

SAN STORM WATER MANAGEMENT PLAN JUNE 2015

San Diego County
Regional Airport Authority
PO BOX 82776
San Diego, CA 92138
619-400-2400
www.san.org



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SAN DIEGO COUNTY REGIONAL AIRPORT AUTHORITY

INTER-OFFICE COMMUNICATION

Date: June 27, 2003

To: Thella F. Bowens
President/CEO

From: Ted Sexton
Vice President, Operations

Subject: Authorization to Sign National Pollutant Discharge Elimination System (NPDES) Documents

NPDES Permits (including General NPDES Permits) require submission of various reports and certifications, which must be prepared and signed by a principal executive office or duly authorized representative. A person is a duly authorized representative if: (1) the authorization is made in writing by the executive officer and (2) a copy of the authorization is retained as part of the permit records for each facility. The authorized representative must be the individual or position having overall responsibility for environmental matters.

This is to request your approval, evidenced by your signature below, authorizing the Director of Environmental Affairs for the Authority to serve as the duly authorized representative for purposed of executing all documents related to the NPDES Permit requirements.

Handwritten signature of Thella F. Bowens in black ink.

Thella F. Bowens
President/CEO
San Diego County Regional Airport Authority

30 June '03
Date

Cc: Paul Manasjan, Director, Environmental Affairs
Zane Gresham, Morris & Foerster



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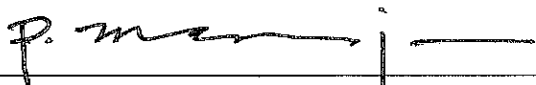
SAN DIEGO COUNTY REGIONAL AIRPORT AUTHORITY

Storm Water Management Plan Report - June 2015

Signed Certified Statement

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Date: June 25, 2015

Signature: _____

Printed Name: Paul Manasjan

Title: Director of Environmental Affairs

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EXECUTIVE SUMMARY

The San Diego County Regional Airport Authority (Authority) was created by state legislation to operate the San Diego International Airport (SAN), and to lead the regional strategic air transportation planning effort. As of January 1, 2003, the Authority became the new owner and operator of SAN, a role previously held by the San Diego Unified Port District (Port of San Diego). Because of this transfer of responsibility, the Authority was required to obtain its own coverage under the appropriate permits and to prepare the associated documentation required as part of the National Pollutant Discharge Elimination System (NPDES) permit program of the Clean Water Act.

This Storm Water Management Plan (SWMP) was prepared by the Authority in accordance with the requirements of two NPDES storm water permits:

- State Water Resources Control Board (State Water Board) Water Quality Order No. 2014-0057-DWQ, NPDES General Permit No. CAS000001, General Permit for Storm Water Discharges Associated with Industrial Activities, referred to in this document as the Industrial Permit
- California Regional Water Quality Control Board, San Diego Region (Regional Water Board), Order No R9. 2013-0001, NPDES No. CAS0109266, Waste Discharge Requirements for Discharges of Urban Runoff from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region, referred to in this document as the Municipal Permit

Pursuant to these permits, this document serves as a Storm Water Pollution Prevention Plan (SWPPP) in terms of the Industrial Permit and a Jurisdictional Runoff Management Program (JRMP) document in terms of the Municipal Permit.

The Authority is subject to the requirements of the Industrial Permit because it operates SAN. Airports that include maintenance, cleaning, and deicing operations require coverage under the permit; however, only those portions of the facility involved with operations associated with industrial activity are required to be addressed. For example, those involved with mechanical repairs, fueling, deicing, etc. The Industrial Permit requires a Permittee to develop a SWPPP for the facility that is covered by the permit, which identifies and evaluates sources of pollutants from the industrial activities at that facility and identifies, describes, and implements best management practices (BMPs) to reduce or prevent the discharge of those pollutants.

The Authority is subject to the Municipal Permit because it owns and operates an MS4 and the Regional Water Board has determined that coverage under this local permit is the most appropriate method of regulating the Authority's MS4 discharges (rather than coverage under the statewide general small MS4 permit or an individual permit). The Municipal Permit requires a Copermittee to develop comprehensive programs, collectively referred to as a JRMP, to reduce and eliminate the pollutants entering and discharging to its storm drain systems. JRMPs are required to address numerous aspects of a Copermittee's operations, including the management of the lands under its jurisdiction, and approval of development, maintenance, and education. A Copermittee is also required to identify BMPs that must be implemented for the Copermittee's areas and activities, including, among others, industrial, commercial, and construction areas and activities under the Copermittee's jurisdiction.

Because the requirements of the two permits overlap so extensively, the Authority has chosen to address the documentation requirements of the two permits in a single, comprehensive document, namely this SWMP.

EXECUTIVE SUMMARY

The SWMP addresses the Municipal Permit requirements of the JRMP document by serving as an informational document that provides a written account of the overall program to be conducted by the Authority to comply with the Municipal Permit. It complies with the Industrial Permit requirements of a SWPPP by describing potential pollutant sources, the BMPs implemented to address them, and other Industrial Permit requirements.

The various sections of this document and the permit requirements that they address are summarized below. The organization of these sections is based on a standardized format developed and agreed upon by the Municipal Permit Copermittees and storm water management approaches that have been developed as guidance by the Copermittees, the County of San Diego's Project Clean Water, and the U.S. Environmental Protection Agency. However, compared with the other Copermittees and MS4 communities, the Authority is unique in that it has no residential uses and owns all of the land under its jurisdiction; therefore, this SWMP is different with respect to organization and approach. It has also been adapted to reflect reorganization under the 2013 Municipal Permit, and has been updated to incorporate strategies from the Water Quality Improvement Plan (WQIP) for the San Diego Bay Watershed Management-Area (WMA), developed under Provision B of the Municipal Permit.

The SWMP includes the following elements:

- Executive Summary – In response to the reporting requirements of the Municipal Permit, the SWMP contains an Executive Summary, which clearly and concisely describes the purpose and major elements of the SWMP.
- Signed Certified Statement – The SWMP contains a signed certified statement that addresses the certification requirements of the Industrial Permit and Municipal Permit.
- Introduction, Section 1.0 – This section briefly describes the Authority and its environmental setting, and provides regional and general vicinity maps and the Authority's legislative background. The section also outlines the component of this SWMP and describes the storm water drainage system at SAN.
- Administrative and Legal Procedures, Section 2.0 – This section identifies the departments and staff that conduct urban runoff management activities. The purpose of this section is also to identify and describe relevant legal authorities and enforcement tools.
- Non-Storm Water Discharges/Illicit Discharge Detection and Determination, Section 3.0 – This section addresses Provision E.2 of the Municipal Permit and Section III of the Industrial Permit, including identifying all potential authorized and unauthorized non-storm water discharges, BMPs in place to control or eliminate those discharges, reporting of illicit discharges, spill response and prevention measures, dry weather monitoring, and inspection and enforcement.
- Development Component, Section 4.0 – This section addresses the Development Planning Component for New Development and Redevelopment requirements in Provision E.3 of the Municipal Permit. It discusses the Authority's development and environmental review processes and the incorporation of storm water management into those processes, and enforcement procedures.
- Construction Component, Section 5.0 – This section addresses the Construction Component requirements in Provision E.4 of the Municipal Permit, including the description of approval processes, inventory and prioritization of construction activities, implementation of construction BMPs, and inspection and enforcement.

- Municipal and Commercial Component, Section 6.0 – This section addresses the requirements of the municipal and commercial components in Provision E.5 of the Municipal Permit, including an inventory and prioritization of municipal and commercial activities and areas, characterization of potential pollutant sources from these activities and areas, implementation of BMPs, and inspection and enforcement.
- Industrial Component, Section 7.0 – This section addresses the requirements of the Industrial Components in Provision E.5 of the Municipal Permit and Sections X.D.1, X.D.2, X.F, X.G.1, X.G.2, and X.H.1 through 4, of the Industrial Permit, including the pollution prevention team, an inventory and prioritization of industrial activities and areas, characterization of potential pollutant sources from these activities and areas, authorized and unauthorized non-storm water discharges, implementation of BMPs, exceedance response actions, and inspection and enforcement.
- Residential Component, Section 8.0 – There are no residential land uses or activity areas within the Authority's jurisdiction. For this reason, the SWMP contains no discussion of activities conducted by the Authority relative to the Residential Component of the Municipal Permit.
- Public Participation and Education Component, Section 9.0 – This section addresses the training requirements of the Industrial Permit and the requirements in Provision E.7 of the Municipal Permit. It discusses education for Authority Staff, airport tenants, and the public, as well as mechanisms for the public to participate in the implementation of the Authority's SWMP.
- Fiscal Analysis Component, Section 10.0 – This section addresses the requirements of Provision E.8 of the Municipal Permit, including methods to secure funds for storm water programs, the strategy for developing a Fiscal Analysis, and annual reporting.
- Effectiveness Assessment Component, Section 11.0 – As required by the Municipal Permit, this section discusses a strategy to assess the effectiveness of the Authority's SWMP through water quality assessments, various levels of program assessment, and program review and modification. It also includes assessments of monitoring results required to fulfill the requirements in Section XII of the Industrial Permit.
- Reporting, Section 12.0 – This section outlines reporting required by the Municipal Permit, including JRMP and WQIP annual reports and updates, and the Industrial Permit, including Annual and Exceedance Response Action (ERA) reports.
- Modifications to the SWMP, Section 13.0 – The section provides the modifications made to the previous SWMP to meet the requirements of the new Municipal Permit and the new Industrial Permit.
- Conclusions and Recommendations, Section 14.0 – This section is included in response to Municipal Permit Attachment B requirements.
- References, Section 15.0 – This section provides a list of documents referred to during the preparation of this SWMP.

Appendices – The appendices to the SWMP contain supporting information such as Authority regulations, detailed BMP information, the Authority's Standard Urban Storm Water Mitigation Plan (SUSMP), and monitoring programs. Of specific relevance to permit requirements, Appendix D (Monitoring Programs) addresses the Monitoring Program requirements of Section X.I of the Industrial Permit and the dry and wet weather monitoring requirements of the Municipal Permit.

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SIGNED CERTIFIED STATEMENTS i

EXECUTIVE SUMMARY v

TABLE OF CONTENTS ix

1.0 INTRODUCTION 1-1

1.1 BACKGROUND 1-1

1.2 PURPOSE AND OBJECTIVES 1-2

1.3 ENVIRONMENTAL SETTING 1-5

1.4 OVERVIEW OF SITE DRAINAGE AND THE MS4 1-6

2.0 ADMINISTRATIVE AND LEGAL PROCEDURES 2-1

2.1 DEPARTMENT ROLES AND RESPONSIBILITIES 2-1

2.2 LEGAL AUTHORITY 2-5

2.3 ENFORCEMENT 2-6

3.0 NON-STORM WATER DISCHARGES/ILLCIT DISCHARGE DETECTION AND ELIMINATION 3-1

3.1 INTRODUCTION 3-1

3.2 CONTROL MEASURES FOR AUTHORIZED NON-STORM WATER DISCHARGES 3-6

3.3 UNAUTHORIZED NON-STORM WATER DISCHARGES 3-12

3.4 CONTROL MEASURES TO PREVENT UNAUTHORIZED NON-STORM WATER DISCHARGES 3-12

3.5 ILLICIT DISCHARGE DETECTION AND ELIMINATION 3-13

3.6 DRY WEATHER MONITORING PROGRAMS 3-18

3.7 FOLLOW-UP AND ENFORCEMENT 3-20

3.8 MONITORING PROGRAM ASSESSMENTS 3-24

3.9 ILLICIT DISCHARGE DETECTION AND ELIMINATION COMPONENT PROGRAM REVIEW AND MODIFICATION 3-25

4.0 DEVELOPMENT AND PLANNING COMPONENT 4-1

4.1 INTRODUCTION 4-1

4.2 LAND USE PLANNING 4-2

4.3 DEVELOPMENT PROJECT REVIEW PROCESS 4-6

4.4 PRIORITY DEVELOPMENT PROJECTS 4-9

4.5 BEST MANAGEMENT PRACTICES 4-10

4.6 ALTERNATIVE COMPLIANCE PROGRAM 4-13

4.7 BMP DESIGN MANUAL 4-13

4.8 STRUCTURAL BMP APPROVAL AND VERIFICATION 4-14

4.9 DEVELOPMENT AND PLANNING ENFORCEMENT 4-16

4.10 DEVELOPMENT AND PLANNING MODIFICATIONS 4-17

5.0 CONSTRUCTION COMPONENT 5-1

5.1 INTRODUCTION 5-1

5.2 CONSTRUCTION SITE INVENTORY AND TRACKING 5-3

5.3 BEST MANAGEMENT PRACTICE REQUIREMENTS 5-6

5.4 PROJECT APPROVAL PROCESS 5-11

5.5 CONSTRUCTION SITE INSPECTIONS 5-13

TABLE OF CONTENTS

5.6	CONSTRUCTION SITE ENFORCEMENT	5-15
5.7	EDUCATION AND TRAINING	5-18
6.0	MUNICIPAL AND COMMERCIAL COMPONENT	6-1
6.1	INTRODUCTION	6-1
6.2	OPERATION AND MAINTENANCE OF MS4 AND STRUCTURAL CONTROLS	6-7
6.3	OPERATION AND MAINTENANCE OF ROADS AND PARKING FACILITIES	6-9
6.4	PREVENTION OF INFILTRATION FROM SANITARY SEWER TO MS4	6-12
6.5	MANAGEMENT OF PESTICIDES, HERBICIDES, AND FERTILIZERS	6-14
6.6	MANAGEMENT OF SPECIAL EVENT VENUES	6-15
6.7	POWER WASHING	6-16
6.8	MUNICIPAL WASTE MANAGEMENT	6-17
6.9	FACILITY INSPECTIONS	6-18
6.10	ENFORCEMENT RESPONSE PLAN	6-21
6.11	EDUCATION AND STAFF TRAINING	6-23
6.12	RETROFITTING AND REHABILITATION AREAS OF EXISTING DEVELOPMENT	6-23
6.13	MUNICIPAL COMPONENT EFFECTIVENESS ASSESSMENT	6-24
6.14	MUNICIPAL COMPONENT PROGRAM REVIEW AND MODIFICATION	6-24
7.0	INDUSTRIAL COMPONENT	7-1
7.1	INTRODUCTION	7-1
7.2	OBTAINING PERMIT COVERAGE	7-3
7.3	SWPPP AVAILABILITY AND IMPLEMENTATION	7-4
7.4	POLLUTION PREVENTION TEAM	7-4
7.5	STORM WATER AND AUTHORIZED NON-STORM WATER DISCHARGE REQUIREMENTS	7-7
7.6	TRAINING QUALIFICATIONS	7-8
7.7	STORM WATER POLLUTION PREVENTION PLAN COMPONENTS	7-9
7.8	PROGRAM IMPLEMENTATION	7-61
7.9	EXCEEDANCE RESPONSE ACTIONS	7-68
7.10	ANNUAL EVALUATION AND REPORTING	7-71
7.11	INDUSTRIAL COMPONENT EFFECTIVENESS ASSESSMENT REPORTING	7-72
7.12	INDUSTRIAL COMPONENT PROGRAM REVIEW AND MODIFICATION	7-72
8.0	RESIDENTIAL COMPONENT	8-1
9.0	PUBLIC EDUCATION AND PARTICIPATION COMPONENT	9-1
9.1	EDUCATION	9-1
9.2	PUBLIC PARTICIPATION	9-6
9.3	PUBLIC PARTICIPATION AND EDUCATION OUTREACH COMPONENT EFFECTIVENESS ASSESSMENT	9-9
9.4	PUBLIC PARTICIPATION AND EDUCATION OUTREACH COMPONENT PROGRAM REVIEW AND MODIFICATION	9-10
10.0	FISCAL ANALYSIS COMPONENT	10-1
10.1	INTRODUCTION	10-1
10.2	FISCAL ANALYSIS METHODS	10-1
10.3	UPDATE TO FISCAL ANALYSIS METHODS	10-3
10.4	FISCAL ANALYSIS COMPONENT PROGRAM REVIEW AND MODIFICATION	10-3

11.0	EFFECTIVENESS ASSESSMENT COMPONENT.....	11-1
11.1	INTRODUCTION	11-1
11.2	MUNICIPAL PERMIT ASSESSMENT COMPONENTS	11-1
11.3	RECEIVING WATER ASSESSMENT	11-1
11.4	MS4 OUTFALL ASSESSMENT	11-2
11.5	SPECIAL STUDIES ASSESSMENT	11-2
11.6	INDUSTRIAL PERMIT ASSESSMENT COMPONENTS	11-4
11.7	PROGRAM REVIEW AND MODIFICATION	11-5
12.0	REPORTING.....	12-1
12.1	MUNICIPAL PERMIT REPORTS	12-1
12.2	INDUSTRIAL PERMIT REPORTS	12-4
13.0	MODIFICATIONS TO THE SWMP	13-1
14.0	CONCLUSIONS AND RECOMMENDATIONS	14-1
15.0	REFERENCES	15-1

TABLES

Table 2-1.	Authority Departmental Roles and Responsibilities for SWMP Implementation	2-4
Table 4-1.	Anticipated and Potential Pollutants Generated by Land Use Type at SAN.....	4-5
Table 4-2.	PDP Prioritization Criteria	4-15
Table 5-1.	Level of Threat to Water Quality Criteria	5-5
Table 5-2.	Inventory of Active Construction Sites as of June 2015	5-5
Table 5-3.	Designated Minimum BMPs for All Construction Projects.....	5-9
Table 6-1.	San Diego International Airport Entities Conducting Municipal and Commercial Activities.....	6-5
Table 6-2.	San Diego International Airport Municipal Land Use and Activity Areas	6-6
Table 6-3.	Minimum BMPs Requirements.....	6-8
Table 6-4.	Minimum BMPs Requirements.....	6-10
Table 6-5.	Minimum BMPs Requirements.....	6-13
Table 6-6.	Minimum BMPs Requirements.....	6-15
Table 6-7.	Minimum BMPs Requirements.....	6-16
Table 6-8.	Minimum BMPs Requirements.....	6-17
Table 6-9.	Minimum BMPs Requirements.....	6-18
Table 7-1.	Authority Key Personnel Responsible for SWMP Implementation	7-6
Table 7-2.	SAN Industrial Facility and Facility Discharge Information	7-11
Table 7-3.	Overview of Inventory of Industrial Sites/Sources	7-15
Table 7-4.	Inventory of Industrial Sites/Sources	7-17
Table 7-5.	Industrial Inventory by Drainage Basin	7-27
Table 7-6.	Potential Pollutant Sources at SAN.....	7-37
Table 7-7.	BMPs Applicable to Individual Industrial Sites/Sources	7-53
Table 7-8.	Minimum BMPs Implemented at SAN	7-55
Table 11-1.	Assessment of Goals for Focused Priority Condition (Copper and Zinc) Within Airport Authority Jurisdiction, Current Permit Term	11-3

TABLE OF CONTENTS

FIGURES

FIGURE 1	REGIONAL LOCATION MAP
FIGURE 2	GENERAL VICINITY MAP
FIGURE 3	SITE MAP FOR SAN
FIGURE 4	LAYOUT FOR DETAILED SITE MAPS
FIGURE 5	SITE MAP FOR SAN TERMINAL 1, TERMINAL 2, AND WEST RUNWAY
FIGURE 6	SITE MAP FOR SAN TERMINAL 1, OLD COMMUTER TERMINAL, AND RUNWAY
FIGURE 7	SITE MAP FOR SAN NORTH RAMP, FBO, AND EAST RUNWAY
FIGURE 8	ORGANIZATIONAL CHART

APPENDICES

APPENDIX A	GENERAL INDUSTRIAL PERMIT CHECKLIST AND NOTICES
APPENDIX B	BEST MANAGEMENT PRACTICES
APPENDIX C	STANDARD URBAN STORMWATER MITIGATION PLAN
APPENDIX D	STORMWATER MONITORING PROGRAMS
APPENDIX E	TENANT SUMMARY SHEETS
APPENDIX F	AUTHORITY RULES & REGULATIONS STORMWATER CODE AND TENANT LEASEHOLD AGREEMENT
APPENDIX G	MISCELLANEOUS SUPPORT MATERIALS
APPENDIX H	MUNICIPAL PERMIT
APPENDIX I	GENERAL INDUSTRIAL PERMIT

Acronym/Abbreviation	Definition
303(d) list or listed	Clean Water Act Section 303(d) list of impaired water bodies
°F	degrees Fahrenheit
AB	Assembly Bill
ACI-NA	Airports Council International-North America
ADC	Airport Design and Construction
AFFF	aircraft firefighting foam
AIP	Airport Improvement Program
Air Ops	Airside Operations
Annual Evaluation	Annual Comprehensive Facility Compliance Evaluation
AOA	aircraft operations area
AP&NMD	Airport Planning and Noise Mitigation Department
ARFF	Airport Rescue and Firefighting Facility
ASBS	Area of Special Biological Significance
ASIG	Aircraft Service International Group
AST	above-ground storage tank
ATCT	Air Traffic Control Tower
Authority	San Diego County Regional Airport Authority
Basin Plan	Water Quality Control Plan for the San Diego Basin
BAT	best available technology economically achievable
BCT	best conventional pollutant control technology
BMP	best management practice
BOD	biological oxygen demand
Board	Airport Authority Board
CalEMA	California Emergency Management Agency
CASQA	California Stormwater Quality Association
CDO	Cease and Desist Order
CEDEN	California Environmental Data Exchange Network
CEO	Chief Executive Officer
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CGP	Construction General Permit
CIC	Capital Improvements Committee
COC	chain of custody
COD	Chemical Oxygen Demand
Consultation Panel	WQIP Consultation Panel
Copermittee	An agency listed under the Municipal Permit Provision B.1
County	County of San Diego
CRDC	Centralized Receiving and Distribution Center
CRM	Certified Reference Material
CUPPS	common use passenger processing system
DAR	Duly Authorized Representative
DO	dissolved oxygen
DQO	data quality objective
DSA	disturbed soil area
EAD	Environmental Affairs Department
EIR	Environmental Impact Report
ELG	Effluent Limitation Guideline

ACRONYMS

Acronym/Abbreviation	Definition
ELS	Elite Line Services
EONS	Economic Viability, Operational Excellence, Natural Resource Conservation, and Social Responsibility
ERA	Exceedance Response Action
ERP	Enforcement Response Plan
ESA	Environmentally Sensitive Area
FAA	Federal Aviation Administration
FBO	Fixed-Base Operations
FDD	Facilities Development Department
FMD	Facilities Management Department
FOD	foreign object damage
FSF	Fuel Storage Facility
FY	fiscal year
GIS	geographic information system
GPM	gallons per minute
GPS	Global Positioning System
GSE	ground support equipment
HA	hydrologic area
HAS	hydrologic sub-area
HU	hydrologic unit
HVAC	heat, ventilation, and air conditioning
IAS	Integrated Airline Services
IDDE	illicit discharge detection and elimination
Industrial Permit	State Water Resources Control Board (State Water Board) Water Quality Order No. 2014-0057-DWQ, NPDES General Permit No. CAS000001, General Permit for Storm Water Discharges Associated with Industrial Activities
IPM	integrated pest management
JAL	Japan Airlines
JRMP	Jurisdictional Runoff Management Plan
LAMC	Lindbergh Airline Managers Council
LCD	liquid crystal display
LCS	laboratory control spike
LEED	Leadership in Energy and Environmental Design
LHE	Laurel Hawthorn Central Embayment
LID	low-impact development
LRP	Legally Responsible Person
MB	method blank
MBAS	Methylene Blue Active Substance
MEP	maximum extent practicable
MND	Mitigated Negative Declaration
MS	matrix spike
MS4	municipal separate storm sewer system
MSCP	Multiple Species Conservation Program
MSD	matrix spike duplicate
MSGP	Multi-Sector General Permit

Acronym/Abbreviation	Definition
Municipal Permit	Regional Water Board Order No. R9-2013-0001, National Pollutant Discharge Elimination System Permit and Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds Within the San Diego Region
MWWD	Metropolitan Wastewater Department
NAICS	North American Industry Classification System
NAL	numeric action level
ND	Negative Declaration
NEPA	National Environmental Policy Act
NGO	non-governmental organization
NOI	Notice of Intent
NOV	Notice of Violation
NPDES	National Pollutant Discharge Elimination System
NSWD	non-storm water discharge
NWS	National Weather Service
O&M	operations and maintenance
OPR	State of California Governor's Office of Planning and Research
OWS	oil-water separator
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PD	Police Department
PDP	Priority Development Project
PFC	Passenger facility charge
PGA	pollutant-generating activity
PIT	Project Intake
POC	point of contact
POC	Pollutant of concern
Port of San Diego	San Diego Unified Port District
PRD	Permit Required Document
PSA	public service announcement
QA	quality assurance
QAMP	Quality Assurance Management Plan
QAPrP	Quality Assurance Program Plan
QC	quality control
QISP	Qualified Industrial Storm Water Practitioner
QSD	Qualified SWPPP Developer
QSE	qualifying storm event
QSP	Qualified SWPPP Practitioner
RARE	Rare, Threatened, or Endangered Species Beneficial Use
RCC	Rental Car Center
Responsible Party	A San Diego Bay Watershed Management Area Copermittee named in the Municipal Permit Provision B.1
RFF	Remote Fueling Facility
RON	remain-overnight
Regional Water Board	California Regional Water Quality Control Board, San Diego Region
ROWD	Report of Waste Discharge
RPD	relative percent difference

ACRONYMS

Acronym/Abbreviation	Definition
SAN	San Diego International Airport
SB	Senate Bill
SDP	standard development project
SC	special conductance
SDS	Safety Data Sheet
SMARTS	Storm Water Multiple Application and Report Tracking System
SIC	Standard industrial classification
SOP	standard operating procedure
SPCC	Spill Prevention Control and Countermeasure
SR-MLS	Sweetwater River Mass Loading Station
Standard Format	Standardized Format for Jurisdictional Urban Runoff Management Plan
Subchapter N	40 Code of Federal Regulations Chapter I Subchapter N
SUSMP	Standard Urban Storm Water Mitigation Plan
SWAMP	Surface Water Ambient Monitoring Program
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
SWQMP	Storm Water Quality Management Plan
State Water Board	California State Water Resources Control Board
TMDL	total maximum daily load
TPH	total petroleum hydrocarbon
TSS	total suspended solids
TTWQ	threat to water quality
UPS	United Parcel Service Co.
USEPA	United States Environmental Protection Agency
USMP	Urban Storm Water Mitigation Plan
UST	underground storage tank
VSR	vehicle service road
WDID	Waste Discharge Identification
WMA	Watershed Management Area
WMAA	Watershed Management Area Analysis
WPCP	Water Pollution Control Plan
WQIP	Water Quality Improvement Plan
WTAP	weather-triggered action plan

1.0 INTRODUCTION

1.1 BACKGROUND

The San Diego County Regional Airport Authority (Authority) was established by the California Legislature as a local regional government entity with authority to operate the San Diego International Airport, a role previously the responsibility of the San Diego Unified Port District (Port of San Diego). Among various other duties, the San Diego County Regional Airport Authority Act (AB93, 2001) provided language in the Public Utilities Code that granted the Authority the responsibility for developing and managing all aspects of the airport facilities that it operates. Relevant sections of the Public Utilities Code were amended by the Legislature in 2002 (SB 1896) to establish the date on which responsibility for airport management would be transferred from the Port of San Diego to the Authority, to ensure that trusteeship of the lands underlying the airport were retained by the Port of San Diego, and to modify the responsibilities of the Authority. The amendments required the Port of San Diego to execute a 66-year lease with the Authority that transferred title and ownership of all real property interests and improvements, including above and below ground utilities, to the Authority. The legislative amendments also made the Authority responsible for all applications to other governmental agencies and for all approvals, permits, authorizations, or agreements of any kind affecting or relating to the property governed by the lease. As such, the Authority is responsible for managing storm water at the airport and for complying with laws, regulations, and permits related to storm water management activities.

This introductory section outlines the purpose of this document, provides an overview of the Authority and the Authority's obligations to manage storm water runoff at the airport, and presents the environmental setting of the airport.

On January 1, 2003, the Authority became the owner and operator of the San Diego International Airport (SAN) and was required to obtain coverage under the applicable sections of the National Pollutant Discharge Elimination System (NPDES) permit program of the Clean Water Act and to prepare any associated documentation that was required.

The Port of San Diego was first required to manage storm water runoff at SAN by NPDES Permit No. CAS0108758, which established storm water management requirements through San Diego Regional Water Quality Control Board (RWQCB) Order No. 90-42 for the municipal separate storm sewer system (MS4) owned and operated by the County of San Diego, the incorporated cities within San Diego County, and the Port of San Diego. NPDES Permit No. CAS0108758 was first renewed in 2001 by RWQCB Order No. 2001-01. With the creation of the Authority and the transfer of SAN operations to the Authority in January of 2003, the RWQCB determined that the Authority itself was now subject to NPDES Permit No. CAS0108758. As such, the RWQCB amended Order No. 2001-01 and required the Authority to implement the storm water management activities required by the permit and to prepare and submit the appropriate documentation. In August of 2003, the Authority submitted the SAN Storm Water Management Plan (SWMP) as documentation of permit compliance. NPDES Permit No. CAS0108758 was renewed again by RWQCB Order No. R9-2007-0001 in 2007, which specifically named the Authority as a Permittee. The municipal NPDES permit was most recently reissued in 2013 by RWQCB Order No. R9-2013-001 (NPDES Permit No. CAS0109266), as amended by RWQCB Order No. R9-2015-0001. The Authority is again named as a Permittee. This document is presented to fulfill the Jurisdictional Runoff Management Plan (JRMP) requirements of this permit.

Since 1992, operations at SAN have also been subject to NPDES Permit No. CAS000001, a state-wide General Permit to Discharge Storm Water Associated with Industrial Activity, established by California State Water Resources Control Board (SWRCB), Water Quality Order No. 91-13-DWQ. Certain activities are defined as "industrial activities" subject to NPDES Permit No. CAS000001, and those defined activities include, among others, aircraft maintenance, cleaning, and deicing operations. Thus, certain activities at

SAN require coverage under the permit. The permit requires a Permittee to develop a Storm Water Pollution Prevention Plan (SWPPP) for the facility that identifies and evaluates sources of pollutants arising from industrial activities and that identifies and describes the best management practices (BMPs) implemented to reduce or prevent the discharge of those pollutants. At that time, the Port of San Diego filed a Notice of Intent (NOI) to comply with NPDES Permit No. CAS000001 (see Appendix A). NPDES Permit No. CAS000001 was subsequently renewed in 1997 by SWRCB Order No. 97-03-DWQ. In September of 2002, with the transfer of SAN from the Port of San Diego to the Authority scheduled for January 1, 2003, the Port of San Diego filed a Notice of Termination from permit compliance for SAN and listed the Authority as the new facility operator (Appendix A). In March of 2003, the Authority filed a NOI to comply with SWRCB Order No. 97-03-DWQ (Appendix A), and in August of 2003 prepared the SAN SWMP to comply with the permit. CAS000001 was most recently renewed in 2014 by SWRCB Order No. 2014-0057-DWQ, which becomes effective on July 1, 2015. This document is presented to fulfill the Storm Water Pollution Prevention Plan (SWPPP) requirements of this permit.

Presently, as the owner and operator of SAN, the Authority is subject to the requirements of the following two NPDES storm water permits:

- California Regional Water Quality Control Board, San Diego Region (RWQCB), Order No. R9-2013-0001, as amended by Order No. R9-2015-0001, NPDES No. CAS0109266, National Pollutant Discharge Elimination System Permit and Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds Within the San Diego Region; referred to in this document as the Municipal Permit (Municipal Permit), and
- State Water Resources Control Board (SWRCB) Water Quality Order No. 2014-0057-DWQ, NPDES General Permit No. CAS000001, General Permit for Storm Water Discharges Associated with Industrial Activities; referred to in this document as the Industrial Permit (Industrial Permit).

In regards to Industrial Permit compliance, the primary Standard Industrial Classification (SIC) code for the site is 4581 Airports, Flying Fields, and Airport Terminal Services, and the Waste Discharge Identification number (WDID #) for SAN under the Industrial Permit is 937I018035.

1.2 PURPOSE AND OBJECTIVES

As the owner and operator of the municipal separate storm sewer system (MS4 or storm drain system), the Authority is subject to the Municipal Permit. The Municipal Permit requires a Permittee to develop a comprehensive program, collectively referred to as a jurisdictional runoff management program, to reduce and eliminate the pollutants entering and discharging from its storm drain systems. The jurisdictional runoff management program is required to address numerous aspects of the operations and activities that occur within its jurisdiction, including land uses and other development activities. A Permittee is also required to identify the BMPs that are required to eliminate storm water pollution from activities and areas within its jurisdiction, including municipal, industrial, commercial, and construction areas and activities. The Municipal Permit requires each jurisdiction (known collectively as the “Copermittees”) to implement public participation and public education programs directed at storm water pollution prevention. The permit further requires that the whole of these jurisdictional runoff management programs be described in a jurisdictional runoff management program document, referred to as a Jurisdictional Runoff Management Plan (JRMP).

Under the 2013 Municipal Permit, Copermittees in each watershed management area (WMA) in the San Diego region were also required to develop a watershed-based plan to improve discharges from their MS4s. These plans, known as Water Quality Improvement Plans (WQIPs), identify the highest and focused priority conditions impacting water quality in each WMA, delineate potential MS4 sources of these conditions, and then prescribe a set of goals, strategies, and schedules each Copermittee will follow to address the conditions as applicable to their jurisdictions. The WQIPs also include programs of monitoring and assessment so that Copermittees can evaluate whether progress is being made in improving each highest and focused priority

condition. The aim of these assessments is to gauge the effectiveness of the implemented strategies; the goals, strategies, and schedules can then be modified as necessary through an adaptive management process. Beginning in the fall of 2013, the Authority participated in the development of the San Diego Bay WMA WQIP. The final document was submitted for public review in June 2015, and the Copermittees anticipate beginning implementation in fall 2015.

Because the requirements of the Municipal Permit and the Industrial Permit overlap so extensively, the Authority has chosen to address the documentation requirements of the two permits with a single, comprehensive document, namely this Storm Water Management Plan (SWMP). As an informational document providing a written description of the overall runoff management program conducted by the Authority, the SWMP addresses the Municipal Permit requirements for a JRMP. The SWMP also complies with the Industrial Permit requirements for a SWPPP, since it also describes potential pollutant sources at SAN and the BMPs implemented to address them.

This document has been prepared to update the March 2008 version of the SWMP in accordance with NPDES Permit No. CAS0109266 (Municipal Permit) as renewed in June 2013 by RWQCB Order No. R9-2013-0001, and NPDES Permit No. CAS000001 as renewed in April 2014 by SWRCB Order No. 2014-0057-DWQ, which is effective from July 1, 2015. The SWMP incorporates storm water management approaches that have been developed as guidance by the Municipal Permit Copermittees, the U.S. Environmental Protection Agency, the California Stormwater Quality Association (CASQA), and others. In addition, this SWMP incorporates the output from several elements of a special project conducted by the Authority in 2005 and 2006 entitled the Storm Drainage System BMP Program, enhanced and updated by strategies and BMPs outlined in the WQIP. Several completed and ongoing environmental programs at SAN have informed this document, including a hydrology assessment; a hydraulic analysis and tidal surge study; a biannual Site Audit; a chemical emergency response evaluation; a Catastrophic Fuel Release Evaluation; the development of a new Storm Water Sampling Plan for SAN; and a BMP Recommendations Report. Many of the documents produced from these elements of the program are mentioned, discussed, or incorporated into this SWMP, as well as other subsequent documents. Finally, the SAN SWMP seeks to present information in a manner that is intended to facilitate understanding by Authority staff and SAN tenants.

This update to the SWMP meets the requirements of Provision E of the renewed Municipal Permit. The SWMP is intended to reduce the discharge of pollutants from the Authority's MS4 to the maximum extent practicable (MEP) and to prevent urban runoff discharges from the MS4 from causing or contributing to a violation of water quality standards. This update to the SWMP also meets the requirements of the Industrial Permit, including the requirement to implement BMPs that control potential pollutant discharges using best available technology economically achievable (BAT) for toxic and non-conventional pollutants and using best conventional pollutant control technology (BCT) for conventional pollutants.

SWMP ORGANIZATION

The content and organization of the SWMP is based, in large part, on a standardized format developed and agreed upon by the Municipal Permit Copermittees ("Standardized Format for Jurisdictional Urban Runoff Management Plan" (Standard Format), as submitted to the RWQCB on July 24, 2007) to address sections D, G, H, I.1 and 5, and J.1a of the 2007 Municipal Permit. This standardized format has been modified to include elements of the renewed Municipal Permit; therefore, there are some differences between the original Standard Format and the layout of this document. The content and organization of the SWMP is briefly summarized below.

INTRODUCTION

There are aspects of the SWMP that likely vary significantly from the JRMPs prepared by other Copermittees. These variations are due in part to the unique aspects of the Authority's governance, as well as the airport's unique geographic setting. While these factors will be discussed elsewhere in the SWMP, where applicable, the Authority is unique in comparison to most of the other Copermittees in that: a) the Authority controls all land uses through property leases or use agreements; b) there are no residential uses within the Authority's jurisdictional area; c) there are no hillsides within the Authority's jurisdictional area; and d) the SWMP incorporates SWPPP requirements of the Industrial Permit. The SWMP includes the following elements:

- **Executive Summary** – a clear and concise description of the purpose and major elements of the SWMP.
- **Signed Certified Statement** – a signed statement addressing the certification requirements of both the Industrial Permit and Municipal Permit.
- **Introduction** – an outline of the purpose of the document, an overview of the Authority and the Authority's obligations to manage storm water runoff at the airport, and a presentation of the environmental setting of the airport.
- **Administrative and Legal Procedures** – an identification of all departments and staff that conduct urban runoff management activities. This section also identifies and describes all relevant legal authorities.
- **Non-Storm Water Discharges/Illicit Discharge Detection and Elimination** – an identification of all potential authorized and unauthorized non-storm water discharges, and the BMPs in place to control or eliminate those discharges (as required by Section E.2 of the Municipal Permit and Sections III and IV of the Industrial Permit). Also, a description of mechanisms for reporting illicit discharges, spill prevention and response measures, and inspection and enforcement activities (as required by Section E.2 of the Municipal Permit and Sections X and XI of the Industrial Permit).
- **Development and Planning Component** – a description of the Authority's development and environmental review processes and the incorporation of storm water management elements into those processes (as required by Section E.3 of the Municipal Permit).
- **Construction Component** – a description of the approval processes, methods of generating an inventory and the prioritization of construction activities, the BMPs required to address construction activities, and construction activity inspection and enforcement (as required by Section E.4 of the Municipal Permit).
- **Municipal and Commercial Components** – a description of methods of generating an inventory and prioritization of municipal and commercial activities and areas, characterization of potential pollutant sources from these activities and areas, the BMPs required to address municipal and commercial activities, and inspection and enforcement (as required by Section E.5 of the Municipal Permit).
- **Industrial Component** – a description of methods of generating an inventory and prioritization of industrial activities and areas, characterization of potential pollutant sources from these activities and areas, the BMPs required to address industrial activities, and inspection and enforcement (as required by E.5 of the Municipal Permit). This section also presents the bulk of documentation required by Section X of the Industrial Permit regarding the development and implementation of a SWPPP.
- **Residential Component** – a brief explanation of the non-existent residential land uses or activity areas within the Authority's jurisdiction and the absence of storm water management program elements relative to the Residential Component (Section E.5) of the Municipal Permit.

- **Education and Public Participation Component** – a description of the program elements designed to address both the training requirements of the Industrial Permit and the education requirements of the Municipal Permit (Section E.7). The section discusses education for Authority staff, as well as tenants and the public. Also, a description of the mechanisms in place to enable the public to participate in the implementation of the Authority’s SWMP.
- **Fiscal Analysis Component** – a description of the methods to secure funds for storm water programs, program expenditures and budgets, and the strategy for developing standardized fiscal analysis and annual reporting.
- **Effectiveness Assessment** – a discussion of the strategy to assess the effectiveness of the Authority’s SWMP through water quality assessments, various levels of program assessment, WQIP assessments, and program review and modification.
- **Reporting** – a description of the reporting requirements under the renewed Municipal Permit and Industrial Permit.
- **Modifications to the SWMP** – an outline of the modifications made to the March 2008 version of the SWMP to meet the requirements of the renewed Municipal Permit and Industrial Permit.
- **Conclusions and Recommendations** – a discussion of any key conclusions or recommendations derived as a result of updating the SWMP in response to the renewed Municipal Permit and Industrial Permit.

1.3 ENVIRONMENTAL SETTING

San Diego International Airport is located in San Diego County (see Figures 1 and 2) just north of downtown San Diego. The airport covers approximately 661 acres and operates as a domestic and international commercial airport. Airport operations at SAN currently include two main airline terminals, a Fixed-Base Operation (FBO) facility, one main runway area, taxiways, and ancillary support facilities (including an aircraft fuel storage facility, a remote fueling facility, air cargo facilities, ground support facilities and operations areas), an airplane wash-rack, overnight airplane parking areas, and the Airport Rescue and Fire Fighting Facility (ARFF). Figure 3 shows the layout of SAN, including boundaries, major structures, surrounding areas, direction of storm water flow, and surface waters.

SAN is located within the Pueblo San Diego hydrologic unit (908.00) of the RWQCB San Diego Basin Plan (1994). More specifically, SAN is located in the San Diego Mesa hydrologic area (908.20), Lindbergh hydrologic sub-area (HAS 908.21). The climate of the area is typical of the southern California coastal region. The adjacent Pacific Ocean has a moderating effect on temperatures. The average temperature is 71 degrees Fahrenheit (°F) with temperature extremes ranging from 40°F in the winter months to 80°F in the summer months. The San Diego coastal area has an average annual rainfall of about 11 inches, with the greatest rainfall occurring during the winter months. The rainy season in San Diego is considered to be October through May. Precipitation is sparse during the summer months. Occasionally, strong dry and northeasterly Santa Ana winds descend the mountain slopes to the east producing wind speeds in excess of 50 miles per hour over localized sections of the San Diego Basin, usually below canyons. The highest winds at SAN are in association with the winter and spring storms that invade southern California from the Pacific Ocean. During the summer months, low clouds, known as the “marine layer,” are common in the late night and early morning hours due to the proximity to the Pacific Ocean.

Approximately 85 to 90 percent of the SAN property is covered by impervious surfaces consisting mainly of buildings and paved areas. The soils underlying SAN are generally undifferentiated bay deposits and hydraulic fill material originating from San Diego Bay. The soil is described as undetermined in the Soil Hydrologic Groups map in the San Diego County Hydrology Manual. The elevation of SAN ranges from approximately 10 to 25 feet above mean sea level.

Storm water from SAN drains to San Diego Bay, portions of which are currently 303(d) listed for impacts due to polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), chlordane, lindane, indicator bacteria, and metals, as well as benthic community effects and sediment toxicity. The 2010 303(d) list includes copper as a pollutant impacting water quality in the marinas along Harbor Island and PCBs as a pollutant impacting water quality throughout the San Diego Bay. Runoff from the airport commingles with runoff from other sources and discharges into the waters along Harbor Island. There are four Toxic Hot Spots in San Diego Bay, one of which (namely, the Downtown Anchorage, near the foot of Grape Street) is located near outfalls associated with runoff commingled from SAN and other sources. This area is currently the subject of an Investigative Order issued by the RWQCB. The SWRCB has designated San Diego Bay in its entirety as having rare beneficial use (RARE) in the San Diego Basin Plan (1994). Both the Sweetwater Marsh National Wildlife Refuge and the South Bay Unit of the San Diego National Wildlife Refuge are considered Areas of Special Biological Significance (ASBS), but neither is within close proximity to SAN.

The Airport has recently completed several improvements to address environmental sustainability, storm water quality, and water conservation. The Centralized Receiving and Distribution Center (CRDC), completed in 2012, helps reduce traffic on the surrounding roadways by centralizing all truck deliveries of food, beverage, retail, and other goods. The Green Build, completed in August 2013, was the largest project in the history of the airport, expanding Terminal 2 with 10 new gates and adding a dual-level roadway for arrivals and departures. This project earned the Authority a Leadership in Energy and Environmental Design (LEED) Platinum certification, making the airport home to the first LEED Platinum certified commercial terminal in the world. The Fixed-Base Operator Complex project, completed in August 2014, constructed a bigger, more environmentally friendly FBO facility and is also expected to achieve LEED Platinum certification. The new developments also include many low-impact development (LID) BMPs, as detailed in the drainage basin descriptions below.

1.4 OVERVIEW OF SITE DRAINAGE AND THE MS4

The majority of surface water runoff from SAN is conveyed via sheet flow into gutters and storm drain inlets. The storm water conveyance system consists of 15 outfall basins. Each basin is comprised of sub-basins that route flow to different sections of the infrastructure. The total system consists of approximately 192,000 linear feet of pipe and approximately 550 inlets discharging through 15 outfalls. Storm drain pipe sizes vary in diameter, according to their location in the storm drain system, from 4 to 84 inches in diameter.

Storm water runoff flows from SAN through the storm water conveyance system and discharges through Outfalls 01 through 11 into San Diego Bay to the south of the airport, and Outfalls 12 through 15 into the Navy Boat Channel portion of San Diego Bay to the west. Flow in the majority of the storm drain system is intermittent and dependent on the amount of rainfall and subsequent runoff. Those portions of the MS4 that are closest to San Diego Bay receive seawater infiltration during high tides.

Below is a detailed description of each drainage basin located on the SAN property:

DRAINAGE BASIN 1

In the past, Drainage Basin 1 was occupied by the FBO facility serving general aviation aircraft (as opposed to regularly scheduled commercial passenger airlines). Following the North Side Improvements renovating and moving the FBO, this Drainage Basin now encompasses just a portion of the FBO public parking lot, with one area of permeable pavement with an associated infiltration trench, and the far eastern end of the runway and taxiway areas. Storm water runoff from adjacent properties, to the east of SAN, flows in a westerly direction into Drainage Basin 1.

DRAINAGE BASIN 2

Drainage Basin 2 at the far eastern end of the runway contains a storm drain inlet and part of the vehicle service road (VSR) which circles the perimeter of the airfield. Drainage Basin 2 used to include a lavatory waste disposal facility connected to the sanitary sewer, but this facility has been moved to Drainage Basin 8.

DRAINAGE BASIN 3

Drainage Basin 3 includes the FBO. The facility includes two office buildings and 5 hangars used for a passenger area, a café, storage for small corporate jets and private aircraft, storage tanks for aircraft fuel and lavatory waste, and aircraft maintenance. The storage tanks are pumped out regularly and the fluids recycled. New LID BMPs were installed at the FBO as part of the North Side Improvements, including seven sections of permeable pavement with infiltration trenches and seven bioswales. It also encompasses parts of the runway, taxiway and least tern nesting areas, and part of the airfield perimeter vehicle service road. Small aircraft are sometimes parked alongside the vehicle service road just south of the FBO. The area also includes aircraft parking and loading/unloading areas, aircraft refueling truck parking, and a vehicle and equipment maintenance shop with a hazardous waste accumulation area. In addition to the FBO, Drainage Basin 3 also includes a portion of the Rental Car Center (RCC) construction site. Construction in this area is expected to be complete by summer 2015, after which time Drainage Basin 3 will include rental car parking and storage.

DRAINAGE BASIN 4

Drainage Basin 4 is a small area in the southeastern portion of SAN encompassing parts of the southern taxiway areas and vehicle service road. The drainage basin also includes the nesting area for an endangered species of seabird, the California least tern and a vehicle parking area containing a proprietary drain inlet filter BMP.

DRAINAGE BASIN 5

A large portion of Drainage Basin 5 is utilized for vehicle parking, rental car company car parking areas, and a public long-term parking lot. It also encompasses parts of the runway, taxiway and least tern nesting areas, as well as portions of the vehicle service road and the RCC construction area. Drainage Basin 5 contains the majority of the operational area for three cargo carriers; the cargo carrier areas include loading/unloading materials, container storage, some vehicle and equipment maintenance, and office space. The southern edge of Drainage Basin 5 now extends to Harbor Drive, and contains parking areas (with various newly installed BMPs, such as proprietary drain inlet filter BMPs), and the runway generator area where two 500-gallon, above-ground diesel storage tanks, a couple of small buildings, and an Authority materials storage area are located. Storm water runoff from adjacent properties to the north of SAN flows in a southerly direction into Basin 5.

DRAINAGE BASIN 6

The northeastern side of Drainage Basin 6 contains a portion of the operational area for three air cargo carriers; activities performed by the cargo carriers in this area include loading/unloading cargo onto their airplanes, and container storage. Aircraft, vehicle, and equipment fueling and maintenance also are conducted here. The Aircraft Fuel Storage Facility (FSF) is located on the northwest side of the drainage basin. There are two 1-million gallon above-ground jet fuel storage tanks (ASTs) within secondary containment located at the FSF. This facility is equipped with a 12,000-gallon oil water separator (OWS) plus an 8,000-gallon holding tank to treat fuel spills. There are also jet fuel, diesel, and gasoline loading and unloading areas with spill containment, an equipment pad with spill containment, gasoline and diesel USTs, and a foam equipment building with a 1,500-gallon AST containing a 3% aqueous foam concentrate. Although located on the opposite side of the runway from the FSF, Drainage Basin 6 also includes the airport Remote Fueling Facility (RFF) used to dispense fuel from the FSF to mobile aircraft refueling tanker trucks. The mobile refueling tanker trucks have the capacity to hold from 750 to 15,000 gallons, depending on the size of truck. The fuel reaches the RFF dispensers via an underground pipeline from the FSF. The

INTRODUCTION

RFF has four single-position refueler loading islands with spill containment, an oil water separator, one 3,000-gallon underground reclaimed fuel tank, and a 12,000-gallon capacity blind sump used to capture storm water runoff at the dispenser islands.

Between the FSF and the air cargo carrier area is an Authority equipment and materials storage area, referred to as the “boneyard,” containing both solid waste and hazardous waste accumulation areas, and storage for various parts and equipment. The boneyard is just north of the Air Traffic Control Tower (ATCT). Adjacent to the boneyard is the CRDC serving as a central delivery location for food, beverage, retail and other goods. This facility was constructed with several proprietary trench drain filter and grate inlet skimmer BMPs. The Airport Rescue and Fire Fighting Facility (ARFF) is located to the south of the FSF. The ARFF station participates in fire fighting vehicle and equipment testing at least once per year on a large concrete pad called the north ramp area, just to the east of the ARFF facility. The north ramp area drains through two oil water separators. Also located in Drainage Basin 6 are portions of the runway, taxiways, and the vehicle service road.

This drainage basin also includes the old Commuter Terminal ramp area and new parking lots in the southern portion of the drainage basin. The Commuter Terminal now serves as Authority offices and no longer has flights arriving or departing, or any ramp activities. Near the old Commuter Terminal are 140 and 190 gallon capacity diesel ASTs. A portion of the old Commuter Terminal ramp drainage is directed towards a storm drain inlet equipped with a 20,000-gallon capacity oil water separator. The parking lots were constructed with several new treatment control and LID BMPs including hydrodynamic separators, permeable asphalt strips, and a high-rate media filter. Storm water runoff from adjacent properties, those to the north of SAN, flows in a southerly direction into Basin 6.

DRAINAGE BASIN 7

Drainage Basin 7 includes the old Commuter Terminal short-term parking lot and access road, Authority offices and parking lot, part of the airport RFF, an aircraft wash rack, a vehicle wash rack, ground support equipment (GSE) maintenance and storage areas, a fuel truck parking area that drains into a 3,000-gallon oil water separator, and a secondary cargo area where outdoor loading and unloading of cargo occurs. Equipment, parts, vehicles, materials and trash storage areas, as well as a hazardous waste accumulation area are all located in this drainage basin. The aircraft wash rack is equipped with a wastewater filtration system that is designed to capture and treat washwater before it is discharged to the sanitary sewer. During a rain event, no washing occurs and the drainage is switched to the storm drain system, via an automatic rain-event-triggered valve. The vehicle wash rack drains to a small sump which is connected to the sanitary sewer.

DRAINAGE BASIN 8

The eastern portion of Drainage Basin 8 contains a trash compactor, recycling bin, and dewatering bin. This area is used by the Authority, the airlines, and other tenants to dispose of trash, recyclables, and compost. Wastewater from the power washing of sidewalks, daily ramp scrubbing, and aircraft cleaning passes through the dewatering bin, where solids are removed before the wastewater is discharged to the sanitary sewer. The trash compactors and de-watering bin are located within a bermed area. Drainage in the bermed area is directed towards a sump that also pumps the water and liquids into the dewatering bin before being discharged to the sanitary sewer. No GSE washing is permitted in the trash compactor area.

To the north of the trash compactor area is a bermed vehicle and equipment wash rack, which has a closed loop system for collecting and recycling the rinse water, and aircraft lavatory waste disposal area (triturator). Drainage from both areas is directed to the sanitary sewer.

To the south of the trash compactor area is parking for the secondary cargo area. West of this parking area is the Terminal 1 gate and ramp areas and building. Fueling, maintenance, de-icing, lavatory servicing, washing, and loading/unloading of passenger aircraft occur at the main terminal ramp. Approximately

350,000 gallons of jet fuel is brought to the Terminals 1 and 2 ramp area daily by the mobile refueling tankers and loaded by positive lock hose into the aircraft. There is also a 250-gallon diesel AST located on the roof of the terminal building. Aircraft maintenance equipment, vehicles, deicing fluids, hazardous waste accumulation areas, trash dumpsters, parts, and flammable materials storage lockers containing mainly oils and lubricants are stored under overhangs and around jet ways and gates in this area. One 3,000-gallon grease receptacle, plus several grease traps and smaller grease containers, are located next to the Terminal building to trap and/or collect grease from the airport restaurants. The receptacles and traps are linked to the sanitary sewer and are serviced regularly. The wastewater and grease from cleaning of the units are transported offsite for processing and disposal to the sanitary sewer or to a landfill.

Drainage Basin 8 also encompasses parts of the runway, taxiway, vehicle service road, a generator and 425-gallon gasoline AST to the north of the vehicle service road on the north side of the runway and southwest of the ARFF facility. This drainage basin also includes the Terminal 1 short-term parking lot.

DRAINAGE BASINS 9, 10, 11, AND 14

Runoff from the Terminal 2 public short-term parking lot and access roads, as well as the majority of the terminal building, is captured in four drainage basins: 9, 10, 11, and 14 spanning from the east to the west, where the new dual-level roadway for arrivals and departures has been constructed as part of the Green Build. Drainage Basin 9 also includes office buildings, the central heat/air (HVAC) building and power plant building, equipment fueling, maintenance, and storage areas, and other materials and waste storage areas. Drainage Basin 14 includes office buildings.

New storm water BMPs were installed in the Terminal 2 parking lots as part of the Green Build, including an acre of pervious pavers and bioswales, and three high-rate media filters.

DRAINAGE BASIN 12

The Terminal 2 East gate and ramp areas and part of the terminal building are located in Drainage Basin 12, and have very similar activities and storage as in the Terminal 1 gate and ramp areas in Drainage Basin 8 (described above). The Terminal 2 area has one 6,000-gallon and one 5,000-gallon grease receptacle, plus several grease traps. An oil water separator is located northwest of Gate 41. Trash dumpsters are present at Terminal 2 West and in between Terminal 2 West and East. Four emergency generators are located near the terminal areas, with a substation and 500-gallon diesel AST located at the west end of the runway. There are also two 240-gallon diesel ASTs located near Terminal 2.

DRAINAGE BASIN 13

Drainage Basin 13 is a small area in the far northwestern section of SAN, which covers the western end of the taxiway and portion of the vehicle service road. SAN's Engineered Material Arresting System (EMAS), designed to prevent aircraft overruns, is also in Drainage Basin 13. Storm water runoff from adjacent properties, to the north of SAN, flows in a southerly direction into Basin 13.

DRAINAGE BASIN 15

Drainage Basin 15 encompasses the Terminal 2 West gate and ramp areas and part of the terminal building, and has very similar activities as Drainage Basin 12. Drainage Basin 15 has one 5,000-gallon and two 2,000-gallon grease receptacles as well as several grease traps located alongside the terminal. A 250-gallon diesel AST is located alongside the terminal building, with an additional 1,000 gallons of diesel storage available within the generator. Drainage Basin 15 also includes aircraft overnight parking. As part of the Green Build, a high-rate media filter and 1.75 acres of permeable artificial turf were added on the airfield at the far western end of Drainage Basin 15.

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2.0 ADMINISTRATIVE AND LEGAL PROCEDURES

This section identifies and describes the Authority departments and staff that conduct and/or oversee activities related to SWMP implementation and urban runoff management. This section also addresses the roles and responsibilities of these departments and individuals as required by Provision E.3.e.(b) of the Municipal Permit and Section X.D.1 of the Industrial Permit. Enforcement response procedures can be defined differently, per Provision E.6.d.(1) of the Municipal Permit, and are described for each component in Sections 3.0, 4.0, 5.0, 6.0, and 7.0 of this SWMP.

2.1 DEPARTMENT ROLES AND RESPONSIBILITIES

In June 2015, the Authority filed an NOI to comply with the Industrial Permit. The Authority has elected to assume a lead role with regard to the Industrial Permit. Airport tenants that conduct industrial activities are also subject to the requirements of the Industrial Permit and must comply with the Authority direction regarding storm water management at SAN. This approach (1) conforms to federal regulations, (2) was the preferred option of the State Water Board, and (3) allows for implementation of consistent storm water pollution prevention measures throughout the entire airport site. This approach provides for consistency in the programs that the Authority has developed and implemented to comply with the requirements of both the Industrial Permit and the Municipal Permit.

Several Authority departments share responsibility for the implementation of the SAN SWMP, specifically: the Environmental Affairs Department (EAD), the Facilities Management Department (FMD), the Airside Operations Department, the Terminals and Tenants Department, the Facilities Development Department (FDD), the Airport Planning and Noise Mitigation Department, the Aviation Security and Public Safety Department. The Harbor Police Department is also available to assist with enforcement as necessary. The Directors and key staff members from these departments are integral for efforts to eliminate and reduce pollutants in the storm water that discharges from SAN. Together, they ensure that the Authority complies with the NPDES Permits.

The EAD assumes a lead role in performing the following tasks required by the Industrial Permit:

- Conducting meetings with and training of appropriate stakeholders
- Ensuring the proper implementation of required BMPs
- Conducting wet and dry season monitoring
- Conducting wet weather storm water sampling
- Conducting annual facility inspections of all industrial areas and activities
- Preparing and submitting an annual report to the Regional Water Board
- Uploading the SWMP into the Storm Water Multiple Application and Report Tracking System (SMARTS) database
- Submitting monitoring results onto SMARTS
- Revising and updating the SWMP annually, or as necessary.

ADMINISTRATIVE AND LEGAL PROCEDURES

The EAD also assumes a lead role in ensuring that the following tasks are conducted as required by the Municipal Permit:

- Prohibiting all identified illicit discharges
- Prohibiting and eliminating illicit connections to the MS4
- Controlling the discharge of spills, dumping, or disposal of materials other than storm water into the storm drain system at SAN
- Controlling the contribution of pollutants in discharges of runoff associated with industrial and construction activity
- Requiring compliance with Authority ordinances, permits, contracts, or orders related to storm water management and/or control, and using escalating enforcement mechanisms as necessary to ensure compliance
- Controlling the contribution of pollutants from one portion of any shared MS4 to another portion of the MS4 through interagency agreements among Copermitees
- Conducting all inspections, surveillance, and monitoring necessary to determine compliance and noncompliance with local ordinances and permits
- Requiring the use of BMPs to prevent or reduce the discharge of pollutants into the MS4 to the MEP
- Requiring and/or preparing documentation of the effectiveness of BMPs implemented to reduce the discharge of pollutants into the MS4 to the MEP
- Preparing WQIP reports and assessments in coordination with other San Diego Bay WMA Responsible Parties (Responsible Parties)
- Providing the SWMP, WQIP, Annual Reports, and monitoring results to the public
- Informing the public of WQIP and SWMP updates and public comment periods or meetings

The EAD manages directly or coordinates the management of information and records required by the Industrial Permit and the Municipal Permit. The Director of the EAD has been duly authorized by the President/Chief Executive Officer (CEO) of SAN as the position having responsibility for overall operation of facilities and activities regulated by the Industrial Permit and Municipal Permit. As such, the Director of the EAD signs and certifies all reports and other information required by an NPDES Permit or requested by the USEPA, SWRCB, or Regional Water Board.

The EAD assumes overall responsibility for developing, implementing, and revising the SWMP, as necessary. The EAD conducts all monitoring program activities required in Section XI of the Industrial Permit. The EAD generally conducts all inspections required by the Municipal Permit, with the assistance of the FMD and the Airside Operations Department. The EAD conducts/coordinates most of the storm water education and outreach efforts required by the Municipal Permit, with the assistance of key supervisory or lead staff from the other departments listed above.

The FMD conducts many of the municipal activities described in Section 6.0 of this SWMP. The Airside Operations Department staff and FMD staff are generally first on scene for spills and other facility maintenance and repair issues. The EAD assumes responsibility for determining the need for and reporting, as necessary, any significant incidents of noncompliance to the appropriate agencies. The Airport Planning and Noise Mitigation Department and the FDD are generally responsible for project planning, design, and approval, with assistance as necessary from the EAD. The Terminals and Tenants Department helps the EAD coordinate activities with the airport tenants and service providers. The EAD, the Airside Operations Department, and the Terminals and Tenants Department generally assume responsibility for assisting airport tenants and service providers in maintaining compliance with the Industrial Permit and Municipal Permit. These departments help Authority staff and airport tenants formulate and implement BMPs to prevent storm water contamination from their operational areas/activities.

Table 2-1 presents the departments with roles and responsibilities for implementing various elements of the SAN SWMP. Table 7-1 in Section 7.0 presents the key Authority personnel, listed by department, directly involved with or assisting in the implementation of the SWMP. Figure 8 presents the Authority's organizational chart.

ADMINISTRATIVE AND LEGAL PROCEDURES

Table 2-1. Authority Departmental Roles and Responsibilities for SWMP Implementation

SWMP Element/Program/Activity	Environmental Affairs	Facilitates Management	Airside Operations	Terminals and Tenants	Facilities Development	Airport Planning and Noise Mitigation	Aviation Security and Public Safety
Administration	P						
Reporting	P	S	S	S	S	S	
Water Quality Monitoring	P						
Water Quality Sampling	P						
Illicit Discharge Detection and Elimination	P	S	S	S	S	S	S
Education and Outreach	P						
Public Participation	P		S	S		S	
Program Assessment	P						
Fiscal Analysis	P						
Engineering/Design	S				P		
Development Planning/Review/Approval	S			S	S	P	
Construction Inspection/Oversight	P				S		
Municipal Facilities Maintenance/Oversight	S	P					
Airfield Activities Oversight	S		P				S
Terminal Activities Oversight	S			P			S
Industrial/Commercial Activities Inspection/Oversight	P	S	S	S			
Enforcement	P		S	S	S		

P – primary responsibility

S – supporting responsibility

Numerous airport tenants are conducting a variety of airport-related support functions at SAN and this SWMP addresses the industrial and commercial activities conducted by these tenants. All tenants and airport service providers with a SIC of air transport or related services are considered Copermittees with the Authority on the Industrial Permit. As such, they play a role in ensuring effective implementation of the SAN SWMP. Tenancy agreements between the Authority and airport tenants contain clauses that require the Airport tenant to abide by all Authority, local, state, and federal laws and regulations. It is airport tenants' responsibility to comply with the Industrial Permit and to respond to Authority requests for permit information regarding tenants' facilities, operations, or activities. Each airport tenant or service provider conducting industrial or commercial activities and operations is furnished a copy of this SWMP and is obligated to comply with its requirements. Airport tenants and service providers are also responsible for ensuring that hired contractors or subcontractors comply with the SWMP.

In its management role for the implementation of the SAN SWMP, the Authority ensures that airport tenants comply with the requirements of both the Industrial Permit and the Municipal Permit. Airport tenants that implement their own storm water management programs are still required to comply with the SAN SWMP for operations/activities conducted within the boundaries of SAN.

2.2 LEGAL AUTHORITY

On September 20, 2002, the Authority Board adopted Resolution No. 2002-02 amending the Authority Codes to include Section 8.70 to 8.79, known as the "San Diego County Regional Airport Authority Storm Water Management and Discharge Control" and the "Storm Water Code" (Article 8.70).

The Storm Water Code sets forth uniform requirements and prohibitions for dischargers and places of discharge to the storm water conveyance system, and receiving waters, necessary to adequately enforce and administer all laws and lawful standards and orders or special orders, that provide for the protection, enhancement, and restoration of water quality. With respect to environmental and economic considerations, the Authority seeks to reduce pollution entering San Diego Bay from storm water discharges and to protect and promote the public health, safety, and general prosperity of its tenants and the public, and to protect the natural resources and environment by attaining the following objectives as stated in the Storm Water Code:

- Reduce storm water runoff pollution
- Reduce non-storm water discharges to the storm water conveyance system and receiving waters to the MEP
- Comply with all federal and state laws, lawful standards, and orders applicable to storm water and urban runoff pollution control
- Prohibit any discharge that may interfere with the operation of, or cause damage to, the storm water conveyance system, or contribute to the impairment of the beneficial use or violation of a water quality objective of the receiving waters
- Prohibit illegal discharges and illicit connections to the storm water conveyance system and receiving waters
- Develop and implement effective educational outreach programs to educate the public, Authority employees, and tenants on issues of storm water and urban runoff pollution prevention

The Storm Water Code provides for the prevention, control, treatment, diversion, and regulation of discharges to the storm water conveyance system and receiving waters, through a program of education and enforcement of general and specific prohibitions and requirements. The Storm Water Code applies to all dischargers and places located on property within the Authority's jurisdiction that discharge storm water or non-storm water into any storm water conveyance system or receiving waters. The Authority's President/CEO or his or her designee administers, implements, and enforces the provisions of the Storm Water Code.

Any person violating any of the provisions or failing to comply with the mandatory requirements of the Storm Water Code is guilty of a misdemeanor unless such violation or failure is declared to be an infraction by the Code.

2.2.1 CERTIFICATION OF LEGAL AUTHORITY

Attached at the front of this SWMP is the Authorization from the Authority's President/CEO to assign the Director of the EAD as the Duly Authorized Representative [40 CFR 122.22(b)] i.e., the position having responsibility for overall operation of facilities and activities regulated by the Industrial Permit and Municipal Permit, and a signed, certified statement [40 CFR 122.22(d)] from the Duly Authorized Representative, as required by Municipal Permit Attachment B, Provision 1.k. As such, the Director of the EAD signs and certifies all reports and other information required by an NPDES Permit or requested by the USEPA, SWRCB, or Regional Water Board.

2.3 ENFORCEMENT

The Authority's EAD staff members (and other appropriate Authority staff members) are required to inspect Authority, airport tenant operations/activities, and construction areas and activities for compliance with all storm water pollution prevention requirements. If an incidence or evidence of noncompliance is observed, the inspector has the authority to enforce storm water pollution prevention requirements by implementing the Authority Storm Water Code. An escalation in enforcement is typically applied by Authority staff to stop and correct incidents of noncompliance, as described below.

Depending on the severity of the violation, enforcement can range from a verbal warning to civil and/or criminal court actions. In addition, if the noncompliance is the result of negligence by Authority staff, the enforcement action may include disciplinary action. If the noncompliance is a result of negligence by a contractor to the Authority, the enforcement action could range from a verbal warning to withholding of contract payment, assessment of fines, civil and/or criminal court actions. The Authority enforcement program seeks to accomplish the following goals:

- Limit environmental impacts resulting from noncompliant activities or conditions
- Educate the regulated community (Authority staff, airport tenants and service providers, and contractors)
- Promote compliance with laws and regulations
- Return violators to compliance in a timely manner
- Initiate and conclude enforcement activities in a timely manner
- Penalize violators, as appropriate, and deprive violators of any significant benefit gained from violations
- Prevent any business from having an unfair business advantage through noncompliance

- Treat similar airport tenants, service providers, and contractors equally and consistently with regard to the same types of violations

The Authority employs several enforcement mechanisms and penalties to ensure compliance with its ordinances. The levels of enforcement and associated penalties are typically issued and escalated at the discretion of the enforcement officer with consideration of relevant circumstances regarding the violation.

The EAD will conduct follow-up inspections to determine whether corrective actions have been taken in accordance with the corrective action orders, the Authority's ordinances, and the minimum BMP requirements. Escalating enforcement procedures, which provide flexibility in the establishment of appropriate compliance time frames, are implemented as needed. The procedures for escalated enforcement specific to each component are described in their corresponding sections (Sections 3.7, 4.9, 5.6, 6.10, and 7.0). If a significant and/or immediate threat to water quality is observed, appropriate actions will be taken to require the responsible party to immediately cease the discharge and/or correct the situation.

Sections 2.3.1 through 2.3.9 discuss typical escalating enforcement procedures.

2.3.1 VERBAL WARNINGS

A common initial method of requesting corrective action and enforcing compliance is a verbal warning from the inspector to the responsible party. Verbal warnings are often sufficient to achieve correction of the violation, often while the inspector is present. The inspector will notify the responsible party and the facility/operation supervisor of the violation, and will document the violation and the notification to the project supervisor in the inspection file. A specific time frame for correcting the problem and a follow-up inspection date will be documented by the inspector. In judging the degree of severity, the inspector may also take into account any history of similar or repeated violations by the responsible party at this or other sites.

2.3.2 WRITTEN WARNINGS

If the deficiency noted in a verbal warning is not corrected by the next inspection, or if the severity of the violation is such that a verbal warning is not considered sufficient, a written notice will be issued that describes the infraction that is to be corrected, the time frame for correction, and the date for a follow-up inspection. A copy of the notice should be given to the responsible party and facility/operation supervisor and placed in the inspection file. If the violation has been corrected to the satisfaction of the inspector, the inspector will document compliance in the inspection file.

2.3.3 DISCIPLINARY ACTIONS

If an Authority employee is responsible for the noncompliant activities, the Authority may choose to take disciplinary actions against the employee in accordance with established procedures.

2.3.4 ENFORCEMENT OF CONTRACTS, LEASES, OR USE PERMITS

If a contractor or developer is performing contract work for the Authority, the Authority may use the provisions within the contract to correct noncompliant activities or conditions. The Authority generally adds language into all contracts that gives the right to refuse payment, stop work (without time penalties), or revoke the contract if the contractors' performance does not comply with appropriate permits, laws, regulations, and ordinances. Similarly, for tenant projects, the Authority may use provisions within the lease or use permit to correct noncompliant activities or conditions. This mechanism is typically preferred to other legal actions.

2.3.5 CEASE AND DESIST ORDER

If the deficiency noted in an initial warning is not corrected by the follow-up inspection, or if the severity of the violation is such that a warning is not considered sufficient, a Cease and Desist Order (CDO) may be issued. A warning may be insufficient if, for example, there is a significant and/or immediate threat to water quality. CDOs are administrative orders issued to cease and desist all activities that may cause or contribute to a violation and to stop illegal discharges and/or illicit connections. CDOs typically require compliance within a designated time frame and remedial or preventive actions to prevent the violation from recurring. Conditions that might warrant such action include observation of runoff from an industrial or commercial area or activity that is not reasonably controlled by protective measures or observation of a failure in BMPs that results in or potentially results in a release of pollutants to a degree that may substantially degrade water quality.

2.3.6 NOTICE AND ORDER TO CLEAN, TEST, OR ABATE

These are written and/or verbal orders to perform activities listed in the Authority's Storm Water Code. Activities may include development of a SWPPP, BMP implementation, testing, monitoring, and/or mitigation.

2.3.7 FINES

Costs or fines associated with pollution detection and abatement, in addition to other penalties, are the responsibility of the property owner or tenant. These costs may be made in lien against the owner's or tenants' property in accordance with the Uniform Public Nuisance Abatement.

2.3.8 CIVIL AND CRIMINAL COURT ACTIONS

Civil and criminal court actions may be taken under Section 8.76 of the Storm Water Code, the State Porter Cologne Water Quality Act, or the Federal Clean Water Act.

Section 8.76(d) of the Storm Water Code makes a violation either a misdemeanor offense or an infraction, at the discretion of the Executive Director. Infractions are punishable by a fine not to exceed \$100 for the first violation and \$250 for the second violation of the same provision within a year of the first violation. Third violations are misdemeanor offenses subject to a fine and/or imprisonment.

The Authority may use civil and/or criminal court action under the Porter-Cologne Water Quality Act, the Federal Clean Water Act, or other applicable statute as an enforcement mechanism. Civil and criminal court actions under the State Porter-Cologne Water Quality Act may result in fines ranging from \$100 to \$15,000 per day per violation and \$10 to \$20 per gallon of polluted discharge. Penalties under the Federal Clean Water Act may result in fines ranging from \$2,500 to \$50,000 per day per violation and/or one to three years of imprisonment for first offenders. Repeat offenders face double the penalties.

2.3.9 BONDING REQUIREMENTS AND LIENS

All pollution detection and abatement costs may be made in lien against the owners' or tenants' property in accordance with the Uniform Public Nuisance Abatement Procedure to assist in the collection of penalties and/or abatement, pollution detection, or administrative costs. An authorized enforcement official may determine that posting of a bond is necessary to ensure that a violation is corrected.

3.0 NON-STORM WATER DISCHARGES/ILLICIT DISCHARGE DETECTION AND ELIMINATION

3.1 INTRODUCTION

This update to the Authority SWMP is in response to the requirements of the Municipal Permit and Industrial Permit. The Authority prohibits all types of non-storm water discharges into its MS4 unless such discharges are authorized by Section IV of the Industrial Permit, Provision E.2 of the Municipal Permit, or a separate NPDES permit. The Authority is required by both the Municipal Permit and Industrial Permit to eliminate unauthorized or illicit non-storm water discharges. If the Authority identifies a non-storm water discharge as a significant source of pollutants to the waters of the United States (receiving waters), both permits require the Authority to prohibit the discharge. Certain non-storm water discharges are authorized under the Municipal Permit if controls are in place to reduce the discharge of pollutants to the MEP, or as prescribed in the permit. Under the Industrial Permit, non-storm water discharges are authorized if the Authority, in its SWPPP, (1) identifies the sources of pollution that potentially affect the quality of authorized non-storm water discharges, and (2) describes and ensures the implementation of BMPs to reduce or prevent pollutants in authorized non-storm water discharges using BAT and BCT.

Section 3.0 addresses the requirements in Municipal Permit Provisions D.2.b, D.4.b(1), E.2, and E.7.a and Industrial Permit Sections III, IV, VI, X.G.e, X.H.1 and XI.A for non-storm water discharges and illicit discharge detection and elimination.

The provisions of the Municipal Permit require the Authority to:

D.2.b—Develop an MS4 Outfall Discharge Monitoring Program to detect discharges from MS4 outfalls during dry weather. The monitoring program requirements include field screening and non-storm water persistent flow monitoring. Section 3.6.4 and Appendix D-2 have been prepared to address this requirement.

D.4.b.(1)—Assess and report on the effectiveness of the MS4 Outfall Discharge Monitoring Program in effectively reducing, eliminating, or prohibiting non-storm water and illicit discharges, and identify any modifications needed to increase the effectiveness of the program. Section 3.8 and Appendix D-2 have been prepared to address this requirement.

E.2.a—Establish an IDDE program, in accordance with the WQIP strategies, to actively seek and eliminate illicit discharges and connections to the storm drain system. This program provides a framework for the detection, investigation, follow-up, and elimination of reported violations. The program is designed to be adaptive and to allow the Authority to periodically assess data, re-evaluate areas of concern, and concentrate control methods and corrective actions as necessary in those areas. Municipal Permit Provision E.2.a requires all non-storm water discharges to be treated as an illicit discharge unless the discharge is (1) authorized under a separate NPDES permit, (2) identified as an allowable discharge as outlined in Municipal Permit Provision E.2.a.(3) and not as a source of pollutants to receiving waters, or (3) identified as an allowable discharge as outlined in Municipal Permit Provisions E.2.a.(4) or E.2.a.(5) and controlled using the measures detailed in those sections of the permit or in the WQIP. Section 3.5 and Appendix D-2 have been prepared to address this requirement.

E.2.b—Update its MS4 inventory and drainage area map to include all areas of the MS4 that are owned, operated, or maintained by the Authority; locations of discharge inlets and all outfalls; known connections with other MS4s; any segments of receiving water within the Authority’s jurisdiction that are affected by its MS4 discharges; and locations of any outfalls with non-storm water persistent flow, identified during outfall field screening. Authority employees and contractors are encouraged to be vigilant in identifying and reporting illicit discharges and connections during daily activities. Reporting should include a public hotline and email address to receive reports. The Authority should designate and implement response procedures for illicit discharges to prevent discharges from reaching the MS4, including control of spills, prevention of seepage from sanitary sewers to the MS4, and coordination with other upstream Copermittees to prevent illicit discharges from entering the MS4 within the Authority’s jurisdiction. Sections 3.5, 3.6.4, and 3.7 have been prepared to address this requirement.

E.2.c—Implement a strategy for field screening the MS4 within its jurisdiction to detect non-storm water discharges and connections to the MS4. Section 3.6 and Appendix D-2 has been prepared to address this requirement.

E.2.d—Develop a timeline and prioritization for responding to reports or observations of non-storm water or illicit discharges, using the criteria detailed in Municipal Permit Provision E.2.d.(1). These criteria include whether or not pollutants are (1) classified as highest or focused priority pollutants in the WQIP; (2) listed on the 303(d) list for the receiving water; (3) used within the Authority’s jurisdiction; (4) causing an exceedance to a Numeric Action Level (NAL), or (5) posing a threat to human health or the environment. The Authority must implement investigation procedures to determine the validity of each report, prioritize responses, respond and investigate, attempt to identify the source of the discharge, assess and reclassify discharges if necessary, and maintain records of the report and actions taken. The Authority is also required to implement procedures to eliminate illicit discharges and connections to its MS4 by enforcing its legal authority and implementing the Enforcement Response Plan (ERP) required under Municipal Permit Provision E.6. A summary of the non-storm water and illicit discharges, investigations, and actions to eliminate the discharges must be included in the WQIP. Sections 3.6 and 3.7 have been prepared to address this requirement.

The Industrial Permit requires the Authority to:

III.—Effectively prohibit all non-storm water discharges, with the exception of those authorized by the Industrial Permit or by other NPDES permits. Sections 3.1.1 to 3.4 have been prepared to address this requirement.

IV.A—Ensure that all authorized non-storm water discharges, as listed in Industrial Permit Section IV.A, meet the conditions described in Industrial Permit Section IV.B. Sections 3.1.1 and 3.2 have been prepared to address these requirements.

IV.B—Ensure that any authorized non-storm water discharges do not violate the San Diego Basin Plan, applicable water quality standards, or any applicable Authority ordinance or code, and implement BMPs to reduce or prevent pollutants in authorized non-storm water discharges as well as the flow or volume of those discharges to the MEP, by using BAT/BCT. The Authority should conduct monthly visual observations of authorized non-storm water discharges to ensure effective BMP implementation and report all authorized non-storm water discharges in the Industrial Annual Report. Sections 3.6.4 and 7.5.3 have been prepared to address this requirement.

VI—Ensure that authorized non-storm water discharges, once they reach receiving waters, do not contribute to water quality impairments, cause exceedances in water quality standards, threaten human health or the environment, or contain pollutants that contribute to overall pollution or public nuisance. Sections 3.6.1 and 7.5.4 have been prepared to address this requirement.

X.G.e—Evaluate the facility to identify all non-storm water discharges, including their sources and drainage areas. The Authority is required to evaluate all drains connected to the MS4 and describe the process by which all unauthorized non-storm water discharges have been eliminated. The Authority is also required to include in this SWMP the source, quantity, frequency, characteristics, and drainage areas of all non-storm water discharges, and whether they are authorized or unauthorized. Section 7.7 and 7.8.4.2 has been prepared to address this requirement.

X.H.1—Implement and maintain a minimum set of BMPs to prevent spills and illicit discharges from entering the storm drain system and to minimize authorized non-storm water discharges. Sections 3.2, 3.4, and 7.7.4 have been prepared to address this requirement.

XI.A—At least once per month during daylight hours of a dry weather period, visually observe each drainage area, including all industrial operational areas and equipment and material storage areas, for authorized or unauthorized non-storm water discharges and the associated BMPs and their effectiveness. These monthly visual observations and facility inspections actively seek to detect and eliminate illicit discharges, and help determine the effectiveness of BMPs in minimizing and controlling authorized non-storm water discharges. Sections 3.6.4 and 7.8.4.2, and Appendix D-1 have been prepared to address this requirement.

3.1.1 AUTHORIZED NON-STORM WATER DISCHARGES

The Municipal Permit and/or the Industrial Permit allow the following non-storm water discharges at SAN provided that they have not been identified as a source of pollutants to receiving waters, and are either permitted under another NPDES permit or are controlled using the BMPs outlined in this SWMP, which include measures specified in the Municipal Permit or in the WQIP to prevent contact with pollutants and reduce the flow and volume of those discharges:

- Fire prevention system flushing/testing
- Potable water sources and system flushing/testing
- Drinking water fountains
- Air conditioning, refrigeration and compressor condensate
- Landscape irrigation, provided that integrated pest management has been utilized
- Uncontaminated natural springs, groundwater, and foundation and footing drainage
- Tidal intrusion
- Incidental windblown mist from cooling towers

The authorized non-storm water discharges are in compliance with the Municipal Permit and Industrial Permit if they meet the following conditions:

- The non-storm water discharges are in compliance with the San Diego Basin Plan and statewide water quality control plans and requirements.
- The non-storm water discharges are in compliance with any Authority ordinances, codes, or requirements.

- BMPs are specifically included in the SWMP to prevent or reduce the contact of non-storm water discharges with significant materials or equipment; minimize, to the MEP, the flow or volume of non-storm water discharges; ensure that non-storm water discharges do not contain quantities of pollutants that result in water quality exceedances; and reduce or prevent discharges of pollutants in non-storm water discharges using BAT/BCT.
- The non-storm water discharges are listed as an authorized non-storm water discharge under the Industrial Permit Section IV.A.
- The monitoring program includes monthly visual observations of each non-storm water discharge and its source to ensure that BMPs are being implemented and are effective.
- The non-storm water discharges have not been identified by the Regional Water Board as a source of pollutants to receiving water.
- Any non-storm water discharges listed in Provision E.2.a.(4) of the Municipal Permit that are applicable to the Authority are identified and controlled in accordance with the requirements under that provision.
- Firefighting discharges are not identified as a significant source of pollutants. Authorized firefighting discharges must be controlled by the requirements under Provision E.2.a.(5) of the Municipal Permit, as described in Section 3.2.
- The non-storm water discharges are described and reported in the Annual Reports.

3.1.2 SOURCE CHARACTERIZATION

Potential non-storm water discharges at SAN include these sources: groundwater, water from crawl space pumps and footing drains, air conditioning and cooling plant condensation and mist, landscape irrigation, potable water flushing, eye wash station testing, water fountains, hose bibs, fire hydrant and sprinkler system flushing, non-emergency and emergency firefighting flows, and tidal intrusion into the MS4. The potential for these non-storm water discharges to be a source of pollutants to the receiving water is discussed below.

GROUNDWATER, WATER FROM CRAWL SPACES, AND FOOTING DRAINS

The elevation and proximity of SAN in relation to San Diego Bay creates a relatively shallow groundwater table, generally approximately 10 to 15 feet below the ground surface, with depth to groundwater increasing to the northeast, away from San Diego Bay. Groundwater elevations vary around SAN and fluctuations occur during and following periods of heavy rain. The shallow groundwater tends to infiltrate into below-grade structures at the airport, including utility vaults, below-grade crawl spaces, footing drains, and the storm drain system itself. The Industrial Permit authorizes these non-storm water discharges as long as the discharger meets the conditions identified in Section IV.B of the Industrial Permit. Discharges from rising groundwater or groundwater infiltration to the MS4 and any water pumped from footing drains above the groundwater table are authorized with common-sense control measures in place as outlined in Section 3.2.

AIR CONDITIONING AND COOLING PLANT CONDENSATION

Air conditioners are located throughout the Authority and are used for environment and equipment cooling. Condensate is regularly discharged from air conditioners, although most discharge rates are extremely low, and air conditioning condensate in passenger boarding bridges in drainage basins 8, 12 and 15 is captured and reused in power washing activities (in 2014, 5,225 gallons of condensate were captured this way). Air conditioner condensate may contact contaminants if allowed to flow through areas where significant materials, oil from parking lots, sediment, trash, and construction debris may potentially be carried into the storm drain system by the discharge.

The cooling plant in the Terminal 2 parking lot (Drainage Basin 9) upgraded as a part of the Green Build construction project includes four electric centrifugal chillers, four cooling towers with condenser water pumps for individual tower bypass, and a primary, secondary, and tertiary chilled water system to improve cooling of the airport terminals. These cooling devices dispense water through mist, evaporation, and blowdown, which may collect on rooftops and adjacent structures. Cooling towers generally evaporate 3 gallons of water per minute for every 100 tons of cooling. Metals and debris from rooftops may potentially be carried into the storm drain system by the condensate mist. Control measures to address the potential for air conditioner and cooling plant condensate to transport pollutants to receiving waters are described in Section 3.2.

LANDSCAPE IRRIGATION

Landscape irrigation constitutes a small portion of the potable water usage at SAN, (6 million gallons in 2012, before completion of xeriscaping), due in part to the limited landscape acreage (approximately 18 acres) in drainage basins 1, 3, 5, 6, 7, 8, 9, 10, and 11 and the use of xeriscaping to help reduce the need for irrigation, including planting indigenous and drought-tolerant plants. For example, water-intensive shrubs were replaced with turf and drought-tolerant trees in front of the Terminal 1 check-in building. SAN has also used a satellite water-tracking system to determine the airport's watering needs; this system is expected to save approximately 9 million gallons of water each year. Approximately 2 acres of bioswales and 1.25 acres of bioretention swales have been installed in the last three years as part of SAN's Green Build low-impact development projects. These areas will require additional landscaping and irrigation. This non-storm water discharge is authorized by the Authority, since it is an authorized discharge under the Industrial Permit, provided that integrated pest management practices have been used and industry standard control measures are implemented in regard to the landscape irrigation discharges as outlined in Section 3.2.

POTABLE WATER, HOSE BIBS, AND EYE WASH STATIONS

Each of the airline passenger loading/unloading gates at Terminals 1 and 2 (drainage basins 8, 12 and 15) features a potable water supply cabinet with a hose to dispense potable water to the aircraft. Proper use and maintenance of the water cabinets requires potable water to be flushed from the system and if possible, flushed water should be captured for non-potable reuse or reduced to a minimum flushing time onto the ramp area.

A drinking water fountain was installed outside of the Terminal 2 West baggage claim area. The water is contained and is pumped back through the back flow system, where it is treated for algae. The water fountain is flushed directly into the sanitary sewer annually.

Hose bibs are installed around the perimeter of the terminals for connection to hoses. Hose bibs can be locked and use is limited. These hose bibs provide the opportunity for non-storm water discharge.

Eye wash stations are located outside most gates along Terminals 1 and 2 for emergency purposes. This equipment requires monthly testing, during which water is released onto the ramp.

Water discharged from these sources may contact contaminants if allowed to flow through areas where significant materials, oil, sediment, trash, and construction debris may potentially be carried into the storm drain system by the discharge. Control measures to address the potential for potable water flushing, drinking water fountain leaks, hose bibs, and eye wash station testing to transport pollutants to receiving waters are described in Section 3.2.

FIRE HYDRANT FLUSHING

The City of San Diego Water Department generally maintains the water mains and fire hydrants at SAN. However, Allied Aviation performs annual flush testing of fire hydrants in its operating area, (Drainage Basin 6) and the Authority FMD responds to minor leaks and breaks throughout the airport. Fire hydrant

flushing has the potential to transport pollutants to receiving waters if the discharge is allowed to flow through areas where significant materials, oil, sediment, trash, and construction debris may potentially be carried into the storm drain system. Fire hydrant or fire response system flushing is an authorized discharge under the Industrial Permit only if the discharge meets the conditions provided in Section IV.B. The Industrial Permit requires BMPs to be used for those non-prohibited discharges, as outlined in Section 3.2.

NON-EMERGENCY FIREFIGHTING FLOWS

The ARFF and Allied Aviation (in Drainage Basin 6) are the only facilities at SAN that operate and maintain fire suppression systems and/or perform firefighting activities. Non-emergency firefighting flows at SAN generally fall into two categories: (1) discharges from building fire suppression systems during installation, maintenance, or testing; and (2) discharges of potable water and/or potable water mixed with firefighting foaming agents from the ARFF rigs during firefighting practice drills and other exercises. Quantities and frequencies involved are outlined in Section 3.2. Allied Aviation maintains fire suppression systems surrounding oil storage areas and regularly tests the foam-to-water ratio of their equipment. Once potable water has been left to stand in building fire suppression systems or mixed with foaming agents, the water becomes contaminated and serves as a transport mechanism for pollutants. Discharges of potable water from the ARFF equipment during firefighting practice drills and equipment testing have the potential to transport foaming agents or other pollutants to receiving waters if the discharge is allowed to flow through areas where significant materials, oil, sediment, trash, and construction debris may potentially be carried into the storm drain system. Not all the activities conducted at the ARFF station that generate non-storm water discharges are considered non-emergency firefighting flows. Routine vehicle and equipment cleaning is conducted either at the SAN wash rack or in a nearby permeable area. The Authority requires the implementation of various BMPs to address these types of activities.

The Authority allows non-emergency firefighting equipment testing to be performed, but prohibits the discharge of non-emergency firefighting flows, which consist of potable water mixed with foaming agents, to the MS4. The proper disposal of non-emergency firefighting flows is discussed in Section 3.2.

TIDAL INTRUSION

Many of the outfalls from the storm drain system at SAN are submerged during high tides and even during low tides, allowing water from San Diego Bay to travel upstream in the storm water conveyance system. The tidal waters have the potential to transport back downstream to the receiving water any pollutants that have accumulated in the SAN storm water conveyance system. Pollutants from industrial operations, residue from spills of significant materials, construction debris, sediment, and oil from parking lots and streets have the potential to collect in the storm water conveyance system. Control measures to address the potential for tidal intrusion to transport pollutants to receiving waters are described in Section 3.2.

3.2 CONTROL MEASURES FOR AUTHORIZED NON-STORM WATER DISCHARGES

Authorized non-storm water discharge categories that may be sources of pollutants to receiving water without proper management and control are identified in Section 3.1.2. To prevent impacts to storm water quality, the Authority requires the use of BMPs designed to prevent these discharges from contacting pollutants, reduce the flow or volume of the discharges, or prevent these discharges from reaching the storm drain system. The Authority conducts regular inspections to ensure that these BMPs are properly and fully implemented. The BMPs required by the Authority for the non-storm water discharges identified above are discussed in this section. Monitoring and reporting of all non-storm water discharges as required by the applicable permits are described in Appendix D-1 and D-2 and Section 12.0.

GROUNDWATER, WATER FROM CRAWL SPACES, AND FOOTING DRAINS

While rising groundwaters, groundwater infiltration to the MS4, and any water pumped from footing drains above the groundwater table have not been identified as significant sources of storm water pollution, in addition to the standard airport-wide BMPs described in Appendix B, the following common-sense BMPs are generally applicable to these types of non-storm water discharges:

- Verify that the discharge does not originate from an area of known environmental contamination.
- Conduct a visual, olfactory inspection of the discharge to check that the discharge is free of obvious, observable pollutants.
- Prevent the discharge from contacting surface pollutants in the path of the discharge.
- Prevent discharges from entering the storm water conveyance system, if possible, by diverting the flow to a landscaped area, a pervious area, an impervious area where the discharge can evaporate, an OWS, or the sanitary sewer.

As indicated in Section 3.1.2, the Industrial Permit authorizes permittees to discharge water from crawl space pumps, uncontaminated pumped groundwater, and any water pumped from footing drains below the groundwater table as long as certain conditions identified in the permit are met.

AIR CONDITIONING AND COOLING PLANT CONDENSATE

Incidental air conditioning and cooling tower condensate has been identified as a source of storm water pollution only when allowed to contact pollutants lying in the path of the discharge. In addition to the standard airport-wide BMPs described in Appendix B, the following BMPs are applicable to air conditioning and cooling plant discharges:

- Monitor and control the amount of blow-down water or water lost to evaporation. To ensure the most efficient use of water, cooling towers can be equipped with automatic blowdown control systems or water flow meters to monitor water loss.
- Keep a log to track the make-up and blowdown quantities, conductivity, and cycles of concentration to detect leaks, excessive blowdown, or deterioration.
- Properly maintain the air conditioners and cooling towers to help reduce the amount of condensate discharged. Monitor water usage in cooling towers to track water loss and efficiency.
- Capture and reuse air conditioning condensate as appropriate.
- Prevent the discharge from contacting surface pollutants in the path of the discharge.
- Prevent discharges from entering the storm water conveyance system, if possible, by diverting the flow to a landscaped area or other pervious surface, an impervious area where the discharge can evaporate, an OWS or other treatment control or LID BMP, or the sanitary sewer.

LANDSCAPE IRRIGATION

Although the Municipal Permit prohibits discharges into the MS4 from over-irrigation because it has been found to be a source of pollutants such as nutrients, bacteria, pesticides and sediment, the Industrial Permit authorizes landscape irrigation as a non-storm water discharge provided that integrated pest management is implemented and BMPs are implemented to minimize, prevent or control those discharges. The following BMPs are utilized during landscape irrigation to minimize, to the extent practicable, the volume of the non-storm water discharges and to prevent these discharges from contacting sources of pollution:

- Utilize native plants to reduce the need for irrigation and fertilization. Perform soil analysis seasonally to determine appropriate fertilization requirements and minimize the use of chemical fertilizers.
- Apply pesticides, herbicides, and fertilizers as needed and in accordance with manufacturer instructions to maximize the utility of the product and minimize the potential for product residue to contact irrigation runoff. Do not use pesticides or herbicides if a rain event is expected. Do not apply pesticides or herbicides during periods of high wind.
- Combat weeds by hand pulling when feasible. Use herbicides only as a last resort.
- Properly dispose of landscaped materials in the garbage or compost. If immediate disposal is not feasible, store landscaped materials and vegetation debris in areas that are covered or otherwise protected from wind and rain dispersal.
- Avoid exposed soils by revegetating or temporarily covering these areas.
- Do not water during a rain event or at least 48 hours following a rain event.
- Employ water conservation practices, such as:
 - Water a maximum of two days per week.
 - Limit watering days to Mondays and Fridays. Exceptions include:
 - Irrigation with a landscape permit.
 - Erosion control.
 - Landscape establishment following a disaster.
 - When using a standard sprinkler system, limit watering duration to 5 minutes between the hours of 4:00 pm to 10:00 am from November 1 to May 31 and 6:00 pm to 10:00 am from June 1 to October 31.
 - When available, use recycled or reclaimed water for landscaping purposes.
 - Use automatic sprinkler timers. Automatic sprinklers, when properly set, minimize runoff by turning off the system at the appropriate intervals.
 - Where automatic sprinkler timers are not used, periodically observe the area being watered.
 - Conduct weekly observations to identify and correct damaged sprinkler systems and to adjust sprinkler heads. The landscaped or vegetated LID areas should also be observed for prevention of over-watering and runoff.
 - Assess the soil moisture and depth and utilize the Authority’s satellite water-tracking system to determine accuracy of irrigation schedules.
 - Use water delivery rates that do not exceed the infiltration rate of the soil, but instead minimize ponding and runoff and allow water to infiltrate into the soil.

- If a rain event is predicted, temporarily turn off sprinkler systems or use smart controllers to avoid over-watering and runoff.
- Avoid overspray outside of the landscaped areas and adjust irrigation systems to prevent overspray, minimize or eliminate runoff, and prevent contact with surface pollutants.
- Use micro-irrigation systems (e.g., drip irrigation).
- Use a control nozzle if watering by hand to avoid runoff.
- Avoid placing, storing, or parking equipment and vehicles in areas being irrigated to minimize the potential for runoff caused by blocking the spray or water delivery patterns. In this way, the potential for inadvertent runoff to contact pollutants is precluded.

POTABLE WATER FLUSHING, HOSE BIBS, AND EYE WASH STATION TESTING

While potable water flushing has been identified as a source of storm water pollution only when the water is allowed to contact pollutants lying in the path of the discharge, in addition to the standard airport-wide BMPs described in Appendix B, the following BMPs are generally applicable to potable water flushing discharges:

- Minimize flushing time and volume of water released.
- Do not perform flushing activities near storm drains or in a manner that discharges water directly to a storm drain, but rather flush water in a manner and direction that allow the water to pond on the surface and evaporate without ever reaching a storm drain.
- Capture and reuse released potable water, where possible.
- Flush water to a landscaped area, or other pervious surface, if possible.
- Flush water in a manner and direction that prevents the discharge from contacting surface pollutants in the path of the discharge.

Further BMPs applicable to hose bibs and eye wash stations include the following:

- Lock hose bibs to limit excessive usage.
- Post signs at hose bibs to discourage use.
- Inspect eye wash stations when necessary and release only minimal water so that it evaporates before reaching the storm drain.

Inspect eye wash stations and hose bibs for signs of leaking.

FIRE HYDRANT FLUSHING

Fire hydrant flushing has been identified as a source of storm water pollution only when the water is allowed to contact pollutants lying in the path of the discharge. Fire hydrant flushing and maintenance activities are authorized under the Industrial Permit Section IV.A, provided that they meet the conditions in Section IV.B. BMPs should be implemented to minimize contact between pollutants and flows, minimize the potential for erosion from any nearby landscaped areas, and use treatment control BMPs, where applicable, to treat the discharge to remove pollutants before entering the MS4. The City of San Diego Water Department flushes fire hydrants at SAN once per year. Allied Aviation's annual flushing activities are performed in a bermed area and nearby storm drains are covered. All waste water and foam is contained and collected for offsite disposal.

- **Fire Suppression System Installation, Maintenance, and Testing:** Potable water that has been left to stand in a building fire suppression system has a significant potential to carry pollutants, especially over time, as the water tends to stagnate and undergo various physical and chemical changes. As such, the Authority requires the following BMPs be implemented to address the discharge of this type of water:
 - Obtain the proper permit(s) from the City of San Diego MWWD to discharge the water directly to the sanitary sewer.
 - Discharge the water directly into a tanker truck for proper disposal offsite.
 - Capture the discharge in a holding tank or lined, bermed area or sump of sufficient capacity to store the water prior to discharge to an on-site sewer under proper permit(s) from MWWD or prior to transferring the water to a tanker truck for proper disposal offsite. In addition, berm or block storm drains located close to or within the test area to prevent any risk of seepage into the MS4.
 - Direct flows to nearby landscaped or pervious area to infiltrate or evaporate during dry weather.
 - Direct flows to a contained area and collect using a wet vacuum or equivalent, and properly dispose of collected water. Remove any residue in contained area and do not perform during rain events.

If the methods above cannot be used, pollutants in the path of the discharge should be removed and the flow should be mechanically filtered with an appropriate filter to treat the expected pollutants, so that the discharge to the storm drain is a clear, odorless, pH neutral liquid.

NON-EMERGENCY FIREFIGHTING FLOWS

Non-emergency firefighting flows that have the potential to transport pollutants to receiving waters include potable water that has been mixed with firefighting foaming agents, or potable water discharged from the ARFF rigs during firefighting practice drills and other exercises if allowed to contact pollutants lying in the path of the discharge. Fire hydrants will be used only to fight fires and to maintain human health and safety. The Authority requires implementation of the following BMPs to reduce pollutants in non-emergency firefighting flows to the MEP and using BAT/BCT:

1) Firefighting Foam Discharge

While firefighting equipment is tested annually at Allied Aviation's Fuel Storage Facility (FSF), the test is conducted using water only and the water is discharged into storm drains connected to the onsite OWS. At the FSF foam house, the test ports inside the house are used to test the water-to-foam ratio; however, no foam discharge is created in this process. During all equipment and facility testing, the test area is bermed and all waste water is collected and disposed offsite.

Firefighting foam testing is performed only by ARFF. ARFF performs its testing once per year north of the north ramp, using approximately 1,000 gallons of water and 50 gallons of 3 percent foaming agent. Although the entire north ramp drainage area is connected to OWSs, these systems are used only as a back-up fail-safe. The slit drainage trench is blocked off from the storm drain system by sandbags prior to conducting the foam test, allowing the foam to be captured in the slit trench, but preventing the foam from entering the storm drain. All of the foam is then vacuumed into a tanker truck and properly disposed of to an onsite sanitary sewer under the proper permit from the Metropolitan Wastewater Department (MWWD).

2) Firefighting Training

Firefighting training typically involves discharges of potable water from the ARFF rigs. These discharges may transport storm water pollutants when allowed to contact contaminants lying in the path of the discharge. As such, in addition to the standard airport-wide BMPs described in Appendix B, the following BMPs are generally applicable to firefighting training discharges:

- Pre-plan training exercises to allow integration of structural BMPs to control runoff.
- Use lower gallon per minute (GPM) nozzle settings.
- Use fog streams for short durations and change the direction of discharge as frequently as possible.
- Avoid training activities and discharges near storm drains and do not discharge water directly to a storm drain.
- Discharge water in the direction of landscaped or pervious areas whenever possible.
- Discharge water in a manner and direction that allows the water to pond on the surface and evaporate without ever reaching a storm drain.
- Utilize techniques for storm drain inlet protection when possible.
- Remove debris from adjacent curbs or inlets when possible.
- Prior to training, inspect the training area to avoid transporting debris to the storm drain system through flows produced during training.
- Utilize techniques for berming or diking the discharge to allow evaporation whenever possible.
- Utilize techniques for velocity reduction (energy dissipaters) when possible.
- Utilize techniques for sediment control in training whenever possible.
- Discharge water in a manner and direction that maximize either or both the time and/or distance required for the discharge to reach the storm drain system, such that the potential for evaporation is also maximized.
- Discharge water in a manner and direction that prevents the discharge from contacting surface pollutants in the path of the discharge.

TIDAL INTRUSION

Tidal intrusion has been identified as a source of water quality impact to receiving waters only when pollutants are allowed to accumulate in the SAN storm water drain system and then be carried downstream by the receding tidal flow. To prevent these potential impacts, the Authority regularly inspects and cleans the storm drain system to reduce potential pollutants from coming into contact with tidal flows. The Authority's monthly inspection program is more fully described in Section 7.8.4. In addition to the standard airport-wide BMPs described in Appendix B, the following BMPs are employed to maintain a clean storm drain system:

- Perform monthly and additional ad hoc inspections of the MS4.
- Perform annual inspection of all storm water conveyance systems. Daily, inspect the sump by the trash compactor, OWS near the Aircraft Service International Group (ASIG) fueling facility, and storm drain near the California Least Turn nesting areas.

- Perform annual cleaning of all OWSs and underground storm drain pipes, quarterly cleaning of drop inlet, curb inlet, trench drains, slit drains, and high priority catch basins located near terminal areas. Additional storm drains are cleaned as needed on the basis of year-round ad hoc inspections, monthly and after each storm event during the wet season.
- Install and maintain screens in front of curb inlets on the southern side of SAN. Additional screens will be installed as necessary.
- Keep accurate logs on cleaning and maintenance of the storm drain system.
- Maintain a clean and waste-free facility by using foreign object damage (FOD) buckets, performing frequent dumpster service, and cleaning all dumpsters, compactors, and trash haulers.

3.3 UNAUTHORIZED NON-STORM WATER DISCHARGES

The following discharges are prohibited in accordance with the Industrial and/or Municipal Permits unless otherwise authorized by a separate NPDES permit:

- All non-storm water discharges that have not been identified as authorized in Section IV of the Industrial Permit
- Any authorized non-storm water discharges that contain pollutants that cause, or threaten to cause, contamination or nuisance of receiving water quality
- Discharges that violate prohibitions of applicable Regional Water Board Basin Plans or other statewide water quality control plans or policies
- Non-storm water discharges that contain hazardous material in concentrations exceeding the quantities listed under 40 CFR
- Discharges identified by the Regional Water Board as a source of pollutants to receiving water
- Discharges authorized by the Municipal or Industrial Permits, but not controlled in accordance with the Permit requirements
- Discharges from water line flushing and water main breaks, other than those authorized under the Industrial Permit, that have not received coverage under Permit CAG679001 (Order No. R9-2010-0003)
- Firefighting discharges that have been identified as a significant source of pollutants to receiving water.
- Any wash water, e.g., from vehicle, equipment, ground or building washing activities.

3.4 CONTROL MEASURES TO PREVENT UNAUTHORIZED NON-STORM WATER DISCHARGES

A full description of BMPs in place at SAN to prevent or eliminate unauthorized non-storm water discharges is in Appendix B. Examples of the potential sources of unauthorized non-storm water discharges at SAN and corresponding BMPs to prevent them include:

- **Aircraft and Vehicle Washing:** Washing of equipment, vehicles, and aircraft is prohibited by the Authority, unless it is performed at the designated wash areas located at the Wash Bay Facility, where wash water is collected and recycled, and the American Airlines aircraft wash rack. Both areas are bermed and direct all flow to a sump, an OWS, or the sanitary sewer. All fluids in the American Airlines facility go through an OWS and are collected in a sump and then discharged to the sanitary sewer.

During a storm event, the valve is switched to discharge the storm water to the storm drain system and no washing is performed. The ASIG wash area drains to the sanitary sewer. The use of a control nozzle on all hoses is recommended to minimize the amount of water used. According to City of San Diego water conservation measures, vehicles, equipment, and aircraft should be washed only during the following time increments:

- November 1 to May 31: 4:00 pm to 10:00 am
- June 1 to October 31: 6:00 pm to 10:00 am
- **Erosion/Sediment Transport:** The amount of exposed soils at SAN should be minimized to the extent possible. For areas where soil is exposed, temporary erosion and sediment control measures can be used to minimize erosion of exposed soils and to minimize the potential for sediment transport (i.e., erosion control blankets, mulch, gravel bags, fiber rolls, and silt fences). These temporary BMPs require regular inspection and maintenance or replacement to check their effectiveness.
- **Aboveground Storage Tanks:** All ASTs are equipped with built-in cement secondary containment. ASTs used and maintained by the Authority are inspected daily by FMD and maintenance is performed as needed. The Authority ensures that all tenants perform inspection, maintenance, and safety protocols as required under their Use and Occupancy Permit if their operations require the use of ASTs.
- **Vehicle, Equipment and Material Leaks or Spills:** Preventive employee and tenant training, inspections, and vehicle and equipment maintenance activities are conducted regularly to reduce the potential for leaks and spills. All fuel operators are required to perform monthly testing of all fueling equipment. A full description of the Authority’s spill prevention and cleanup program is described in Section 3.5.3. Seven OWSs serve as a precautionary capture method for leaks and spills. Each installed OWS has an alarm system. If the oil reaches a certain level, or oil leaks to the ground, an alarm goes off. The capacities of the OWSs range from 3,000 to 40,000 gallons, depending on the respective loads anticipated in each area. If a spill occurs and must be diverted to an OWS, the person(s) who caused the spill is(are) responsible for cleaning out the OWS once the spill has been contained and the threat removed. The OWSs are inspected by the EAD and maintenance is conducted as needed.
- **Debris Accumulation:** Sweeping at SAN is conducted using mechanical and regenerative air sweepers. Roadway sweeping is conducted 5 days per week and daily sweeping is conducted within the aircraft operations area (AOA), including ramps, parking lots, perimeter roads, and construction areas. Each ramp area is on rotation throughout the week so that terminal and taxiway areas are swept at least once per week. As part of the SAN ramp-walk program, FMD inspects and sweeps up against each building every month.

3.5 ILLICIT DISCHARGE DETECTION AND ELIMINATION

As defined in the Municipal Permit, an illicit discharge is “any discharge to the MS4 that is not composed entirely of storm water except discharges pursuant to a NPDES permit and discharges resulting from firefighting activities.” Washwater, sediment, spilled chemicals, and other pollutants allowed to enter the storm drain system may contribute to the degradation of the local water quality. Releases from the sanitary sewer or private laterals can allow pathogens, ammonia, detergents, and other contaminants to enter the storm drain system.

Illicit connections are defined as “...any manmade conveyance or drainage system through which a non-storm water discharge to the storm water drainage system occurs or may occur. Any connection to the MS4 that conveys an illicit discharge...” These connections provide pathways for pollutants to enter the storm drain system. Improperly installed or defective rain diversion systems or devices that release pollutants into the storm drain system will also be considered illicit connections. A complete evaluation and

characterization of all non-storm water discharges, their sources, and drainage areas is included in Section 7.7.3.

The IDDE program incorporates several elements of the Authority's storm water management program to develop a comprehensive approach to preventing, detecting, and eliminating illicit discharges. Inspection, maintenance, and enforcement activities contribute to the identification of illicit discharges and the elimination of those detected. Often, when an illicit discharge is detected as a part of an inspection or maintenance program, it can be eliminated before it potentially affects a receiving water. Authority regulations prohibit illicit discharges. The Authority code can require a responsible party to conduct abatement activities to eliminate an illicit discharge, or allow the Authority to conduct those activities itself at the cost of the responsible party. Non-storm water discharge and IDDE enforcement programs are discussed below in Section 3.7.

Authority staff and airport tenants play an important role in the detection of illicit discharges. Education and outreach efforts for Authority staff and airport tenants are directed at storm and non-storm water pollution prevention, including the detection and elimination of illicit discharges. Education programs for the Authority staff are described in Section 9.0.

The Authority's dry weather monitoring programs or IDDE components are described in Appendix D-1 and D-2 of this SWMP. The following section discusses those IDDE program elements that are not described in Appendix D-1 and D-2.

3.5.1 PUBLIC REPORTING OF ILLICIT DISCHARGES AND CONNECTIONS

Public reporting mechanisms are an effective way to promote the reporting of illicit discharges. To meet the requirements of Provisions E.2.b.(3) and F.4 of Municipal Permit, the Authority promotes four primary mechanisms for reporting complaints or concerns regarding unauthorized non-storm water discharges: (1) the Authority Environmental Affairs Department main telephone line (619-400-2782) and webpage (<http://www.san.org/Airport-Projects/Environmental-Affairs>); (2) the SAN public reporting hotline (619-400-2710) and e-mail contact environmental@san.org for reporting non-storm water and illicit discharges; (3) the County of San Diego storm water hotline (888) 846-0800 and online complaint reporting forum (<http://www.projectcleanwater.org/html/complaints.html>), and (4) the THINK BLUE Hotline at (619-235-1000) and webpage (www.sandiego.gov/thinkblue) operated by the City of San Diego, which is available Monday through Friday, 8:00 a.m. to 5:00 p.m. and provides a voice mail message for 24-hour access in both English and Spanish. The hotline operators forward complaint information, as appropriate, to the Authority EAD for investigation and follow-up. The City of San Diego also offers an online storm water service request help line through which the public can report a violation through cell phone texts or the online mapping tool.

The Authority's SAN Operations Department storm water hotline is a 24-hour telephone line that allows Authority staff and airport tenants to report complaints or concerns regarding unauthorized non-storm water discharges. This reporting mechanism is promoted by including the telephone number on the back of SAN Security ID Badges that are issued at SAN.

Each call or email message that is forwarded to the Authority through these public reporting mechanisms is handled as an incoming complaint and entered into the Web-based database as a unique incoming record. The report includes the date the violation was reported, a description of the violation, its location, the SAN personnel notified, and whether or how the issue was addressed. All reported incidents, along with a description of how each one was investigated and/or resolved, will be summarized in the Annual Report required by the Municipal Permit.

3.5.2 TRASH POLLUTION PREVENTION

Litter and illegal dumping can be significant sources of pollutants if allowed to reach the storm drain. Trash is often transported in runoff and accumulates at storm drains or inlets. To reduce the amount of trash transported to receiving waters, the Authority conducts ramp sweeping four times per month and as needed or requested. Roadways leading into and out of SAN are swept daily; FMD also inspects and sweeps each terminal building up against the building every other month, as a part of the ramp-walk program. Every tenant is required to provide FOD containers on the ramp to deposit materials picked up on ramps and other areas inside the AOA. These containers are covered and emptied regularly. FOD walks are also conducted monthly to observe and pick up debris. If large amounts of debris are found in a tenant's operational area, a warning is provided and the tenant has three days to address the issue. Dumpsters and trash facilities are serviced several times throughout the day depending on the rate of accumulation. Tenants are encouraged to report overflowing trash facilities to FMD to prevent wind-blown litter. "No dumping" signs should also be posted along SAN's perimeter close to major roadways and walk ways. The Authority's Web-based database will be employed to track incidents of intentional littering or dumping. During monthly visual observations, inspectors will identify (if known) the illegal dumping hot spots, patterns and types of occurrence, mode of dumping, reporting mechanism, and known or suspected source or responsible party in the Web-based database.

3.5.3 SPILL PREVENTION, REPORTING, AND RESPONSE

The Authority has programs and procedures to prevent, respond to, contain, and clean up all sewage and other spills that may impact the storm drain system, as required by Provision E.2.b.(4) of the Municipal Permit. Many of the same programs and procedures are implemented as a requirement of Section X.H.1.c of the Industrial Permit. Potential pollution sources were evaluated and descriptions are included in Section 7.7.3.

3.5.3.1 Spill Prevention

SANITARY SEWERS

As discussed in Section 6.4 of this SWMP, the Authority's preventive and corrective sanitary sewer maintenance programs focus heavily on those areas of known problems or concerns. Known problem areas typically consist of the lines immediately downstream of food services, which have a tendency to be impacted by grease. For all locations, the Authority provides for or requires the food service provider (as a requirement of the lease) to conduct the minimum of annual routine monitoring, inspection, and cleaning. Wastewater from restaurants moves through three grease interceptors before entering the sanitary sewer system. Grease interceptors are maintained and cleaned every 1 to 2 months. When system malfunctions do occur, such as stoppages, the cause of the problem is investigated and analyzed. Maintenance schedules are then adjusted accordingly. If necessary, repairs are initiated by Authority maintenance crews or food service provider, as appropriate. If appropriate, the infrastructure component is referred for repair or replacement by maintenance crews. Larger, more complex issues generally become recommendations for capital improvement projects as part of the Authority budget planning and approval process (Section 10.0).

OTHER SPILLS

Refueling and equipment maintenance activities utilize jet fuel, aviation gas, hydraulic oils, oil, deicing fluids, degreasers, and other solvents. Because of the intensity of use, there is a higher possibility of significant spills of jet fuel. Jet fuel is stored in aboveground tanks at the FSF and distributed via pipeline to a RFF. The USEPA requires facilities with "an aggregate aboveground oil storage capacity greater than 1,320 U.S. gallons or a completely buried storage capacity greater than 42,000 U.S. gallons" (USEPA, 2015) to develop and implement a Spill Prevention Control and Countermeasure (SPCC) Plan. Every tenant who must file a SPCC Plan with the USEPA is also required to file a copy with the EAD. Tenants must also contract a hazardous materials emergency response and cleanup services provider and provide the

information to the SAN Operations and the EAD. Aircraft fueling is performed by a fleet of fuel trucks (containing several hundred gallons of fuel) operated by two refueling operations. The fuel trucks operate on the ramp areas of the main terminals, the FBO building, the air cargo area, and the overnight aircraft parking areas. The Authority requires the implementation of spill response BMPs, secondary containment, frequent inspection and maintenance of vehicles, equipment, and storage containers, and proper labeling and dating of material containers. Spills from tenants are reduced through the required use of BMPs, education, and enforcement of relevant regulations for the storage and usage of hazardous materials.

3.5.3.2 Spill Reporting

In the event of a spill, the responsible party (Authority staff or airport tenant) is required to contact SAN Operations (619-400-2710) in all cases, and ARFF if the spill (1) presents a fire hazard, (2) is an immediate human health hazard, (3) is over 10 feet in length or 50 square feet in area, (4) has a source that is continuous, and/or (5) cannot be cleaned immediately. If a vehicle or equipment spill or leak reaches a storm drain or inlet, and cannot be controlled or cleaned with onsite personnel and equipment, the person(s) causing the spill must report it to SAN Operations, the Harbor Police, the National Response Center, and the State of California Office of Emergency Management Agency. If the Authority determines that the incident endangers human health or the environment, then the Authority will provide verbal notification to the Regional Water Board within 24 hours from the time that the Authority becomes aware of the circumstances. The verbal report will include any unanticipated bypass or upset that exceeds any applicable effluent limitations and any violation of a maximum daily discharge limitation for pollutants listed in the permit to be reported within 24 hours. Within 5 days of the time that the Authority becomes aware of the circumstances, the Authority will provide the Regional Water Board with a written submission containing a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, whether the noncompliance has not been corrected, and the anticipated amount of time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The Authority will include a summary of the spill, its source, and the elimination procedures in the WQIP Annual Report, which includes a JRMP Annual Report form, as required by Provision F.3.b.(3) of the Municipal Permit. Any instances of noncompliance will be identified and explained in the Industrial Annual Report Compliance Checklist, as required by Section XVI.B.2 of the Industrial Permit.

3.5.3.3 Spill Response

Each tenant, contractor, or Authority staff member responsible for any spill of sewage or other material is also responsible for immediately responding to that spill. Immediate response to a spill helps to prevent an unauthorized release to the storm drain system and to prevent further contamination of storm water runoff due to spill residuals on the surface. The appropriate spill response includes carrying out appropriate notification procedures, stopping the source of the spill, containing the spill, implementing the proper cleanup procedures, immediately and properly disposing of the spilled materials and other items used for the cleanup, and maintaining records.

Each facility/operation that utilizes, stores, and/or generates hazardous materials is responsible for creating spill response procedures and ensuring that their employees are properly trained in those procedures. The MS4 and Industrial Permits require the preparation of spill response procedures, and those procedures are described below and in the "Spill Prevention, Control, and Cleanup" BMP (SR01) provided in Appendix B. Each airline tenant is responsible for maintaining spill response equipment in its terminal gate area. Spill response equipment includes absorbent materials, shovels, brooms, gloves, and other necessary items. In addition to spill response equipment maintained by the airline tenants and the fuel vendors, the Authority has established, and strategically located on the airfield, three spill response trailers with an adequate inventory of spill response equipment to respond to any spills, including a worst-case incident. Authority staff and airport tenant education and outreach efforts highlight the existence and intended use of these spill response trailers.

SMALL SPILL CLEANUP PROCEDURES

Small spills of jet fuel, hydraulic oil, lube oil, or lavatory wastes are generally efficiently cleaned up using bulk absorbent material. Absorbent is used as a dike to prevent spill migration into the storm drain system and is also used to absorb any ponded material. All waste sorbent and waste material should be stored in a Department of Transportation-approved drum that is properly labeled with the contents, generation date, and facility contact information.

LARGE SPILL CLEANUP PROCEDURES

In the case of a large spill, the responsibility for initial action remains with the party responsible for the spill. In the case of a large fuel or sewage spill, a systematic and controlled response is especially vital. The following procedures can be used as guidelines for responding to a large spill of fuel or petroleum products, and sewage spills. These activities should be performed as appropriate considering the details of the spill:

- Stop the source:
 - Shut off valves on aircraft or refueler trucks
 - Install plugs in ruptured tanks or valve fittings
 - Relocate leaking vehicle to nearby area of secondary containment
 - Transfer fuel into other vessels, tanker trucks, etc.
- Perform notifications:
 - Tenants Contact SAN Operations (619-400-2710) and SAN Rescue and Firefighting Facility (619-231-5204)
 - Harbor Police (619-686-8000)
 - National Response Center (800-424-8802 or 202-267-2675), as necessary or required by law
- SAN Operations Contact:
 - Authority Environmental Affairs (619-400-2782)
 - California Department of Fish and Game/Office of Spill Prevention and Response 24-hour hotline (916-445-9338) or CalTip line (888-334-2258), as necessary or required by law
 - State of California Office of Emergency Management Agency (800-852-7550 or 916-845-8911)
 - U.S. Coast Guard (619-683-6495), as necessary or required by law
 - Regional Water Board (619-516-1990), as necessary or required by law
 - USEPA Office of Emergency Services (800) 300-2193, as necessary or required by law
- Contain and absorb the spill:
 - Prevent the spill from reaching the storm drain.
 - Turn on emergency shutoff valves if they are installed in the nearby storm drains.
 - Create dikes with absorbent or other material.
 - Plug storm drain inlets with rubber mats and tarps and collect ponded materials by vacuum truck, drum-mounted vacuum, squeegee roller, or other means. If the spill is too large to control or if it reaches the storm drain, the person responsible for the spill should immediately contact a Hazardous Materials Contractor.

- Protect San Diego Bay, as necessary, by installing barrier booms and/or absorbent booms at the storm drain outfall and monitoring outfall for signs of release.
- Ensure that emergency diversion to a storm drain is conducted only on the north ramp or the Terminal 2 West ramp where the storm drains have approved separation devices. The responsible party must clean and remove the spilled fluids from the separation device once the spill has been controlled and the surrounding area has been cleaned.
- Make follow-up notifications and submit reports, as necessary, to agencies necessary or required by law.

INCIDENT COMMAND SYSTEM IMPLEMENTATION

Several Authority staff members have been trained in the application of incident command systems for large-scale emergency incidents, such as a large fuel or sewage spill. The responsible party may voluntarily relinquish control of spill response responsibilities to a federal, state, or local agency appropriately prepared to respond, and the responsible party should not hesitate to do so when requested by such an agency. In situations where the release threatens public safety and property damage by fire, explosion, or vapor levels, or if structural collapse is imminent, the SAN ARFF Department has overall authority to control response actions. Only after the immediate threat to life and property has been abated and the ARFF has relinquished exclusive site control will the responsible party enter the incident command system structure. The incident command system will be used to apply control in any emergency response where multiple agencies are involved. Where appropriate, the responsible party may be requested to participate in various aspects of the incident command system.

3.6 DRY WEATHER MONITORING PROGRAMS

The Authority conducts or participates in urban runoff monitoring programs to meet the requirements of both the Industrial Permit and the Municipal Permit. Several of these programs help to identify non-storm water illicit discharges and their potential sources within the Authority's jurisdiction. The Authority can also utilize the data collected through monitoring efforts to identify and eliminate illicit discharge sources.

As required by Provision B of the Municipal Permit, the Authority is collaborating with the County of San Diego, Port of San Diego, and the cities of Chula Vista, Coronado, Imperial Beach, La Mesa, Lemon Grove, National City, and San Diego (collectively, the San Diego Bay WMA Responsible Parties) to develop a WQIP with goals and strategies to reduce pollutant discharges from MS4 outfalls in the San Diego Bay WMA during wet and dry weather. The monitoring programs described below were developed to prevent non-storm water MS4 discharges and to meet water quality goals outlined in the WQIP.

The following urban runoff monitoring programs were developed to meet the requirements of Provision D of the Municipal Permit. The monitoring programs implemented at SAN by the Authority are described in Appendix D-2.

3.6.1 RECEIVING WATER MONITORING

As required by Provision D.1 of the Municipal Permit, the Copermittees developed a receiving water monitoring program to characterize the long-term trends in receiving water quality and determine whether management strategies are effective. The long-term receiving water monitoring station designated by the Copermittees is the Sweetwater River Mass Loading Station (SR-MLS). This site has been monitored by the Copermittees since 2001 because it represents the conditions and water quality of the WMA. Field observations, field measurements, laboratory analytical chemistry, and toxicity testing are conducted at this site during three dry weather events each year. In addition, bioassessment and hydromodification monitoring events are each conducted once during the Municipal Permit term in accordance with the requirements in the Municipal Permit. Section 5.3 of the WQIP provides further information about the monitoring program.

3.6.2 REGIONAL MONITORING

The Copermittees are required to participate in regional monitoring programs, including the Storm Water Monitoring Coalition and Southern California Bight Regional Monitoring programs. The Copermittees have chosen to participate in the Southern California Bight '13 Regional Monitoring Program, Storm Water Monitoring Coalition Stream Survey, Hydromodification Regional Monitoring Program, and San Diego County Beach Water Quality Monitoring Program.

3.6.3 SEDIMENT QUALITY MONITORING

The Copermittees will perform sediment quality monitoring in accordance with the requirements of the Municipal Permit Provision D.1.e.(2). A Sediment Monitoring Plan is included in the WQIP.

3.6.4 MS4 OUTFALL MONITORING

Under Provision D.2 of the Municipal Permit, the Authority will monitor MS4 outfalls during dry weather to assess MS4 outfall discharges for their potential contributions to receiving water quality and to assess the effectiveness of jurisdictional urban runoff management programs. Detailed information about jurisdictional and regional MS4 outfall monitoring programs is provided in the San Diego Bay WQIP and the Authority's program is described additionally in Appendix D-2.

The Authority has developed a Dry Weather Analytical Monitoring Program to encompass both Industrial and Municipal Permit requirements for monitoring dry weather discharges. The dry weather monitoring activities conducted at SAN are summarized below, and described in further detail in Appendix D-1 and D-2.

SELECTION OF OUTFALLS

Two major outfalls within the Authority's jurisdiction have been selected. These two outfalls are tidally influenced and cannot be screened safely at the outfall. Therefore, nearby upstream locations were selected as proxies to provide adequate coverage of the entire drainage areas of those two outfalls. The monitoring locations were selected as far downstream as possible to capture as many areas with industrial activities and sources of potential illicit discharges as possible and to provide adequate coverage of those storm drain lines. The storm drain system outfall monitoring locations have been added to the existing dry weather monitoring locations, along with additional locations in new or redeveloped drainage areas, or those added to comply with new Industrial Permit requirements. Monitoring locations were established to isolate particular land uses, drainage areas, and areas of concern on the basis of historical data.

A storm drain system map was created in geographic information system (GIS) 9.0 to depict the storm drain system, the 15 drainage basins, and the monitoring locations. The storm drain system map is used in source investigations and satisfies the requirements of Provision E.2.b.(1). of the Municipal Permit. During the dry weather monitoring, the storm drain system map is checked for accuracy, and corrections and changes are made accordingly.

DRY WEATHER MS4 OUTFALL DISCHARGE FIELD SCREENING

The Authority conducts dry weather field screening and analytical monitoring in accordance with Provision D.2 of the Municipal Permit to identify water quality problems that may result from any of the non-storm water discharges described in Sections 3.1 and 3.3. Field screening will be conducted at the 2 major MS4 outfalls within the Authority's jurisdiction, as well as at 16 compliance locations and outdoor industrial equipment and storage areas to identify any unauthorized and authorized non-storm water discharges, as required under the Industrial Permit (Section XI.A.1.a).

NON-STORM WATER PERSISTENT FLOW MS4 OUTFALL DISCHARGE MONITORING

Observations and analytical data will be collected twice annually at each outfall monitoring station experiencing persistent flow, if any, during dry weather periods to detect which non-storm water discharges impact receiving water quality. Appendix D-2 of this document describes the MS4 outfall monitoring program. Field monitoring and laboratory analysis procedures, including a list of constituents, equipment required, and quality assurance measures are included in Appendix D-1.

INDUSTRIAL DRY WEATHER VISUAL OBSERVATIONS

The Authority conducts monthly visual observations of all drainage areas within SAN for the presence of unauthorized non-storm water discharges and any authorized non-storm water discharges and their sources, as described in Section 7.8.4.2. The objective of the monthly inspections is to identify sources of non-storm water discharges and to check that BMPs are being properly implemented and are effective, and to prevent or eliminate unauthorized discharges.

3.6.5 SPECIAL STUDIES

The Municipal Permit, Provision D.3.a.(1), requires Copermittees to select special studies to fill in data gaps and provide further information for better management and elimination of pollutants. The Municipal Permit specifically requires:

- At least two special studies related to highest priority water quality conditions for each WMA
- One special study to address the pollutants and/or stressors impacting receiving waters within the San Diego region

The Authority will take part in regional special studies identified in the WQIP, Section 5.3. The Authority will also implement a source identification special study specific to its Focused Priority Conditions.

The Authority will implement a source identification study to determine the potential (PGAs) and areas that contribute the highest concentrations of copper and zinc as part of a special study required under Provision D.3.a.(1) of the Municipal Permit. As part of this study, the Authority will prepare and analyze a report characterizing copper and zinc and the activities and areas that are potential sources. The report will help the Authority target sources of these constituents and develop actions to eliminate or minimize the source activity. A Source Identification Monitoring Plan will also be prepared. The monitoring plan will support the identification of PGAs, quantify the potential loadings from particular activities or areas, and prioritize sources of discharge(s).

3.7 FOLLOW-UP AND ENFORCEMENT

Source investigations are conducted by the Authority when an illicit discharge is detected or suspected and the source of the illicit discharge is not readily identifiable. The purpose of these investigations is to locate the source of an illicit discharge so that necessary measures required to eliminate the illicit discharge can be implemented. This section has been prepared to meet the requirements in Provision E.2.d of the Municipal Permit. Section 3.7.3 provides a detailed description of the Authority's Enforcement Response Plan.

3.7.1 FOLLOW-UP SOURCE INVESTIGATION PROCEDURE

The Authority will encourage staff, contractors, and developers to assist in identifying and reporting illicit discharges and connections to SAN Operations if observed during daily activities. The investigation action criteria for dry weather monitoring results were developed by the Copermittees and are provided in Appendix D-2. Additionally, the Municipal Permit now includes non-storm water action levels. Within two business days of receiving dry weather field screening or laboratory results that exceed any action levels, the

Authority will conduct an investigation to identify the source or provide a rationale for why the discharge does not pose a threat to water quality and does not require further investigation. The trash assessment information collected may also provide the Authority with useful information in regard to problem areas or activities. Source investigations will typically be conducted by the Authority's EAD monitoring personnel. In some cases, other onsite Authority personnel may conduct a source investigation. If a source investigation reveals an upstream source outside of SAN's jurisdiction, the Authority will notify and work with responsible Copermitees to eliminate the source.

In some cases, the mere existence of flows in a portion of the storm drain system or the noticeable increase in dry weather flows at a certain location may trigger a source investigation. The Authority's monitoring personnel will use their judgment and experience in making these and similar decisions in the field on the basis of site-specific observations. The steps taken to identify and eliminate an illicit discharge are described in Appendix D-2.

Follow-up investigations are typically conducted by the Authority under the following circumstances:

- Report of an illicit or suspected illicit discharge
- Exceedance of field or analytical action levels
- Ceasing of the discharge prior to arrival at the point of observation or during a source investigation, and inability to determine the source without the discharge
- Insufficient information produced during source investigations to locate the source or provide enough evidence to identify a responsible party
- An order issued by the Authority to a responsible party and a follow-up investigation necessary to ensure that the responsible party has complied with the required abatement actions
- An area or activity identified as having a high potential for the occurrence of an illicit discharge and, therefore, periodic follow-up visits to ensure that future discharges are rapidly identified and eliminated

3.7.2 DOCUMENTATION AND REPORTING

Source investigations should be documented using photographs, detailed notes on observations, completed field observation sheets when applicable, discussions or decisions made, and other information relevant to the investigation. This information could be useful for future investigations and for possible future resolution of illicit discharges for which sources were unidentified. Documentation is also used in support of enforcement actions. The Authority will document and keep a record of the investigation. The investigation report will include:

- The location of the violation, the hydrologic subarea, the impacted receiving water body, the point of discharge from the MS4
- The initial source of information which triggered investigation
- The date and method through which the information was received
- The date of the investigation
- The corrective action or enforcement procedures implemented
- If any follow-up investigations were conducted and the dates and results of each investigation

- The identified or suspected source of the discharge
- Any known or suspected incidents that may relate to the source of the discharge
- Final results of the investigation

If a source could not be identified after a thorough investigation, a complete report will still be generated and will include a plan to improve the investigation procedure if the same discharge is observed or reported in the future. If the discharge reoccurs and the source is still unidentified through source investigations, the discharge will be considered an illicit discharge and the SWMP will be updated to evaluate the common and suspected sources of the illicit discharge.

If the source of an illicit discharge is considered natural in origin and conveyance, the discharge and source will be documented and all data and evidence in support of this conclusion will be provided to Regional Water Board to demonstrate that the discharge is natural and does not require further investigation.

Sampling for field screening or laboratory analysis should be done when deemed appropriate by the investigator. In many cases, once the source is identified, the makeup of the illicit discharge can be determined by a survey of the source and, therefore, analysis may not be necessary. However, in other cases, analysis of samples may be evidence to support enforcement actions.

All documentation and other information relevant to source investigations should be collected by or be turned over to the EAD. The department will handle, retain, and track files pertaining to the various illicit discharge investigations, and whether or not a responsible party has been identified. The department will also determine whether the discharge is an isolated incident that will be addressed through enforcement procedures, or whether the category of discharge should be prohibited as an illicit discharge, as specified in Provision E.2.a.(6) of the Municipal Permit.

A summary report of the non-storm water and illicit discharges and connections identified during investigations will be included in the WQIP Annual Report in accordance with the requirements of Provision F.3.b.(3) of the Municipal Permit. Additional details on information that will be provided in the WQIP Annual Report are included in Section 12.1. In summary, the illicit discharge and source investigation report will include:

- The known or suspected sources causing or contributing to the highest priority water quality conditions within the Watershed Management Area
- BMPs or additional programs implemented to address these sources
- Education programs implemented to notify the public of the sources of discharge
- Frequency and description of inspections implemented to determine if the source(s) has(have) been eliminated
- Enforcement actions and/or incentives implemented to eliminate the source(s)
- The optional strategies that the Authority plans to implement to prohibit non-storm water and illicit discharges in accordance with Municipal Permit Provision B.3.b.

3.7.3 ENFORCEMENT

The Authority is authorized to enforce prohibitions of illicit discharges and illicit connections and to ensure that the requirements for authorized non-storm water discharges are met to maintain compliance with the Municipal and Industrial Permits, the Authority Rules and Regulations, the Storm Water Code (Article 8), this SWMP, and any contracts and leases. As required by Provision E.6 of the Municipal Permit, the Authority has established an ERP to enforce its legal authority to achieve compliance and respond to reports of violations or noncompliance with the above documents. Provision E.1.a. of the Municipal Permit requires the Authority to prohibit illicit discharges and connections to the MS4, control the discharge of spills, dumping, or dumping of materials other than storm water into the MS4, control through interagency agreements the contribution of pollutants from one portion of the MS4 to another, utilize enforcement mechanisms, and carry out inspections and monitoring of tenants, contractors, developers, and employee operations and activities to ensure compliance. Municipal Permit Provision E.6 requires the use of necessary escalating enforcement measures, and should be in compliance with the strategies in the WQIP. The Authority is authorized to inspect and, if necessary, issue corrective actions, notifications, or written warnings or fines appropriate to the level of violation.

The Authority plans to increase tenant BMP inspections from quarterly to monthly. Ad hoc inspections are also performed. Inspections will focus on pollutant generating areas and activities, and tenants will be encouraged to improve and increase BMP implementation through a graphic scoring system. A detailed list of BMPs evaluated during tenant inspections is included in Appendix B.

Violations are determined on the basis of noncompliance with Authority rules and regulations, permit requirements, provisions in the Storm Water Code, or applicable laws and regulations. Any violations noted during a site inspection by the EAD inspector will be discussed onsite if appropriate personnel are available, be reported as outlined in Section 3.7.2, and be recorded in the Web-based database. Immediate action will be taken to stop or control active prohibited discharges, spills, or obvious illicit discharges. Field screening and monitoring of other non-storm water discharges, as outlined in Appendix D-2, will be conducted to prioritize responses and follow-up investigations. The inspection report will detail the corrective actions required, the timeframe in which corrective actions must be completed, and any enforcement actions issued.

The enforcement mechanisms used by the Authority are listed below. The Authority generally obtains compliance using the first four mechanisms listed. The remaining enforcement mechanisms can be used, as necessary, to increase the severity of penalties and to compel compliance as soon as possible. Violations are required to be corrected within a minimum of 30 days after the violations are identified, or prior to the next predicted rain event, whichever is sooner. If the responsible party requires more than 30 days to correct the violation, the rationale must be described in the Authority's Web-based database and approved by EAD.

- 1) Verbal and written warnings
- 2) Written notices of violation
- 3) Written notices to clean, test, or abate
- 4) Orders to cease and desist (stop work orders)
- 5) Fines
- 6) Denial or revocation of permits and approvals
- 7) Administrative and criminal penalties
- 8) Bonding requirements
- 9) Liens

The Authority's ERP for illicit discharge detection and elimination has two main levels of enforcement, with escalating enforcement measures utilized as necessary on a case by case basis, using the professional judgment of the Authority inspector. The Authority has the discretion to initiate or escalate enforcement using any enforcement mechanism available, depending on the nature of the violation or discharge, the effect on water quality, and the degree of cooperation or response time of responsible parties. Further information on enforcement activities used by the Authority is provided in Section 2.3. The general escalated enforcement process is outlined below:

- Enforcement Level 1 is initiated by the finding of BMP deficiencies. The responsible party is contacted and the inspector provides a verbal warning to fix the observed violation. The notification will also be documented in the Web-based database so that the responsible party and interested parties are aware of the violation. The responsible party can then notify the inspector via the Web-based database when the corrective action has been completed. If the inspector determines that the violation is severe enough that a verbal warning is not sufficient, a written notice will be issued to the responsible party. The written notice documents the violation, the time frame for correction, and the date of follow-up inspection. The written notice will be provided to the responsible party and the facility/operation supervisor. If the violation is resolved within the time frame, the inspector will document compliance and save the inspection information in the inspection file.
- Enforcement Level 2 is initiated when the noncompliant activity or violation may impact water quality, human health, or the environment (i.e. prohibited discharge). A written notice to clean, test, or abate, and/or a CDO is used to initiate enforcement and compliance is expected within 24 hours. If a CDO is issued, the recipient must cease and desist all activities that cause or contribute to illegal discharges or remove illicit connections. A notice and order to clean, test, and abate is a written or verbal order to perform the activities listed in the Authority's Storm Water Code. Penalties and fines may be issued if administrative authority is ineffective and the violation continues.

If the noncompliance resulted in a spill or discharge, the party responsible for the discharge is responsible for conducting cleanup measures appropriate to the degree of the spill or discharge, or if needed, for contacting the appropriate emergency response or cleanup contractor.

Contractors and developers are required to abide by the Authority documents, permits, rules, and regulations while working within airport operational areas. The Authority may use provisions within the contract to correct any noncompliant activities. The Authority may also employ this mechanism for tenants that are under lease or use permits.

3.8 MONITORING PROGRAM ASSESSMENTS

The following assessments will be conducted in accordance with the requirements outlined in the Municipal Permit, Provision D.4.

RECEIVING WATER ASSESSMENTS

The Copermittees will assess the condition of receiving water quality, including a review of data collected during long-term receiving water monitoring, regional monitoring programs, and sediment quality monitoring. These assessments will be included in the Report of Waste Discharge, as required under Provision F.5.b of the Municipal Permit. Additional information on receiving water assessments is provided in Section 5.3 of the WQIP.

NON-STORM WATER MS4 OUTFALL DISCHARGE ASSESSMENTS

The Authority will review the data collected during the MS4 outfall discharge monitoring programs at least once during the term of the Municipal Permit. Assessments of the data collected during the MS4 Outfall Receiving Water Monitoring Program will be made to assess the overall effectiveness of the Illicit Discharge

Detection and Elimination program. These assessments will be included in the WQIP Annual Report (Provision F.3.b.(3)) and Report of Waste Discharge. Additional information on MS4 outfall assessments is provided in Section 5.3 of the WQIP.

SPECIAL STUDIES ASSESSMENTS

The Authority will work with the other Copermittees to assess the effectiveness of the special studies established regionally and within each Watershed Management Area. The Copermittees will report the results of the special studies assessments and identify any necessary modifications to the WQIP. Additional information on regional monitoring program and special studies effectiveness assessments is provided in Section 5.3 of the WQIP.

3.9 ILLICIT DISCHARGE DETECTION AND ELIMINATION COMPONENT PROGRAM REVIEW AND MODIFICATION

The Authority has reserved this section to identify and document future changes to the Illicit Discharge Detection and Elimination Component of the SWMP. In an effort to support the iterative approach and adaptive management process of the WQIPs, updates will be made to the WQIP as the Illicit Discharge Detection and Elimination programs are modified in response to findings during effectiveness assessments. As required under the Municipal Permit Provision B.5, the WQIP will be assessed during preparation of the Report of Waste Discharge. New sources of non-storm water and illicit discharges may be discovered through the approaches described in Section 3.0. The WQIP goals and strategies to meet required pollutant load reductions may need to be modified as a result of findings or reports made during these programs. Section 13.0 of this SWMP details the program modifications made to the March 2008 version of the SWMP to bring this document into compliance with the renewed Municipal Permit.

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4.0 DEVELOPMENT AND PLANNING COMPONENT

4.1 INTRODUCTION

Section 4.0 of this SWMP addresses requirements in Provisions E.3.a through E.3.f of the Municipal Permit that the Authority has determined are relevant to the Development and Planning Component. As listed below, these Provisions require the Authority to:

B.3.b.(4).(b)—Develop a list of candidate projects as part of the Watershed Management Area Analysis (WMAA) that could be used as alternative compliance options in place of implementing onsite structural BMPs for Priority Development Projects (PDPs). Project applicants may choose to fund, contribute funds to, or implement one of the candidate projects identified in the WMAA. Section 4.6 was prepared to address this requirement.

E.3.a.—Require all development projects within SAN’s jurisdiction to implement general BMP requirements and specific source control and LID BMPs, where applicable and feasible, into the planning process. Section 4.5.1 and Section 4.5.2 were prepared to address this requirement.

E.3.b.—Determine which development projects fall under the Municipal Permit’s definition of a PDP and require the implementation of onsite structural BMPs. The Standard Urban Storm Water Mitigation Plan (SUSMP) in Appendix C will be used for BMP design, development, and implementation until the document is updated in accordance with Provision F.2.b and renamed the BMP Design Manual (anticipated to occur in December 2015).

E.3.c.(1)—Ensure that PDPs implement structural BMPs that meet the type and performance requirements of the Municipal Permit. Section 4.5.3 and Appendix C were prepared to address this requirement.

E.3.c.(2)—Require implementation of onsite BMPs for PDPs to manage hydromodification impacts. As discussed in Section 4.5, however, the Authority PDPs are exempt from this requirement, because storm water runoff from Authority PDPs discharges to an enclosed embayment.

E.3.c.(3)—Consider the allowance for PDP applicants to propose and fund, contribute funds to, or implement an alternative compliance project that has or has not been identified in the WMAA. Section 4.6 was prepared to address this possibility.

E.3.c.(4)—Submit proof of the mechanism under which ongoing long-term maintenance of all structural BMPs will be conducted. Section 4.5.3 and Appendix C were prepared to address this requirement.

E.3.c.(5)—Verify that infiltration BMPs do not cause or contribute to an exceedance of applicable groundwater quality objectives. Infiltration BMPs must meet the design criteria required in the Municipal Permit. Section 4.5 was prepared to address this requirement.

E.3.d.—Develop a BMP Design Manual to replace the existing SUSMP and implement the new manual within 180 days of completion. Section 4.7 was prepared to address this requirement. The SUSMP in Appendix C will be followed until it is updated and renamed the BMP Design Manual.

E.3.e.—Implement an approval, verification, and inspection program that requires structural BMPs on all PDPs and confirms that the BMPs are designed, constructed, and maintained to remove pollutants in storm water to the MEP. Section 4.8 was prepared to address this requirement.

E.3.f—Implement an ERP to enforce the legal power of the Authority to achieve compliance with the requirements of the Municipal Permit, as applicable, for all development projects. Section 4.9 has been prepared to address this requirement.

4.2 LAND USE PLANNING

During the Authority's land use planning and project review process, and prior to project approval and/or permit issuance for all PDPs, the Authority prescribes the requirements necessary for project improvement to ensure that discharges of pollutants from the project and to the MS4 will be prevented, eliminated, or reduced to the MEP; will not cause or contribute to a violation of water quality standards; and will comply with Authority ordinances, and the Municipal Permit. The Authority's planning and development project review process incorporates appropriate storm water management controls into standard conditions of approval, use permits, lease agreements, and other project approval mechanisms, as outlined below.

4.2.1 MASTER PLAN

A Master Plan for SAN was adopted by the Authority Board on May 1, 2008. The Master Plan documents the Authority's planning process for SAN and provides guidance for development of the airport to meet continued passenger, cargo, and operations growth. The goal of the Master Plan is "to provide a financially and environmentally responsible guideline for future Airport development that will accommodate forecast aviation demand and remain adaptable to either a short-term or long-term future for the existing Airport site based on the results of the Airport Site Selection Program" (San Diego County Regional Airport Authority, 2008). All Development Projects implemented as a result of the Master Plan are subject to this SWMP.

The Authority prepared the SAN Master Plan to guide the development of SAN to the year 2030. The project's main components are:

- Ten new jet gates at Terminal 2: Addition of 10 gates to accommodate more travelers. (Completed in 2013.)
- Additional parking for remain-overnight aircraft: Additional parking for remain-overnight (RON) aircraft to increase the efficiency of airport operations by eliminating the need to taxi aircraft from one side of the runway to the other. (Completed in 2013.)
- Second-level roadway at Terminal 2: A second-level roadway to provide separate departure and arrival areas at Terminal 2 and so relieve the previous congestion associated with the dual arrival and departure location. (Completed in 2013.)
- Parking structure: A new structure to provide additional options for passengers and greeters to park their vehicles for short-term trips.
- Taxiway improvements on the northern and southern sides: Taxiway improvements to increase the flow of aircraft traffic by efficiently lining up aircraft waiting to take off.
- SAN Park Pacific Highway: Reconstruction and relocation of the SAN Park Pacific Highway. (Completed in 2014.)
- Access road: Construction of a new access road for easier access to North Area facilities. (Completed in 2015.)

- New general aviation facilities: Replacement of the general aviation facilities with new terminals, hangars, access roads, and aprons on 12.4 acres of SAN property. (Completed in 2013.)
- Reconstruction of taxiways: Reconstruction of Taxiways C and D with new apron hold pads and taxiways.
- North Side building improvements: Construction of new, enhanced buildings to improve operations, including a Receiving and Distribution Center and a rental car operation and storage facility.
- Roadway improvements: Expansion of current roadways to improve traffic and access to the northern side of the airport.

The Final Environmental Impact Report (EIR) pertaining to the SAN Master Plan was released on May 1, 2008. The EIR is a comprehensive study of all potential impacts on the environment resulting from proposed improvements to SAN, project alternatives, and enhancements to travel experiences for San Diego County residents and visitors. It ensures that actions being taken are in the best interest of surrounding communities and the environment. The EIR covers potential impacts on aesthetics, air and water quality; archaeological and historical issues; impacts on endangered species, the coastal zone, wetlands, and coastal resources; toxic and hazardous waste issues; potential noise and light pollution; and all cumulative effects on the environment as well. As part of the California Environmental Quality Act (CEQA), the EIR is an objective, full-disclosure report meant to inform the public about any and all possible impacts on the environment and to seek input on alternatives to reduce the impacts. The EIR is available to the public on the SAN website at <http://www.san.org/Airport-Projects/Environmental-Affairs>.

The Authority is currently developing a Strategic Master Drainage Plan to evaluate and prioritize potential drainage improvements at SAN and the effects on water quality. Once complete, the Strategic Master Drainage Plan will be used in planning future development and improvements.

SUSTAINABILITY POLICY

The Authority adopted its Sustainability Policy on February 7, 2008. The Sustainability Policy reviews SAN's primary organizational strategies and sustainability goals, describes ways in which these goals are being met currently at SAN, and evaluates areas where there is room for improvement. The Sustainability Policy commits the Authority to these sustainable practices:

- Commit to regulatory compliance, pollution prevention, continuous improvement, and transparency in environmental performance.
- Actively participate in local and regional sustainability partnerships and encourage and promote sustainable practices.
- Evaluate all new programs and projects to address the four Sustainability Elements set forth by the aviation industry through SAN's Council International-North America (ACI-NA) to guide its development and operations: Economic Viability, Operational Excellence, Natural Resource Conservation, and Social Responsibility (EONS).
- Analyze the life-cycle operating costs and impacts of the airport's facilities, operations, and services using a Total Cost of Ownership approach to determine project feasibility and economic sustainability.

- Adopt the standards set by the U.S. Green Building Council LEED as guiding criteria in sustainable development and remodeling of SAN facilities.
- Apply EONS and LEED criteria when reviewing tenant development and redevelopment projects and provide incentives to encourage sustainable design features.
- Develop language in new leases, agreements, and contracts that supports the Authority's sustainability initiatives.
- Require the Authority's lessees and contractors to comply with all terms and conditions of their agreements pertaining to sustainability.
- Establish a work environment that maximizes employee assets, stimulates an innovative and productive atmosphere, and encourages personal commitment to sustainability.
- Take a leadership role in sustainability initiatives that strengthen the social well-being and community relationships with visitors, airport stakeholders, and the public.

Section 4.3.3 describes how sustainability goals are incorporated into new and redevelopment efforts.

4.2.2 SOURCE CHARACTERIZATION

Pollutants found or expected in SAN runoff can vary according to land use, as indicated by Table 4-1.

Table 4-1. Anticipated and Potential Pollutants Generated by Land Use Type at SAN

Priority Project Category	General Pollutant Categories								
	Sediment	Nutrients	Heavy Metals	Organic Compounds	Trash and Debris	Oxygen-Demanding Substances	Oil and Grease	Bacteria and Viruses	Pesticides
Commercial Development	p ⁽¹⁾	p ⁽¹⁾	X	p ⁽²⁾	X	p ⁽⁵⁾	X	p ⁽³⁾	p ⁽⁵⁾
Industrial	X		X	X	X	X	X		
Automotive Repair Shops			X	X ⁽⁴⁾⁽⁵⁾	X		X		
Restaurants					X	X	X	X	p ⁽¹⁾
Parking Lots	p ⁽¹⁾	p ⁽¹⁾	X		X	p ⁽¹⁾	X		p ⁽¹⁾
Fueling Facilities			X	X	X	X	X		
Streets, Roads	X	p ⁽¹⁾	X	X ⁽⁴⁾	X	p ⁽⁵⁾	X	X	p ⁽¹⁾

X = anticipated

P = potential

- (1) A potential pollutant if onsite landscaping exists.
- (2) A potential pollutant if the project includes uncovered parking areas.
- (3) A potential pollutant if land use involves food or animal waste products.
- (4) Including petroleum hydrocarbons.
- (5) Including solvents.

4.3 DEVELOPMENT PROJECT REVIEW PROCESS

All development projects at SAN undergo a review as part of the project approval process, as described below. This SWMP requires that all development projects provide BMPs to minimize to the MEP the introduction of pollutants of concern to the storm water conveyance system that may significantly impact receiving waters. The Authority's environmental review process ensures a comprehensive evaluation of water quality and cumulative impacts, identifies appropriate measures to avoid, minimize, and mitigate those impacts, and ensures sustainable design features and LEED criteria are incorporated, where possible, into development projects. As part of this process, the EAD evaluates the project application to ensure that all applicable documentation has been submitted. All project documents must be submitted to the proper departments for verification and approval, as described in the sections below.

4.3.1 CEQA

The Authority staff members use the CEQA and the CEQA Guidelines to evaluate projects for approval. CEQA requires that the Authority first evaluate the effects of the proposed project on the environment through an initial environmental review. All phases of project planning, implementation, and operation are considered in the environmental review. The CEQA Guidelines, issued by the State of California Governor's Office of Planning and Research (OPR) contain the "Environmental Checklist Form" (Appendix G), which is a model checklist for use in determining whether the effects of a proposed project on the environment are exempt, mitigatable, or significant. The Authority has adopted the checklist as part of its environmental review process. The checklist is incorporated into an assessment of the environmental impacts of the project, for which the Authority prepares a brief report as necessary with the project description, location, environmental setting, potential for impacts, and ways to mitigate significant impacts, if any and as applicable. The initial environmental review is used by the Authority to assess whether to prepare a Negative Declaration (ND), Mitigated Negative Declaration (MND), or EIR.

A ND or MND is prepared if it is determined that there is no potential for significant impacts or if the project proponent revises the project to include BMPs or other enforceable conditions that will mitigate any identified significant impacts, respectively. The ND or MND includes a description of the project, project name, legal description, project applicant, and findings.

Alternatively, an EIR is prepared if the Authority determines that the project may have a significant effect (as defined by CEQA) on the environment. Projects that clearly require an EIR may skip the initial environmental assessment and be moved directly to the EIR process. An EIR describes the project, analyzes its significant environmental effects (including water quality impacts), discusses ways to mitigate or avoid the effects, and incorporates public comments.

The Authority's approval to execute a development project is typically a discretionary act. The Authority also coordinates with federal agencies (typically the Federal Aviation Administration) on the review process under the National Environmental Policy Act (NEPA).

Authority staff in the Airport Planning and Noise Mitigation Department (AP&NMD) use the following questions pertaining to hydrology and water quality to evaluate the potential storm water impacts of any particular project.

Would the Project:

- Violate any water quality standards or waste discharge requirements?
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation onsite or offsite?

- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on-site or off-site?
- Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?
- Result in an increase in pollutant discharges to receiving waters, considering water quality parameters such as temperature, dissolved oxygen (DO), turbidity, and other typical storm water pollutants (e.g., heavy metals, pathogens, petroleum derivatives, synthetic organics, sediment nutrients, oxygen-demanding substances, and trash)?
- Result in significant alteration of receiving water quality during or following construction?
- Result in increased impervious surfaces and associated increased runoff?
- Create significant adverse environmental impact on drainage patterns because of changes in runoff flow rates or volumes?
- Be a tributary to an already impaired water body as listed on the 303(d) list? If so, can it result in an increase in any pollutant for which the water body is already impaired?
- Be a tributary to environmentally sensitive areas (e.g., RARE, Areas of Special Biological Significance [ASBS], etc.)? If so, can it exacerbate already-existing sensitive conditions?
- Have a potentially significant environmental impact on surface water quality of either marine, fresh, or wetland waters?
- Have a potentially significant adverse impact on groundwater quality?
- Cause or contribute to an exceedance of applicable surface water or groundwater receiving water quality objectives or degradation of beneficial uses?
- Impact aquatic, wetland, or riparian habitat?

4.3.2 APPLICATION OF CALIFORNIA COASTAL ACT

Discretionary projects proposed at SAN may require a coastal development permit in conformance with the California Coastal Act. If the Authority determines that a project requires a coastal development permit, an application is prepared and submitted to the California Coastal Commission. The California Coastal Act contains water quality and watershed-related policies with which coastal development projects must comply. The Authority proposes project alternations or mitigation measures to be consistent with these policies for development projects that require a coastal development permit, which are then reviewed, revised as appropriate, and approved by the Coastal Commission.

4.3.3 SUSTAINABILITY

The Authority intends for all new construction at SAN to be LEED certified. The Authority is committed to building and operating sustainably, and strives to protect the wide variety of natural resources that exist at SAN's location on San Diego Bay. In terms of reducing impacts from storm water to the MEP, all development projects during the review process need to demonstrate their commitment to the following goals:

- Reducing waste and recycling

- Conserving water
- Lowering their impact on air quality
- Using sustainable building methods (applying LEED criteria)
- Promoting green infrastructure

Design and construction incorporate “green” design principles, such as use of LID BMPs, as outlined in the following section and Appendix C, and use recycled materials and renewable resources. Most construction material waste from development projects is recycled and reused on site. The Authority has developed language in new leases, agreements, and contracts that supports the Authority’s sustainability initiatives and requires lessees and contractors to comply with all terms and conditions of their agreements pertaining to sustainability.

4.3.4 STANDARD URBAN STORM WATER MITIGATION PLAN (SUSMP)

The Authority developed a SUSMP under the previous Municipal Permit for projects that are determined to be PDPs. According to Provision E.3.d of the 2013 Municipal Permit, the SUSMP (now called the BMP Design Manual under the 2013 Municipal Permit) should continue to be implemented by the Authority until the new BMP Design Manual has been implemented (anticipated to be December 2015). The Authority is working with other Copermittees to develop the new regional BMP Design Manual in compliance with Provision E.3.d of the Municipal Permit. Once approved by the Regional Water Board, the Authority will work to replace the existing SUSMP with a BMP Design Manual.

The Authority’s current SUSMP/BMP Design Manual describes procedures to identify pollutants and conditions of concern for each PDP. To properly classify pollutants of concern, each PDP must identify the receiving waters to which the project will discharge, list any and all pollutants for which the receiving waters are impaired using the most recent 303(d) list, and then compare the list of pollutants for which the receiving waters are impaired with the pollutants anticipated to be generated by the project. The Authority must also evaluate each PDP for conditions of concern (that is, conditions with the potential to permanently impact downstream channels and habitat integrity). The Authority may request a drainage report to include all or a subset of the following items to conduct its evaluation: the relevant hydrologic and environmental factors; geotechnical concerns and mitigation measures; a field reconnaissance to observe and report downstream conditions and the area’s susceptibility to erosion or habitat alteration; and rainfall runoff characteristics from the project area developed for 2-year and 10-year frequencies. The Authority’s current SUSMP/BMP Design Manual is included in Appendix C. The categories of pollutants and conditions of concern are discussed in detail in Appendix C and a guide to identifying anticipated and potential pollutants generated by land use type is presented in Table 2-1 of Appendix C.

The Authority’s current SUSMP/BMP Design Manual is implemented by the EAD. When the EAD receives new development plans, it reviews them for environmental concerns, including storm water issues. EAD determines whether the project is subject to the current SUSMP/BMP Design Manual. The EAD notifies the proponent of the project (either the tenant or appropriate Authority project sponsor or manager) if Urban Storm Water Mitigation Plan (USMP) development is required. Review and approval of the USMPs are conducted by EAD. Elements of the USMPs are incorporated into the project design, CEQA Mitigation Monitoring and Reporting Program, and lease requirements, as appropriate.

4.3.5 TENANT AND AUTHORITY DEVELOPMENT PROJECTS

4.3.5.1 Tenant Projects

Whenever an airport tenant desires to make surface or subsurface improvements or perform new construction, reconstruction, modification, or demolition, the tenant must submit a request for approval to the Terminals and Tenants Department prior to commencing work. The request must be accompanied by plans and specifications that indicate the nature and extent of the proposed work and conform to Authority policies and all relevant laws, ordinances, rules, and regulations. The plans may include references to specific sections or parts of the Uniform Building Code or other applicable codes, ordinances, or laws. The Terminals and Tenants Department, in conjunction with the FDD, assigns a project manager to evaluate the project application for completeness and to coordinate technical review with the other Authority departments. The EAD must determine whether the current SUSMP/BMP Design Manual requirements are applicable to the project, as described above. The EAD reviews the finalized project plans and documents to ensure that all environmental requirements are met.

The approval of a SAN tenant project becomes part of the lease or part of a use and occupancy permit once all documents in the project application have been approved. Any CEQA mitigation measures or conditions of approval required by the review process of these departments become part of the lease or use permit and may be adopted by the Airport Authority Board (Board) as a CEQA Mitigation Monitoring and Reporting Program. Sustainability and LEED criteria commitments are also incorporated. Authority review does not substitute for any other required applicable City, County, or Federal development permits. Written approval must be obtained from the Authority before development may begin, regardless of the scope of work.

4.3.5.2 Authority Projects

Whenever an Authority department desires to make surface or subsurface improvements or to perform new construction, reconstruction, modification, or demolition, the project sponsor, proponent, or manager must submit appropriate information to the Authority's Capital Improvements Committee (CIC). The CIC evaluates each development project on the basis of its financial funding capacity, and prepares a development program with the accepted projects. The AP&NMD and EAD assess the environmental impacts of the program. Once reviewed by the relevant Authority departments, the development program is submitted to the Board for approval. The Board evaluates the development program and determines whether the program will be included as part of the Authority's budget. Any mitigation measures or conditions of approval required by the review process of these departments become part of the project design, contract, and/or implementation and are formalized, as necessary, as a CEQA Mitigation Monitoring and Reporting Program adopted by the Board at the time of project approval. Again, commitments to sustainability or LEED initiatives are also incorporated into the project design and contracts.

4.4 PRIORITY DEVELOPMENT PROJECTS

PDPs are defined as proposed land development projects for which the Authority must impose specific requirements and structural BMPs. PDPs at SAN are further described in the Authority's current SUSMP/BMP Design Manual (Appendix C). Municipal Permit Provision E.3.b includes the following criteria for determination of a PDP:

- New development projects that create 10,000 cumulative square feet or more of impervious surfaces
- Redevelopment projects that create and/or replace 5,000 cumulative square feet or more of impervious surface if the existing site has 10,000 square feet or more of impervious surfaces

- New or redevelopment projects that create 5,000 cumulative square feet or more of impervious surfaces for use by restaurants, parking lots, and streets, roads, highways, and freeways; hillside development projects are not applicable to SAN
- New and redevelopment projects that create or replace 2,500 cumulative square feet or more of impervious surfaces which discharge directly to an Environmentally Sensitive Area (ESA)
- New development projects that support automotive repair shops or retail gasoline outlets
- New or redevelopment projects that disturb one or more acres of land and are expected to generate pollutants post-construction
- Some development projects may be exempt from being defined as a PDP by the Authority if they meet one or more of the following conditions:
 - New or retrofit paved sidewalks that are designed to divert storm water runoff to vegetated or permeable areas, be hydraulically disconnected from impervious streets or roads, or include permeable pavements or surfaces in accordance with USEPA Green Streets guidance
 - Retrofitting or redevelopment of existing paved alleys, streets, or roads that are designed in accordance with the USEPA Green Streets guidance

As stated in Section 4.3.4, the current SUSMP definitions of a PDP will be followed until the new BMP Design Manual is adopted (anticipated to be December 2015).

4.5 BEST MANAGEMENT PRACTICES

The Authority requires that all development projects ensure that pollutant discharges and runoff flows are reduced to the MEP and that receiving water quality objectives are not violated. Proposed new development projects are required to incorporate BMPs into project plans in order to obtain approval. As required by Municipal Permit Provision E.3.a.(1), all development project plans must incorporate BMPs that remove pollutants from runoff as close to the source as possible and that do not create a nuisance or pollution associated with vectors. All development projects are required to implement source control and LID BMPs. Structural BMPs are required for any development projects which meet the requirements in Provision E.3.b.(2) of Municipal Permit, as discussed below.

4.5.1 SOURCE CONTROL BMPS

Source control BMPs are designed to reduce the contact between pollutants and storm water runoff and include land use and planning practices designed to reduce the potential for contamination at the source of pollution. Detailed source control BMPs are included in Appendix B and in the current SUSMP/BMP Design Manual in Appendix C.

The Authority, as required by Provision E.3.a.(2) of the Municipal Permit, requires the following source control BMPs for all development projects where applicable and feasible:

- Prevention of illicit discharges to the MS4
- Storm drain system stenciling and signage
- Protection of outdoor material storage, trash storage, and work areas from rainfall, run-on, runoff, and wind dispersal
- Minimization of pollutant generation

4.5.2 LID BMPS

LID BMPs incorporate natural landscapes or resources and engineered, small-scale hydrologic controls into new or redevelopment projects to mimic pre-development hydrologic conditions, thereby reducing runoff and pollutants carried to the MS4. Instructions for identifying and implementing LID BMPs, also referred to as Site Design BMPs, are included in the current SUSMP/BMP Design Manual (Appendix C). The Authority, as required by Provision E.3.a.(3) of the Municipal Permit, requires the following LID BMPs to be implemented for all development projects where applicable and feasible:

- Preserve or restore natural reservoirs and drainage corridors.
- Implement buffer zones for natural water bodies where feasible, or other buffers such as access restrictions where buffer zones for natural water bodies are not feasible.
- Conserve natural areas, vegetation, and soils within the development project footprint.
- Minimize the width of streets, sidewalks, and parking lot aisles as feasible, considering public safety.
- Minimize the impervious footprint.
- Minimize soil compaction to landscaped areas;
- Disconnect impervious surfaces with interspersed pervious areas;
- Implement landscaped or pervious areas to enhance infiltration, retention, and treatment of runoff.
- Implement collection areas or devices located at, or close to, the point where storm water initially meets the ground.
- Implement permeable materials in low-traffic areas where feasible.
- Incorporate native or drought-tolerant landscaping.
- Harvest or reuse precipitation to both reduce runoff and minimize water usage.

4.5.3 STRUCTURAL BMPS

Development projects determined to be a PDP must include plans to implement structural BMPs in addition to the Source Control and LID BMPs. Redevelopment PDP projects must meet the structural BMP performance requirements of Provision E.3.c of the Municipal Permit if they result in the creation or replacement of impervious surface in an amount less than 50 percent of the surface area of the previously existing development. In such cases, the structural BMP requirements apply only to the creation or replacement of impervious surface and not to the entire development. If the redevelopment results in creation or replacement of impervious surfaces greater than or equal to 50 percent of the surface area, structural BMP performance requirements apply to the entire development.

Structural BMPs must be designed to retain onsite pollutants contained in the volume of storm water runoff produced from a 24-hour, 85th percentile storm event (design capture volume). Additional information on structural BMP design, implementation, verification, and maintenance is contained in the current SUSMP in Appendix C, which will be updated in the new BMP Design Manual. If BMPs to retain full design capture volume are considered technically infeasible, the following alternatives may be implemented:

- Biofiltration BMPs may be designed with the appropriate hydraulic loading rate to maximize storm water retention and pollutant removal; to prevent erosion, scour, and channeling within the BMP; and to be sized according to the requirements in the BMP Design Manual.
- If biofiltration is not technically feasible, then flow-through treatment control BMPs can be used to treat runoff, mitigate for the design capture volume not reliably retained onsite, and meet the size and design requirements in the BMP Design Manual to remove pollutants from storm water to the MEP. Flow-through treatment control BMPs should be ranked with high or medium pollutant removal efficiencies for the expected pollutants of concern, and a feasibility analysis should be conducted by the Authority if the flow-through BMP has low removal efficiency.

If the project proponent chooses to implement infiltration BMPs to meet the structural BMP requirements, the infiltration device(s) must not cause or contribute to an exceedance in applicable groundwater quality objectives and must meet the following design criteria, according to Provision E.3.c.(5) of the Municipal Permit, unless the project proponent demonstrates that one or more of the criteria are not necessary to protect groundwater:

- Runoff must undergo pretreatment prior to infiltration.
- Pollution prevention and source control BMPs must be implemented at a level appropriate to protect groundwater quality.
- Infiltration BMPs must be adequately maintained to remove pollutants in storm water to the MEP.
- The vertical distance from the base of the infiltration BMP to the seasonal high groundwater mark must be at least 10 feet; this vertical distance criteria can be reduced in cases where the groundwater basins do not support beneficial uses (as is the case at SAN), as long as groundwater quality is maintained.
- The soil through which infiltration will occur must have physical and chemical characteristics adequate for proper infiltration durations and treatment of runoff for the protection of groundwater for beneficial uses.
- The development will not occur in areas of industrial, light industrial, or other activities that pose a high threat to water quality, unless source control BMPs are implemented to prevent exposure or the runoff from these activities is treated or filtered to remove pollutants prior to infiltration.

The current SUSMP/BMP Design Manual provides instructions for selecting, sizing, and designing infiltration BMPs, and will be updated in the new BMP Design Manual.

In accordance with Municipal Permit Provision E.3.c.(2)(d)(ii), the Authority is exempt from the Municipal Permit requirement to implement hydromodification BMPs to manage post-project runoff conditions at SAN, because storm water runoff from the airport discharges to an enclosed embayment (namely, San Diego Bay). This is further discussed in the WMAA, which is included in the San Diego Bay WQIP.

4.6 ALTERNATIVE COMPLIANCE PROGRAM

The Municipal Permit allows the Copermitees to implement an alternative compliance program in lieu of structural control BMPs for a PDP on an individual jurisdictional level, if they so choose. Provision E.3.c.(3) outlines the requirements and conditions for establishing such programs. Although the Authority has not yet determined the need for such a program, Provision E.3.c.(3)(b) also allows the Authority to approve a PDP that proposes to fund, contribute to, or implement an alternative compliance project provided that the Authority determines that implementation of the alternative compliance project will have a greater overall water quality benefit for the WMA than fully complying with the performance requirements of Provisions E.3.c.(1) and E.3.c.(2) onsite, and is subject to the requirements described in Provisions E.3.c.(3)(a)(ii)-(viii).

4.7 BMP DESIGN MANUAL

The Authority is continuing to use the current SUSMP/BMP Design Manual in Appendix C until the new BMP Design Manual is implemented, as described in Section 4.3.4. PDPs are required to minimize the introduction of pollutants of concern to the storm water conveyance system to the MEP to reduce any significant impacts on the receiving water. This objective can be most effectively achieved by using a combination of Site Design, Source, and treatment control BMPs. The Authority's current SUSMP/BMP Design Manual describes the selection and design criteria for the Source Control, LID, and treatment control BMPs to be implemented at PDPs. For PDPs, the Authority's SUSMP requires the selection of storm water BMPs to maximize the removal of the primary pollutant(s) of concern identified on the project site. The SUSMP process leads to the selection of treatment control BMPs with high or medium pollutant removal efficiencies for the most significant pollutants of concern. Matrices are provided in the Authority's current SUSMP/BMP Design Manual to guide BMP selection, based in part on their pollutant removal efficiencies.

The Authority will implement the new BMP Design Manual to replace the current SUSMP to continue to address post-construction urban runoff pollution from new development, priority development, and redevelopment projects. The following changes required by the new Municipal Permit Provision E.3.d.(1) (5) will be incorporated into the new BMP Design Manual:

- Updated procedures to determine the nature and extent of storm water BMP requirements for potential development and redevelopment projects, including all applicable source control, LID, and structural BMPs; design procedures and requirements for structural BMPs; and any requirements specific to phased projects for both private development (tenant) and public improvement (Authority) projects
- Updated procedures for identifying the expected pollutants and conditions of concern, based on receiving water quality; pollutants or conditions that cause or contribute to the highest priority water quality conditions identified in the WQIP; the land use type of the project and the pollutants associated with the land use; and the pollutants predicted to be present at the site
- Updated performance requirements and procedures for designing structural BMPs
- Long-term maintenance criteria for each structural BMP listed in the BMP Design Manual
- Alternative compliance criteria, if permitted, for PDPs

4.7.1 STORM WATER QUALITY MANAGEMENT PLAN

PDP projects that are subject to the new BMP Design Manual must submit a Storm Water Quality Management Plan (SWQMP) to EAD. The SWQMP will replace the USMP currently required by the SUSMP. The SWQMP must demonstrate how permanent source control and site design BMPs have been incorporated and implemented. The PDP SWQMP must include the following information:

- Documentation of the planning and decision process for structural BMP selection
- Calculations used for design of structural BMPs that demonstrate that applicable performance standards have been met
- General operation and maintenance requirements of the selected structural BMPs; a template is provided in Appendix A of the BMP Design Manual for final Operation and Maintenance Plan development
- Maintenance mechanisms selected for long-term operation and maintenance of the structural BMPs

Standard development projects (SDPs), or projects that are not defined as a PDP and are not subject to PDP requirements, will submit checklists that verify that all permanent source control and site design BMPs have been considered and implemented when feasible and include copies of all relevant plan sheets that demonstrate BMP implementation. The following checklist templates are included as appendices in the BMP Design Manual to be used in development of a project Standard SWQMP:

- Storm Water Requirements Applicability Checklist
- Preliminary Site Information for Standard Projects
- Source Control BMP Compliance
- Site Design BMP Compliance

The EAD evaluates the project SWQMP as part of the initial project review process to ensure that the project plans comply with BMP Design Manual and Municipal Permit requirements.

PDP BMP IMPLEMENTATION AND OVERSIGHT

PDP and structural BMP verification and inspection are conducted by the Authority to ensure that all design, construction, and maintenance requirements have been met.

4.8 STRUCTURAL BMP APPROVAL AND VERIFICATION

PDP applications that have not received approval from the Authority prior to the adoption of the new BMP Design Manual must meet the structural BMP performance requirements of Provision E.3 of the Municipal Permit. PDP project applicants who have already received approval prior to the new BMP Design Manual adoption may follow previous land development requirements, i.e., the current SUSMP/BMP Design Manual.

Prior to occupancy of each PDP, EAD, together with a project proponent engineer, inspects each structural BMP to verify that it has been constructed in compliance with all specifications, plans, permits, and ordinances, and records verification and approval of the structural BMPs in the Web-based database. Initial BMP verification inspections are separate from the regular operation and maintenance inspections for each BMP.

4.8.1 PDP INVENTORY

The Authority has incorporated a development inventory into the Web-based database for tracking and approval of all developments including PDPs. If applicable, the USMP or SWQMP can be uploaded and the type and location of structural BMPs can be recorded in the database. The database currently includes, or will be updated to include, the project PDP, address and hydrologic subarea, descriptions of structural BMPs (if applicable), date(s) of construction, responsible parties for construction and structural BMP maintenance, BMP maintenance inspection dates and results, and corrective actions taken and associated resolutions, when applicable.

PDPs with structural BMPs are prioritized for inspection and follow-up as shown in Table 4-2.

Table 4-2. PDP Prioritization Criteria

PDP Priority	Authority Criteria
High	PDPs with expected pollutants that are listed as highest or focused priority pollutants for the Authority in the San Diego Bay WQIP.
Low	PDPs with expected pollutants that are not listed as highest or focused priority pollutants for the Authority in the San Diego Bay WQIP.

The Authority reserves the right to revise its methodology for determining PDP inspection priority for any project as necessary. EAD considers the following additional factors when revising PDP structural BMP inspection priorities, as follows:

- Receiving water quality
- Number and sizes of structural BMPs
- Likelihood of operation and maintenance issues of structural BMPs
- Land use and expected pollutants generated
- Compliance record

4.8.2 PDP STRUCTURAL BMP MAINTENANCE VERIFICATIONS AND INSPECTIONS

The Authority’s approval of a development project includes the requirement to properly operate and maintain any structural BMPs that are constructed. The EAD verifies annually that structural BMPs are adequately maintained and continue to operate effectively to remove pollutants in storm water to the MEP. This verification is accomplished through inspection or self-certification.

Structural BMPs constructed by the Authority as part of a capital improvement project are maintained by the FMD. The FMD inspects and maintains these structural BMPs in accordance with the manufacturer’s recommendations. The FMD records inspection and maintenance of these BMPs. Before October 1 of each year, the EAD inspects either the FMD documentation of inspection/maintenance or the structural BMPs themselves or both.

Structural BMPs constructed by tenants are generally maintained tenants, unless the Authority and the FMD have assumed responsibility under the terms of the tenant's lease or some other mechanism. Structural BMPs constructed by tenants are either inspected by EAD annually before October 1 or the tenant is allowed to self-certify inspection and maintenance. Tenants who have been authorized by EAD to perform their own inspections and maintenance of structural BMPs are required to submit documentation and self-certification that inspection and maintenance were performed prior to October 1.

Any decision to increase the frequency of inspections of structural BMPs will be made by EAD on a case-by-case basis and will be dependent on the type of operations occurring outdoors at the PDP, type of BMPs installed, frequency of storms, and past experience from inspecting structural BMPs.

4.9 DEVELOPMENT AND PLANNING ENFORCEMENT

All project proponents involved in development or improvement planning are responsible for ensuring that project applications meet the requirements of the Municipal and Industrial Permits, Authority Rules and Regulations, Storm Water Code (Article 8), SWMP, SUSMP or BMP Design Manual, project permits and approvals, and contracts and leases. As required under Provision E.6 of the Municipal Permit, the Authority has developed an ERP to enforce its legal authority to achieve compliance. This section describes the ERP as it applies to development and planning projects at the SAN.

Violations are determined on the basis of noncompliance with established codes, regulations, permits, and approvals for development projects at the SAN. The enforcement mechanisms used by the Authority are listed below. The Authority generally obtains compliance using the first four mechanisms listed here. The remaining escalated enforcement mechanisms can be used, as necessary, to increase the severity of penalties and to compel compliance as soon as possible.

- Verbal and written warnings
- Written notices of violation
- Written notices to clean, test, or abate
- Order to cease and desist
- Fines
- Denial or revocation of permits and approvals
- Administrative and criminal penalties
- Bonding requirements
- Liens
- Program review and modification

The Authority's ERP for development and planning activities have two levels of enforcement. The general enforcement process is outlined as follows:

- Enforcement Level 1 is initiated if a project moves forward with construction or development activities before the project application has been approved or in a manner that has not been approved or if the responsible party fails to perform and document BMP inspections or self-verification inspections. The developer or responsible party is issued a verbal and/or written notification of the finding to initiate enforcement. Corrective actions are expected to be submitted and/or verified through re-inspection within 30 days of the verbal or written notice. If the corrective actions require a longer time period than 30 days, the Authority employee or tenants will provide an explanation to the EAD inspector and a suggested timeframe for completion, which the EAD inspector will either agree upon, or reject and provide a preferred timeframe. The Authority or tenants must document the corrective action taken by responding to EAD through the Authority's web-based database. The Authority or tenants who cannot complete corrective actions in the time required must explain in detail through the web-based database the specific causes of delay and propose a schedule for compliance. EAD has the sole discretion to grant an extension or pursue escalated enforcement. All corrective actions, as well as the time periods allowed and dates of actual completion, are recorded in the web-based database.
- Enforcement Level 2 is initiated when a prohibited offsite discharge occurs. A written notice to clean, test, or abate or an order to cease and desist (stop work order), is used to initiate enforcement and compliance is expected within 24 hours. If the violation is not corrected, the Authority or tenants must attend a mandatory meeting with the Director of the EAD to discuss the reasons for failing to comply and the means of resolving the issue.

4.10 DEVELOPMENT AND PLANNING MODIFICATIONS

The Authority has reserved this section to identify and document future changes to the Development Planning Component of the SWMP. Section 13.0 of this SWMP details the program modifications made to the March 2008 version of the SWMP to bring this document into compliance with the renewed Municipal and Industrial Permits.

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5.0 CONSTRUCTION COMPONENT

5.1 INTRODUCTION

This update to the Authority SWMP is in response to the requirements of the 2013 Municipal Permit. All Copermittees are required to reduce discharges of pollutants in storm water from construction sites to the MEP and to effectively prohibit discharges of non-storm water from construction sites into the MS4.

The SWMP update process included internal meetings and a workshop to incorporate comments from key stakeholders. Municipal Permit Provision F.2.a encourages the Authority “to seek public and stakeholder participation and comments early and often during the development of this document.” Final proposed updates must be submitted to the Regional Water Board concurrently with the submittal of the final WQIP for various watersheds. Section 5.0 has been revised to include the San Diego Bay WQIP strategies and goals submitted to the Regional Water Board in June 2015.

This section addresses the requirements in Municipal Permit Provisions E.4 and E.7.a that are relevant to the construction component. As listed below, these provisions require the Authority to:

E.4.a—Require the development of a pollution control plan, a construction BMP plan, and/or an erosion and sediment control plan prior to obtaining a permit to begin construction. The Authority must confirm that the plans achieve full compliance with (1) local ordinances; (2) the Municipal Permit; and (3) the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ, as amended by Order Nos. 2010-0014-DWQ and 2012-0006-DWQ) (the Construction General Permit [CGP]). Section 5.4 has been prepared to address this requirement.

E.4.b—Maintain an inventory of all construction sites and identify all construction sites within its jurisdiction that represent a high threat to downstream surface water quality. The Authority is required to maintain and update, at least quarterly, a watershed-based inventory of all construction projects that have been issued a local permit that allows ground-disturbing or soil-disturbing activities that can potentially generate pollutants in storm water runoff. The Authority is also required to identify all construction sites within its jurisdiction that represent a high threat to downstream water quality. These designations must consider site locations within a hydrologic subarea where sediment is known or suspected to contribute to high-priority water quality conditions identified in the WQIP; sites within the same hydrologic subarea and tributary to a 303(d)-listed waterway; sites adjacent to, or discharging to, a receiving water within an ESA; or other sites determined by the Authority or the Regional Water Board as a high threat to water quality. Section 5.2 has been prepared to address this requirement.

E.4.c—Implement, or require the implementation of, effective BMPs to reduce discharges of pollutants into storm water from construction sites to the MEP and to effectively prohibit non-storm water discharges from construction sites into the MS4. These BMPs must be site-specific, seasonally appropriate, and construction-phase appropriate. Section 5.3 has been prepared to address this requirement.

E.4.d—Inspect construction sites to require and confirm compliance with local permits and the Municipal Permit. Priority for site inspections must consider threat to water quality pursuant to Provision E.4.b. Inspections must be planned and conducted at the appropriate frequency for each phase of construction. Based upon inspection findings, the Authority must implement follow-up actions to confirm site compliance. Construction inspections must assess compliance with applicable permits, BMP implementation and maintenance, and the adequacy and effectiveness of BMPs. Construction inspections must make visual observations of non-storm water discharges, sediment and construction material discharges, and illicit connections. All violations and necessary corrections must be documented in accordance with the ERP. All inspections at all inventoried construction sites must be tracked and recorded. These records must be retained electronically or in tabular form and be available to the Regional Water Board upon request. The inspections

must include site name, date, and rainfall data since last inspection, description of violations or findings, explanatory comments, description of enforcement actions, and resolution of problems with the date that each was resolved. Section 5.5 has been prepared to address this requirement.

E.4.e—Enforce its legal authority established pursuant to Municipal Permit Provision E.1 for all its inventoried construction sites, as necessary, to achieve compliance with requirements of the Municipal Permit in accordance with the ERP. Section 5.6 has been prepared to address this requirement.

E.7.a.(3)—Promote and encourage the development of programs, management practices, and behaviors that reduce the discharge of pollutants in storm water to the MEP, prevent controllable non-storm water discharges from entering the MS4, and protect water quality standards in receiving waters. The public education program must be implemented in accordance with the strategies in the WQIP and must include, at a minimum, appropriate education and training measures for specific target audiences, such as construction site operators. Section 5.7 has been prepared to address this requirement.

5.1.1 SOURCE CHARACTERIZATION

The construction component of the SWMP addresses demolition, grading, excavation, clearing, and structure and road construction, which can disturb soil and/or produce materials that can transport trash, debris, sediment, and other pollutants to the storm water conveyance system. Construction grading and clearing can expose underlying soil, making it susceptible to erosion from rainfall, wind, or improper water use. Natural vegetation root structures normally stabilize underlying soil and increase infiltration, which typically decreases storm water runoff volume and velocity. Excess sediment that is eroded in the absence of vegetation at a construction site is considered a pollutant because it degrades aquatic life by interfering with photosynthesis, respiration, growth, and reproduction.

Sediment particles eroding from construction sites can provide a substrate to which other pollutants can attach (e.g., trace metals, hydrocarbons, conventional pollutants, pesticides, and coliform bacteria). In addition, construction materials and waste can have significant detrimental effects on downstream receiving waters if they are not properly handled and contained. The magnitude of the storm water impacts depends on the nature of construction activities, climatic conditions, site conditions, material- and waste-handling protocols, and appropriately implemented and maintained BMPs. After construction is completed, an increase in impervious surface coverage can have a lasting negative impact on drainage patterns, runoff velocities and downstream erosion, and downstream drainage systems and natural waterways. The impacts of development and associated BMPs to reduce them are outlined in Section 4.0.

Sources of construction pollutants identified by the Authority include any existing or future construction sites at SAN. Designated minimum construction BMPs, as outlined in Section 5.3, are required to be implemented at all construction sites. When necessitated by project- or site-specific characteristics, construction phasing, and/or the season, additional BMPs will also be required. The minimum BMPs, as well as any required additional project-specific BMPs, are intended to reduce the discharge of trash, debris, sediment, and other pollutants from the site to the MEP and to prevent the site from causing or contributing to a violation of water quality standards.

5.2 CONSTRUCTION SITE INVENTORY AND TRACKING

5.2.1 SITE INVENTORY

The Authority maintains an inventory of completed and active construction projects at the SAN. The inventory exists in a Web-based database management system maintained by the EAD. The database manages and tracks completed, ongoing, and upcoming construction projects. Project information is initially entered into the database during the project intake process, described in Section 5.4.

The database records the following specific details required by the Municipal Permit and other pertinent information for each project:

- Project name and location (by address and/or by latitude and longitude)
- Owner's name, address, telephone number, and email address
- Contractor's name, address, telephone number, and email address
- Project manager's name, address, telephone number, and email address
- Construction manager or site superintendent's name, address, telephone number, and email address
- Qualified SWPPP Developer's (QSD's) name, address, telephone number, and email address
- Qualified SWPPP Practitioner's (QSP's) name, address, telephone number, and email address
- Start and completion dates
- Size of the site
- Approximate disturbed soil area (DSA)
- Threat to water quality (TTWQ) designation
- Required inspection frequency
- Copy of the SWPPP or Water Pollution Control Plan (WPCP)
- Date on which the SWPPP or WPCP was received by the EAD
- Date on which the SWPPP or WPCP was approved by the EAD
- WDID number, if any
- Minutes and notes from any pertinent pre-bid, pre-construction, or construction progress meetings

The database is also used to track:

- Current construction phase
- Inspections
- Ongoing enforcement actions

The Municipal Permit requires that the Authority also record the hydrologic subarea in which each project lies, so that a watershed-based inventory can be maintained. However, this hydrologic information is not recorded in the Authority's database, because all construction projects at the SAN lie in the same watershed (namely, the Pueblo San Diego hydrologic unit, San Diego Mesa hydrologic area, Lindbergh hydrologic sub-area [908.21]).

The Municipal Permit requires the construction site inventory to be updated at least quarterly. The database of construction projects at the SAN can provide up-to-the-minute information about completed and ongoing construction projects and suffices as the updated inventory, or it can be used to produce an electronic or hard-copy report at any time.

5.2.2 THREAT TO WATER QUALITY

Municipal Permit Provision E.4.b.(2), requires that "each Copermittee must identify all construction sites within its jurisdiction that represent a high threat to downstream surface water quality." Like other Copermittees, the Authority refers to "threat to downstream surface water quality" as "threat to water quality." Factors to consider when designating high TTWQ must include:

- Whether the site is located within a hydrologic subarea where sediment is known or suspected to contribute to the highest priority water quality conditions identified in the WQIP
- Whether the site is located within the same hydrologic subarea and tributary to a water body segment listed as impaired for sediment on the 303(d) list
- Whether the site is located within, directly adjacent to, or discharging directly to a receiving water within an ESA
- Whether it is another site determined by the Copermittees or the Regional Water Board to be a high TTWQ

ESAs are areas that include 303(d)-listed impaired water bodies, areas designated as an ASBS, State Water Quality Protection Areas, water bodies designated with the RARE beneficial use, areas designated as preserves or their equivalents under the Multiple Species Conservation Program (MSCP), and any other equivalent area identified by the Copermittees.

In considering the factors used to identify the TTWQ, the Authority notes that:

- 1) There are currently no hydrologic subareas identified in the San Diego Bay WQIP where sediment is known to contribute to, or is suspected of contributing to, the highest priority water quality conditions.
- 2) The Authority's jurisdiction does not lie in a hydrologic subarea and is not tributary to a 303(d)-listed water body segment that is currently listed as impaired for sediment.
- 3) Only one of the six criteria for an ESA applies to the discharges from the Authority's jurisdiction: if a particular construction site is directly adjacent to or discharging directly into San Diego Bay because the bay is designated with RARE beneficial use in the Water Quality Control Plan for the San Diego Basin (Basin Plan, 2012, Table 2-3). Note that most of the runoff from the Authority's jurisdiction does not drain directly into San Diego Bay, but rather is commingled with runoff from other jurisdictions, including the City of San Diego, the Port of San Diego, and the United States Marine Corps.

The Authority has determined that construction projects subject to the CGP are considered high TTWQ. Given all of the above, the Authority has developed a two-tiered methodology for determining the TTWQ of any particular construction project. This methodology is presented in Table 5-1.

Table 5-1. Level of Threat to Water Quality Criteria

TTWQ	Authority Criteria
High	Site is directly adjacent to or discharging directly to San Diego Bay; or Site is subject to the CGP and does not qualify for an erosivity waiver from the CGP.
Low	Site is not directly adjacent to nor discharging directly to San Diego Bay; and Site is not subject to the CGP because of the size of the DSA or because it qualifies for an erosivity waiver from the CGP.

As stated in the Municipal Permit, either the Copermitee or the Regional Water Board may unilaterally determine that a particular construction project should be identified as a high TTWQ for reasons not listed above. It is possible that a project that is initially identified by the Authority as a low TTWQ could become a high TTWQ site merely because an erosivity waiver expires before the project is completed. In addition, as the San Diego Bay WQIP and the 303(d) list are updated, the Authority will revise its TTWQ determination methodology as necessary. Table 5-2 presents the inventory of active construction sites as at June 2015.

Table 5-2. Inventory of Active Construction Sites as of June 2015

#	Sponsor	Project Name	Project Description	Start Date	Priority
1	Authority	CIP#104136 Airport Electrical Distribution Center	Construct a new 12-kV electrical distribution system to provide power to the new facilities at Teledyne Ryan and North Side	January 2014	High
2	Authority	CIP #104118 North Side Interior Road and Utilities	Provide necessary utility infrastructure to support the proposed North Side developments	March 2015	Low
3	Authority	CIP #104173 Rental Car Center	Construct a multi-level parking garage	September 2013	High
4	Authority	CIP #104134 Terminal Link Road	Construct a two-way perimeter road that connects the airport terminals to the proposed Rental Car Center for bus traffic	October 2014	High
5	Authority	CIP #104119E NSU Storm Drain Trunk	Construct a storm drain pump station, force main, and outfall for North Side development	March 2015	Low
6	Authority	CIP #601021 T2W Photovoltaic System	Install a photovoltaic power system at Terminal 2 West parking lot and roof	December 2013	Low
7	Authority	CIP #601020 Rental Car Center Photovoltaic System	Install a photovoltaic power system at the Rental Car Center and adjacent parking lot	December 2013	Low
8	Authority	CIP #104185 Employee Parking Lot 6 Expansion	Construct 686 additional employee parking spaces	July 2014	High
9	Authority	CIP#104181 RCC Bus Parking Facility	Construct bus parking facility for Rental Car Center buses	June 2015	High

CONSTRUCTION COMPONENT

Table 5-2. Inventory of Active Construction Sites as of June 2015 (continued)

#	Sponsor	Project Name	Project Description	Start Date	Priority
10	Authority	CIP#104193 Solid Waste Disposal and Recycling Facility	Enclose waste disposal and recycling facility operations and FOD control	October 2014	Low
11	Authority	CIP#104164 Upgrade Remaining 12 Noise Monitoring Poles	Construct 12 new steel, solar- powered noise monitoring poles at existing locations	March 2015	Low
12	Authority	CIP#104166 Upgrade Ground Transportation Systems	Upgrade the current ground transportation systems	July 2014	Low
13	Authority	CIP#104173 North Side Additional Landscaping	Implement sidewalk and landscape improvements along Pacific Highway	February 2015	Low
14	Authority	CIP#104175 Restaurant Development at Rental Car Center	Construct a restaurant shell on third level of the new Rental Car Center	September 2014	Low
15	Authority	CIP#104176 Construct North Side Bypass Taxiway	Construct a single taxiway that parallels and connects to Taxiway "C"	April 2015	High
16	Authority	CIP#104178 Replace Passenger Boarding Bridges in Terminal 1	Replace passenger boarding bridges at Gates 3, 5, and 16 in Terminal 1	September 2013	High
17	Authority	CIP#104182 Terminal 2 East CUPPS Expansion	Complete implementation of common use passenger processing systems (CUPPSs) at seven gates in Terminal 2 East	February 2015	High
18	Authority	CIP#104183A Develop Administrative Spaces	Provide administrative spaces for Authority staff	May 2015	High
19	Authority	CIP#104183A Develop Administrative Spaces Parking Lot	Demolish the taxi building and building 56 stall parking lot	March 2015	High
20	Authority	CIP#104184 Passenger Processing Improvements	Install six automated Passport Clearance kiosks, six automated liquid crystal display (LCD) dynamic, and required electrical signage	March 2015	Low
21	Authority	CIP#104192 Hazardous Waste Storage Facility	Construct a facility to store, segregate, and manage hazardous waste	April 2015	Low
22	Authority	CIP#104200 East Side Fiber Loop Installation	Install 432-stand single mode fiber optic cable around the east loop of the Authority	March 2015	Low

5.3 BEST MANAGEMENT PRACTICE REQUIREMENTS

Each construction site must be protected by an effective combination of site planning, erosion, and sediment controls; materials and waste management controls; and other BMPs to prevent or reduce the discharge of storm water pollution and to prohibit the discharge of non-storm water from construction sites to the MEP.

Effectiveness depends on properly implementing and maintaining these BMPs. This section designates the BMPs required for all construction sites at the SAN, depending on their applicability to the activity at hand.

5.3.1 GENERAL BMP REQUIREMENTS

All projects and construction activities are required to implement construction BMPs. The project proponent must identify the construction BMPs to be implemented in accordance with the performance standards in this section. For projects disturbing one acre or more, the construction BMPs must be identified in a SWPPP in accordance with the CGP. For projects disturbing less than one acre, a WPCP is required, because all projects require some form of BMP plan per Municipal Permit Provision E.4.a to identify the pollution prevention measures that will be taken during construction.

It is the responsibility of the project proponent to ensure the proper selection, installation, and maintenance of appropriate BMPs. Storm water BMPs for construction sites typically require frequent maintenance to maintain effectiveness. BMPs may require relocation, revision, and re-installation, particularly as project phases change. Therefore, the project proponent for any construction project within the Authority's jurisdiction must retain a dedicated qualified person, specifically a QSP as defined in the CGP (even if the project is not subject to the CGP). The QSP must be on the construction site daily to evaluate site conditions with respect to storm water pollution prevention planning and implementation of the SWPPP or WPCP and the BMPs.

All construction project proponents and contractors are required to ensure that the QSP conducts and documents self-inspections of the project site on a weekly basis. (Note that the CGP has additional inspection requirements that must be met.) Documentation of self-inspections must record, among other information as discussed in Section 5.5, the date, time, the condition of the BMPs, the effectiveness of the BMPs, and the need for changes to either the SWPPP or WPCP, or the BMPs, or both. Documentation must be kept onsite and made available for inspection by the Authority upon request.

The primary purposes of self-inspections are to ensure that:

- The owner/contractor takes full responsibility for managing storm water pollution caused by the project site's construction activities.
- Storm water BMPs are properly documented, implemented, and functioning effectively.
- BMP maintenance (e.g., sediment removal) and repair needs are identified and addressed.

BMPs must be installed in accordance with an industry-recommended standard or in accordance with the requirements of the CGP. More information about BMPs is provided in the CASQA Stormwater Best Management Practices Handbook Portal: Construction.

BMP requirements differ, depending upon the type of the project, the topography of the site, and the season (i.e., the rainy wet season from October 1 through April 30, or the dry season, from May 1 through September 30).

5.3.2 PERFORMANCE STANDARDS

The Authority will evaluate the adequacy of the project proponent's construction site management for storm water pollution prevention, including BMP implementation. These evaluations will be based on performance standards for storm water BMPs, which include:

- Pollution prevention measures designed so that there is no increase of project-related pollution (including sediment) in runoff from the site

- Prevention of slope erosion
- Mitigation of runoff discharge velocity to less than or equal to pre-construction levels

A site is considered inactive if construction activities have ceased for a period of 14 or more consecutive calendar days. At any time of year, an inactive site must be fully protected from erosion and discharges of sediment. It is also the project proponent's responsibility (for both active and inactive sites) to implement a plan to address all potential non-storm water discharges.

Regardless of inspections conducted by the Authority, project proponents are required to prevent any construction-related materials, wastes, spills, or residues from entering a storm water conveyance system. More detailed performance standards that each project will be evaluated against are captured as part of the project intake process, described in Section 5.4.2.

5.3.3 MINIMUM REQUIREMENTS

The following requirements are the minimum standards for a construction site. Additional BMPs may be required to comply with the performance standards detailed in Section 5.4.2. The EAD may further amend these requirements on a case-by-case basis.

The minimum BMPs must be implemented unless the justification for their exception is submitted and approved during the SWPPP or WPCP review process (e.g., projects that will not be using concrete and therefore will not generate concrete waste). The justification must be documented in the SWPPP or WPCP, and annotated on the project intake process form. Such exceptions to the minimum BMPs can be approved only by the EAD.

The Authority's designated set of minimum BMPs for use at all construction projects, regardless of the project's TTWQ (unless approved by the Authority as not applicable, as described above) are presented in Table 5-3.

Table 5-3. Designated Minimum BMPs for All Construction Projects

BMP Category, CASQA Identification Number,(1) and Title	
Erosion Control BMPs:	
EC-1–Scheduling	EC-16–Non-Vegetative Stabilization
EC-15–Soil Preparation	
Temporary Sediment Control BMPs:	
SE-1–Silt Fence	SE-7–Street Sweeping and Vacuuming
SE-5–Fiber Rolls	SE-10–Storm Drain Inlet Protection
SE-6–Gravel Bag Berm	SE-13–Compost Socks and Berms
Wind Erosion Control BMPs:	
WE-1–Wind Erosion Control	
Temporary Tracking Control BMPs:	
TC-1–Stabilized Construction Entrance and Exit	
Non-Storm Water Management BMPs:	
NS-1–Water Conservation Practices	NS-9–Vehicle and Equipment Fueling
NS-3–Paving and Grinding Operations	NS-12–Concrete Curing
NS-6–Illicit Connection/Discharge	NS-13–Concrete Finishing
Waste Management and Materials Pollution Control BMPs:(2)	
WM-1–Material Delivery and Storage	WM-5–Solid Waste Management
WM-2–Material Use	WM-8 Concrete Waste Management
WM-3–Stockpile Management	WM-9–Sanitary/Septic Waste Management
WM-4–Spill Prevention and Control	

Note that some BMPs may be not applicable to certain construction projects, such as one with no use of concrete.

(1) Details of the Authority’s minimum BMPs are in the CASQA Stormwater BMP Handbook Portal for Construction at <https://www.casqa.org/resources/bmp-handbooks>. BMPs must be employed to industry standards, as outlined in the CASQA *Construction Handbook*.

(2) For sites with pre-existing soil contamination issues, BMP WM-7, Contaminated Soil Management, must be added to the SWPPP or WPCP.

The 2007 Municipal Permit (Order No. R9-2007-0001) indicated that erosion prevention is to be “used as the most important measure for keeping sediment onsite during construction, but never as the single method.” Sediment controls should be used as a “supplement to erosion prevention for keeping sediment onsite during construction.” BMPs at each construction site must be site-specific, seasonally appropriate, construction-phase appropriate, and implemented year-round, as applicable. Year-round requirements include, but are not limited to:

- Erosion control BMPs must be installed and maintained to comply with detailed performance standards from Section 5.4.2.
- Perimeter protection BMPs must be installed and maintained to comply with detailed performance standards from Section 5.4.2.
- Sediment control BMPs must be installed and maintained to comply with detailed performance standards from Section 5.4.2.

- BMPs to control sediment tracking must be installed and maintained at entrances and exits to comply with detailed performance standards from Section 5.4.2.
- Materials needed to install standby BMPs necessary to completely protect the exposed portions of the site from erosion and to prevent sediment discharges must be stored onsite. Areas already protected from erosion through implementation of physical stabilization or established vegetation stabilization BMPs (as described below) are not considered to be “exposed” for purposes of this requirement.
- Deployment of physical or vegetation erosion control BMPs must begin as soon as grading and/or excavation has been completed for any portion of the site. The project proponent may not continue to rely on the ability to deploy standby BMP materials to prevent erosion of areas where grading has been completed.
- All slopes must be protected and stabilized during rain events.
- All vegetation erosion control must be established prior to the rainy season to be considered as a BMP.
- A disturbed area that is not completed but is not being actively graded must be fully protected from erosion if left idle for 14 or more calendar days. The ability to deploy standby BMP materials is not sufficient for these areas; BMPs must actually be deployed.
- A washout area must be designated and maintained for materials such as concrete, stucco, paint, caulking, sealants, and drywall plaster.
- Materials and wastes must be stored in properly protected, designated storage areas.
- Trash and debris must be removed and properly stored or disposed of daily.
- Storage, service, cleaning, and maintenance areas for vehicles and equipment must be identified and protected accordingly.
- Materials for spill control and containment must be stockpiled onsite.
- Non-storm water discharges must be eliminated or controlled to the MEP.

In addition to the minimum BMPs listed above, construction projects must select and implement additional BMPs, when necessary, to sufficiently address all anticipated activities at the site throughout the project’s duration and phases. For sites with pre-existing soil contamination issues, BMP WM-7, Contaminated Soil Management, must be added to the SWPPP or WPCP.

5.3.4 ADDITIONAL REQUIREMENTS FOR HIGH TTWQ CONSTRUCTION SITES

The EAD may, as part of the project approval process, require incorporation of multiple BMPs in each of the required minimum BMP categories to provide “multiple lines of defense” for high-TTWQ construction sites. Construction projects determined to be high-TTWQ sites also must incorporate the following requirements into the SWPPP or WPCP for the project.

Project proponents for high TTWQ construction projects must:

- Implement a weather-triggered action plan (WTAP) as necessary. The QSP is responsible for monitoring the weather and for ensuring that the WTAP is implemented as needed. The five-day weather forecast will be monitored daily and a WTAP will be developed whenever there is a 40 percent or greater chance of precipitation forecast over the next five days by the National Weather Service (NWS). The WTAP must outline any necessary additional BMPs to be implemented prior to a rain

event, the person responsible for implementing additional BMPs, any changes required in the construction schedule, any changes required in the activities underway for the particular construction phase, a listing of the types of tradesmen and subcontractors active on the construction site, and their relevant contact information. The WTAP must be deployed/activated whenever the NWS forecasts the chance of precipitation as 50 percent or greater at any time in the next 48-hour period.

High-TTWQ construction projects discharging directly to San Diego Bay will:

- Use high-performance erosion control methods, such as bonded fiber matrix or anchored erosion control blankets, on all exposed soils.
- Ensure at least two lines of defense for sediment control where site drainage is directed to an inlet that conveys flow to San Diego Bay, with each line of defense designed to independently control sediment to the MEP.
- Fully protect stockpiles and locate them as far from any inlets as possible.
- Ensure that no flow concentration points are present that could scour soil or overwhelm erosion and sediment control measures.

5.4 PROJECT APPROVAL PROCESS

All construction projects at the SAN undergo the review described below, as part of the project approval process. This section describes the steps that will be taken to require and verify the implementation of the designated minimum BMPs at all construction sites. The detailed content and organization of this section reflect the specific processes used by the Authority.

Section 4.0 of this SWMP outlines the process for approving development or improvement projects carried out by the Authority or airport tenants. In short, the EAD and the Planning Department (PD) receive project information for evaluation and review to assess environmental impacts. The conditions of approval for an airport tenant project become part of the lease or use permit. Conditions of approval for the Authority's own projects are incorporated into the planning, design, and contracting as the project goes before the Board for approval. This process leads to the identification and imposition of the construction and post-construction BMPs required for the project. In general, conditions of approval require the project proponent and project management team to prepare a construction site SWPPP or WPCP, depending upon the size and type of the project, as described below. These plans are reviewed and approved by the EAD.

5.4.1 POLLUTION PREVENTION PLANNING

To facilitate both the preparation and review of construction project SWPPPs, the Authority has developed two templates that are required to be used by project proponents. One template is for a SWPPP in accordance with the CGP and the other template is for a WPCP for those projects not subject to the CGP.

The templates are designed to ensure that the specific information that the Authority requires to be in a SWPPP or WPCP for construction at the SAN are addressed. The templates include:

- The minimum BMPs required to be implemented at all construction sites (including BMP cut sheets from CASQA, illustrating proper installation)
- A checklist for additional BMPs to be selected on a per-project basis, depending on specific site characteristics, the season or the likelihood of rainfall, and the construction phases

5.4.2 PROJECT INTAKE

Once the project proponent or project management team has developed the requisite SWPPP or WPCP, it is submitted to the EAD for review and approval. The EAD has developed a project intake process to obtain the information needed in reviewing the plans for any construction project at SAN.

In addition to providing a signed copy of the WPCP or certified SWPPP, the project proponent or project management team must provide the following information on the Project Intake (PIT) form (Appendix G):

- Project name and location (by address and/or by latitude and longitude)
- Owner's name, address, telephone number, and email address
- Contractor's name, address, telephone number, and email address
- Project manager's name, address, telephone number, and email address
- Construction manager's or site superintendent's name, address, telephone number, and email address
- QSP's name, address, telephone number, and email address
- WDID number (for projects subject to the CGP)
- QSD's name, address, telephone number, and email address (for projects subject to the CGP)
- Start and completion dates
- Size of the site
- Approximate DSA in acres
- Project proponent's self-assessed level of TTWQ, based on whether:
 - The site is directly adjacent to or discharging directly to San Diego Bay
 - The site is subject to the CGP and does not qualify for an erosivity waiver from the CGP
- A list of any minimum BMPs required by the Authority that do not apply to the project, because the BMP is related to activities that are not expected to occur
- A list of any minimum BMPs required by the Authority that will not or cannot be implemented on the project and the justification for their exception, with the justification included in the SWPPP/WPCP
- A description of how the project has been scheduled so that grading in the wet season is avoided or minimized
- A description of how the project has been scheduled so that the areas to be cleared and graded are minimized to only the portion of the site that is necessary for construction
- A description of how the project has been scheduled so that the exposure time of DSAs is minimized
- A description of the measures put in place to ensure that the maximum DSA stated in the SWPPP/WPCP is not exceeded
- A description of how active slopes will be stabilized prior to a rain event

- Confirmation that any pre-existing soil contamination issues will be addressed by appropriate safety measures and BMPs
- Confirmation that the provisions have been addressed in the SWPPP or WPCP to begin deployment of physical or vegetation erosion control BMPs as soon as grading and/or excavation has been completed for any portion of the site

For construction projects that are self-assessed to be high-TTWQ construction projects, the project proponent or project management team must also provide:

- Confirmation that the provisions have been addressed in the SWPPP or WPCP to implement a WTAP as necessary

For construction projects that are self-assessed to be high-TTWQ construction projects discharging directly to San Diego Bay, the project proponent or project management team must also provide:

- Confirmation that provisions for the use of high-performance erosion control methods (such as bonded fiber matrix or anchored erosion control blankets) on all exposed soils have been addressed in the SWPPP or WPCP
- Confirmation that provisions have been addressed in the SWPPP or WPCP to ensure that there are at least two lines of defense for sediment control where site drainage is directed to an inlet that conveys flow to San Diego Bay and that each line of defense is designed to independently control sediment to the MEP
- Confirmation that stockpiles are fully protected and located as far from any inlets as possible
- Confirmation that provisions are in the SWPPP or WPCP to ensure that no flow concentration points are present that could scour soil or overwhelm erosion and sediment control measures.

The EAD uses the PIT process to verify (as required by the Municipal Permit) that those projects subject to the CGP have obtained coverage.

Once the PIT form and the SWPPP or WPCP are submitted, the EAD has 14 days to review the documents. The EAD will either approve or reject the SWPPP or WPCP, and the information on the PIT process form. If a plan is rejected, the project proponent or project management team will be advised as to the reasons for rejection. The project cannot begin construction until approved by the EAD.

5.5 CONSTRUCTION SITE INSPECTIONS

The EAD inspects all construction sites to monitor and enforce compliance with the Authority's ordinances, permits, approvals, the Municipal Permit, and this SWMP. This section discusses the processes and procedures for these inspections.

5.5.1 INSPECTION FREQUENCY

The Municipal Permit requires the Authority to establish the inspection frequency for construction projects on the basis of the TTWQ designation, the phase of construction, and WQIP highest water quality priorities. However, there are several issues related to the operation of an airport in an urban center in close proximity to San Diego Bay that led the Authority to establish a year-round weekly inspection frequency for all construction projects at the SAN, regardless of their TTWQ designation.

5.5.2 INSPECTION CONTENT

The inspection by the EAD includes (1) a review of the SWPPP or WPCP and associated documentation, and (2) a site walk to observe the correlation of project documentation with actual field conditions and the adequacy and effectiveness of the BMPs being implemented. Required documentation of SWPPP or WPCP implementation includes updated site layout plans and figures, and weekly self-inspection reports. If the project is subject to the CGP, then the inspection will also include a review of SWPPP supporting documentation, such as reports for other required inspections (e.g., rain event etc), plan amendments, personnel training records, and runoff monitoring results, as applicable. The objectives of the construction site inspection are to:

- Assess compliance with the Authority's permits, approvals, applicable ordinances, rules, and regulations related to pollution prevention, including the implementation and maintenance of applicable BMPs.
- Assess BMP adequacy and effectiveness.
- Observe actual non-storm water discharges.
- Observe actual or potential discharge of sediment and/or construction-related materials from the site.
- Observe actual or potential illicit connections.
- Verify coverage under the CGP (when applicable).

The inspector carries the following forms and equipment during the inspection: (1) a tablet or cellular telephone, with a backup paper inspection form in case of technical difficulties, to be completed during the inspection (see Appendix G); (2) a copy of the PIT process form with which to review and verify the contents of the SWPPP or WPCP; and (3) a camera, to document site conditions.

After reviewing the documentation associated with the project, including the inspection history and compliance status, the inspector evaluates conditions across the entire site, including:

- The perimeter
- Run-on and discharge points
- Materials, equipment, and waste storage areas
- Storm drain inlets
- Access roads
- Outside perimeter of the site (including nearby storm drain inlets)
- All active and inactive areas
- Supplies of BMPs stored onsite in readiness for a rain event

5.5.3 INSPECTION TRACKING AND RECORDS

The EAD inspector documents the results of the inspection, including any issues identified (such as inadequate implementation or maintenance of required BMPs, inadequate SWPPP or WPCP documentation, and missing inspection records) via the Web-based database management system, described in Section 5.2. When issues are identified, the inspector can also capture images and location information (such as Global Positioning System [GPS] coordinates) that can be stored in the inspection database system. The Web-based database allows the EAD to effectively and efficiently share the inspection results with the project proponent and the project management team. The database records the information from all inspections and re-inspections.

At a minimum, the inspection records include:

- The project site name, location (address and hydrologic subarea), and WDID number (if applicable)
- The inspection date
- The approximate amount of rainfall since last inspection
- A description of problems observed with BMPs and an indication of need for BMP additions, repairs, or replacements, along with any scheduled re-inspection, and date of such re-inspection
- Any other specific inspection comments, which must, at a minimum, include rationales for the allowance of longer compliance timeframes, if any
- A description of enforcement actions issued in accordance with the Authority's SWMP ERP
- Confirmation that issues noted during the inspection have been resolved and the date of resolution

While onsite, the EAD inspector will discuss the results of the inspection with the project proponent or project management team and the project-dedicated QSP. The project proponent and project management team receive the inspection report in an email or as a hard copy. The project proponent and/or project management team accesses the Web-based database to view additional inspection detail and to provide information (text, maps, and pictures) about how and when issues have been resolved. The EAD inspector uses the information in the database provided by the project proponent or project management team to confirm compliance, request further action, or escalate enforcement.

5.6 CONSTRUCTION SITE ENFORCEMENT

5.6.1 ENFORCEMENT RESPONSE PLAN FOR CONSTRUCTION SITES

All construction activities undertaken in the Authority's jurisdiction are required to maintain compliance with the Authority Rules and Regulations, Storm Water Code (Article 8), SWMP, the Municipal Permit, the CGP (if applicable), project permits and approvals, and contracts and leases. Provision E.6 of the Municipal Permit requires each Copermittee to develop an ERP to enforce its legal authority to achieve compliance. Each component of the ERP must describe the enforcement response approaches that will be used to compel compliance. The description must include the protocols for implementing progressively stricter enforcement responses ("escalating enforcement").

This section describes the ERP as it applies to construction activities at SAN. In accordance with the Municipal Permit, the ERP has been updated concurrently, with submittal of the final San Diego Bay WQIP in June 2015, so that the ERP aligns with WQIP strategies.

Any findings or violations noted during a site inspection by the EAD inspector will be discussed onsite with the project proponent or project management team and the project-dedicated QSP. The EAD inspector will discuss the issues, and the inspection report will detail the corrective actions required and the timeframe in which corrective actions must be completed. Findings and violations will be described and recorded in the inspection database (and include photographs, GPS, or other location information, as applicable).

The Authority requires that corrective actions must be started immediately and be completed prior to the next predicted rain event or within a maximum of 72 hours, whichever is sooner. Depending on the nature of the finding, some corrective actions may take longer to complete. In those cases, the project proponent will provide an explanation to the EAD inspector and a suggested timeframe for completion, which the EAD inspector will either agree upon, or reject and provide a preferred timeframe. (Note: corrective actions must be completed within 24 hours for Enforcement Level 2 violations, as described below.) The project proponent or project management team must document the corrective action taken by responding to EAD through the Web-based database. Project proponents and project management teams who cannot complete corrective actions in the time required must explain in detail, through the Web-based database, the specific causes of delay, and must propose a new schedule for compliance. The EAD has the sole discretion to grant an extension or pursue escalated enforcement. All corrective actions, as well as the time periods allowed and dates of actual completion, are recorded in the inspection database.

The enforcement mechanisms used by the Authority are listed below. The Authority generally obtains compliance using the first four mechanisms listed here. The remaining enforcement mechanisms can be used, as necessary, to increase the severity of penalties and to compel compliance as soon as possible.

- 1) Verbal and written warnings
- 2) Written notices of violation
- 3) Written notices to clean, test, or abate
- 4) Order to cease and desist (stop work orders)
- 5) Fines
- 6) Denial or revocation of permits and approvals
- 7) Administrative and criminal penalties
- 8) Bonding requirements
- 9) Liens

The Authority's ERP for construction has two levels of enforcement. Enforcement is initiated and escalated by standard mechanisms for each level. The Authority has the discretion to initiate or escalate enforcement using any enforcement mechanism available, depending on the nature of the concerns, existing site and weather conditions, and actions by the project proponent or project management team to control or correct the finding or violation. The general enforcement process is as follows:

- Enforcement Level 1 is initiated by the finding of a BMP deficiency in the BMP categories of general housekeeping, waste management, non-storm water management issues, erosion controls, sediment controls, tracking controls, run-on and runoff controls, and plan implementation (e.g., lack of self-inspections or documentation thereof, lack of ongoing training or documentation thereof, or failure to adequately update the SWPPP or WPCP to reflect site conditions). A verbal warning and written notification of the finding are used to initiate enforcement and corrective actions are expected to be observed during a re-inspection after 7 days. Photos of the corrective action should be date-stamped to

show completion within 72 hours, or the agreed upon timeframe, if longer. If the finding is not corrected upon re-inspection, a written notice of violation is issued to escalate enforcement and compliance is expected within 5 days. Upon the second re-inspection, if the finding is still not corrected a second written notice of violation is issued, which may include an order to clean, test, or abate, and compliance is expected within 2 days. Continued failure to correct the violation in the time allowed will result in a mandatory meeting between the project proponent or project management team and the Director of the EAD and/or Vice President of Development to discuss the reasons for failing to comply and the means of resolving the issue.

- Enforcement Level 2 is initiated when a prohibited offsite discharge occurs. A written notice to clean, test, or abate, and/or an order to cease and desist (stop work order), is used to initiate enforcement and compliance is expected within 24 hours. If the violation is not corrected upon re-inspection, the project proponent or project management team must attend a mandatory meeting with the Director of the Environmental Affairs Department and/or Vice President of Development to discuss the reasons for failing to comply and the means of resolving the issue.

In accordance with Municipal Permit Provision E.6.e, the Authority will notify the Regional Water Board in writing or email within five days of issuing an escalated enforcement action between levels to a site that it has designated as a significant TTWQ. A construction site that poses a significant TTWQ as a result of violations or other noncompliance with its permits and applicable ordinances, regulations, rules, and the requirements of the Municipal Permit is considered by the Authority to be any site at which there has been any spill, release, or discharge of sewage, petroleum, or a hazardous material listed in accordance with 40 CFR Parts 117 or 302 that enters the storm water conveyance system and that is not fully contained and cleaned up and/or that reaches San Diego Bay. (40 CFR Part 117 addresses the determination of such quantities of hazardous substances that may be harmful pursuant to Section 311(b)(3) of the CWA. 40 CFR Part 302 addresses the designation, reportable quantities, and notification requirements for the release of substances designated under Section 311(b)(2)(A) of the CWA.)

Penalties for violations, including failure to correct a finding or violation, generally include (1) submittal of a written report that outlines the cause of the violation and the actions taken to prevent or minimize a reoccurrence of the violation; (2) attendance at a relevant training session and documentation of such; (3) attendance at an Authority-sponsored or presented relevant training session; (4) attendance at a mandatory meeting between the project proponent or project management team and the Director of the EAD and/or Vice President of Development; and (5) monetary penalties. The Authority may exercise its discretion to use any and all penalties available, depending on the nature of the concerns and actions by the project proponent or project management team to control or correct the violation.

5.6.2 RE-INSPECTIONS

The enforcement process requires project proponents or project management teams to take corrective actions within a specified time period. To confirm that corrective actions have been completed effectively and on time, findings or violations typically require re-inspection by EAD within one to seven days, depending on the nature of the issues, whether or not escalated enforcement is being pursued, and the type and level of enforcement. The following are the general time periods for re-inspection by EAD associated with each level of enforcement:

- Enforcement Level 1 requires a re-inspection within 7, 5, or 2 days.
- Enforcement Level 2 requires a re-inspection within 1 day (24 hours).

Re-inspections are also documented in the inspection database in the same manner as are regularly scheduled inspections.

5.7 EDUCATION AND TRAINING

5.7.1 EDUCATION

Municipal Permit Provision E.7 requires that the Authority implement a public education and participation program in accordance with the WQIP to promote and encourage the development of programs, management practices, and behaviors that reduce the discharge of pollutants to the MEP, effectively prohibit non-storm water discharges from construction sites into the MS4, and protect water quality standards in receiving waters. The Authority's public education program includes appropriate education and training measures for specific target audiences, such as those involved in construction activity at SAN, including Authority management and staff, project proponents, planners and reviewers, contractors, construction site managers, and onsite personnel. The Authority's storm water construction education focuses on construction activities and their relationship to urban runoff impacts on water quality. The Authority has developed internal and external outreach programs to present the following objectives to this audience, as appropriate:

- Federal, state, and local water quality laws and regulations that apply to construction projects
- Methods to minimize impacts on receiving water quality resulting from construction
- The connection between project implementation decisions and short- and long-term water quality impacts
- Methods to integrate the consistent application of reasonable and effective BMPs, pollution prevention strategies, and BMP requirements into the Authority's construction management process

The construction education program uses available guidance mechanisms, BMP information, and training programs to create the awareness of (1) pollution-causing activities related to construction sites, and (2) methods used to minimize these pollutants. This program is designed to address the following primary objectives:

- Provide useful guidance in developing outreach and training programs that will support the successful implementation of the Authority SWMP and the project-specific SWPPP/WPCP.
- Encourage participation by all construction personnel.
- Maximize consistency in information and help adapt education and outreach to the appropriate construction personnel, raising their knowledge and awareness of the issues related to storm water and urban runoff.

5.7.2 TRAINING

The Authority uses formal and informal training mechanisms to educate construction personnel about storm water pollution prevention and BMPs. The most comprehensive training is provided annually to Authority management and staff. This training involves classroom training at a divisional level for the FDD (including Project Managers and Construction Managers), the Airport Design and Construction (ADC) Department, the PD, and the EAD staffs.

The annual training provides construction project proponents, project managers, inspection staff, and other relevant persons with an understanding of the following topics:

- Federal, state, and local water quality laws and regulations applicable to construction and grading activities
- Municipal Permit and CGP requirements, as applicable

- Water quality impacts of land development and control measures to address them
- The connection between construction activities and water quality impacts (e.g., impacts from land development and urbanization and impacts from construction-related material such as sediment)
- Proper implementation of erosion and sediment controls and other BMPs to minimize the impacts on receiving water quality resulting from construction activities
- The Authority's construction storm water pollution prevention plan review, inspection, and enforcement policies and procedures
- Compliance construction site inspections and self-inspections
- Preventive maintenance
- Spill response, containment, and recovery
- Current advancements in BMP technologies
- Prohibited discharges to the MS4 and the Authority's illicit discharge detection and elimination program

The annual training may be a joint effort between the EAD and the FDD and ADC staffs to emphasize the relationships among the requirements of the Municipal Permit, the CGP, the SWMP, the SWPPP or WPCP, and the specific project plans and contract documents. Continuous training may also include in-house presentations, emails, joint field-walk inspections, new-hire reviews, and training programs put on by outside agencies.

The EAD, FDD, and ADC will also provide or support training directed at the contractors and subcontractors working on construction projects underway within the Authority's jurisdiction. Such project- and site-specific training will address the Authority's storm water pollution prevention policies, procedures, and expectations. Training for contractors and subcontractors may be conducted during:

- Pre-bid, pre-construction, and ongoing project progress meetings
- Onsite inspections, tailgate safety and training meetings, and site visits
- Seasonal training sessions to emphasize the expectations for an upcoming dry or wet season
- Refresher training sessions conducted by the EAD every six months for projects scheduled to last more than one year

The Authority may also use the following educational mechanisms to provide training to the construction activity audience:

- Development and distribution of BMP guidance for specific construction activities
- Workshops
- Community meetings
- Posters, pamphlets, and flyers
- Educational videos

- Authority newsletter articles
- Airport tenant notices and advisories
- Website updates
- Outreach to business associations
- Participation in joint outreach efforts (e.g., the Think Blue campaign)

When feasible, the Authority will help sponsor outreach to and/or training of representatives from other municipal and quasi-governmental agencies, private construction, and the development industry. It is also anticipated that those business communities and trade associations related to construction activities will train their colleagues in response to their own experiences related to preventing construction storm water pollution within the Authority's jurisdiction.

Finally, the Authority employs enforcement actions that require supplemental education in response to violations and noncompliance issues at construction sites. The enforcement process and the Director of EAD will dictate when and how often additional education is required. The following resources are examples of the types of education and training that might be required through the enforcement process:

- Free online training courses without certifications, but with self-documentation of completion:
 - www.dot.ca.gov/hq/construc/stormwater/interactive.html, and
 - www.dot.ca.gov/hq/construc/stormwater/swppp_training.html;
- Online training courses with certifications:
 - www.waterboards.ca.gov/water_issues/programs/stormwater/training.shtml,
 - www.owp.csus.edu/courses/stormwater-bmp.php, and
 - www.ieca.org/education;
- Registration and attendance at a conference relating to storm water and erosion control:
 - www.stormcon.com/preconference.html,
 - www.casqa.org/events, and
 - www.ieca.org/conference/annual/ec.asp;and
- Subscriptions to a journal on erosion control, construction, or similar topics:
 - <http://www.erosioncontrol.com/EC/EChome.aspx>.

6.0 MUNICIPAL AND COMMERCIAL COMPONENT

6.1 INTRODUCTION

This section addresses requirements in provisions of the Municipal Permit (Provisions E.5.a-e and E.6) that the Authority has determined are relevant to the municipal and commercial existing development at SAN. Existing development in industrial areas of SAN is addressed in Section 7.0. The provisions of the Municipal Permit require the Authority to:

E.5.a—Annually update a watershed-based inventory of municipal, commercial, and industrial areas and activities that may discharge a pollutant load to and from the MS4. Tables 6-1 and 6-2 and Sections 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.8 and 7.0 have been prepared to address this requirement.

E.5.b.(1).(a), (b), and (c).(i)—Designate, implement, and properly operate and maintain pollution prevention methods and BMPs for all municipal, commercial, and industrial areas and activities to address the priorities and strategies in the San Diego Bay WQIP. Sections 6.2.3, 6.3.3, 6.4.3, 6.5.3, 6.6.3, 6.7.3, 6.8.3, and 7.0, and Appendix B have been prepared to address this requirement.

E.5.b.(1).(c).(ii)—Properly operate, inspect, and maintain its MS4s and structural treatment controls. Section 6.2.3 and Appendix B have been prepared to address this requirement.

E.5.b.(1).(c).(iii)—Implement a schedule of operation and maintenance for roads and parking facilities that is designed to reduce pollutant discharges to its MS4s. Section 6.3.3 and Appendix B have been prepared to address this requirement.

E.5.b.(1).(c).(iv)—Implement controls and measures to prevent and eliminate infiltration of sewage from municipal sanitary sewers into MS4s. Section 6.4.3 and Appendix B have been prepared to address this requirement.

E.5.b.(1).(d)—Implement BMPs to reduce pollutants in storm water discharges to the MEP and effectively prohibit non-storm water discharges to MS4s associated with the application, storage, and disposal of pesticides, herbicides, and fertilizers from municipal, commercial, and industrial areas and activities. Sections 6.5.3 and 7.0 and Appendix B have been prepared to address this requirement.

E.5.c—Inspect at least 20 percent of its inventoried municipal, commercial, and industrial areas and activities annually and the entire facility once every five years. The Authority must also inspect its facilities as a response to valid public complaints, or as frequently as needed to confirm that the BMPs are being implemented and to reflect the priorities in the WQIP. In addition, the Authority must implement all follow-up actions necessary to comply with the provisions of the Municipal Permit. Sections 6.9 and 7.8.4 have been prepared to address this requirement.

E.5.d and E.6—Enforce its legal authority to ensure compliance with the requirements of this SWMP and the Municipal Permit for all inventoried existing development in accordance with its ERP. Sections 2.3 and 6.10 have been prepared to address this requirement.

E.5.e.(1)—Describe a program to retrofit areas of existing development to address identified sources of pollutants and/or stressors that contribute to the highest and focused priority water quality conditions in the San Diego Bay WQIP. Sections 4.0 and 6.12 and Appendix C have been prepared to address this requirement.

E.5.e.(2).(e)—Collaborate and cooperate with other Copermittees to develop WMA and regional rehabilitation projects that benefit water quality. Sections 4.0 and 6.12 have been prepared to address this requirement.

6.1.1 OVERVIEW OF MUNICIPAL AND COMMERCIAL AREAS AND ACTIVITIES

This section outlines the information in the remainder of Section 6.0 that applies to the municipal and commercial source areas under the control of and activities conducted by the Authority at SAN, the associated significant materials that could generate storm water pollutants, and the program implemented to achieve the water quality goals established in the WQIP. The Municipal Permit requires an inventory and discussion of specific municipal and commercial facilities and activities, as well as industrial facilities and activities (discussed in detail in Section 7.0). SAN is in itself a municipal airfield, as discussed below, and includes these facilities: (1) MS4 and associated structural controls; (2) streets and roads; (3) parking facilities; (4) flood control devices and structures; (5) sanitary sewer collection systems; (6) corporate yards; (7) hazardous waste collection facilities; (8) other treatment, storage, or disposal facilities; (9) special event venues; and (10) commercial facilities and areas determined by the Authority to potentially contribute a significant pollutant load to the MS4. SAN no longer has a closed landfill. Sections 6.2 through 6.8 discuss each of these facilities.

Airport operation is also subject to the requirements of the Industrial Permit. Many of the activities classified as municipal activities by the Municipal Permit are also considered to be industrial activities by the Industrial Permit. For this reason, many of the municipal activities discussed in this section are also detailed in Section 7.0, which addresses the Industrial Component. For instance, inspection and maintenance of the storm drain system is discussed in both sections, as are pesticide, herbicide, and fertilizer management and sweeping activities.

The Municipal Permit requires an inventory of all the municipal and commercial areas and activities. Each entry must include a name, location (e.g., address and hydrologic subarea), and description. The description can include the status of the facility (e.g., active or inactive); a statement of whether the business is a mobile business; SIC or North American Industry Classification System (NAICS) code; Industrial Permit NOI or WDID number; identification of pollutants generated or potentially generated by the facility or area; determination of whether the facility or area is adjacent to an ESA; and a statement of whether the facility or area is tributary to and within the same hydrologic subarea as a water body segment listed as impaired on the 303(d) list and generates pollutants for which the water body segment is impaired. The inventory of municipal and commercial areas and activities at SAN is stored in a Web-based database and is updated annually, as required by the Municipal Permit. This SWMP includes a map showing the locations of the inventoried municipal and commercial areas and activities, watershed boundaries, and water bodies (Figure 3) and is updated annually.

Of the municipal and commercial areas/activities defined by the Municipal Permit, the following are considered to be a high priority in terms of being potential sources of pollutants that contribute to the focused priority water quality conditions for the Authority identified in the WQIP (i.e., copper and zinc in wet weather discharges):

- MS4 and related structures
- Roads

- Parking facilities
- Corporate yards (used for maintenance or storage of materials, waste, equipment, and vehicles)
- Sanitary sewer collection systems
- Hazardous waste collection areas
- Other treatment, storage, or disposal facilities for municipal waste
- Power washing

Table 6-1 presents the inventory of entities conducting municipal and commercial areas and activities at SAN. Table 6-2 presents the inventory of municipal areas and activities at SAN.

Municipal airfields were not included in the list of SAN's Municipal Permit-defined areas because the entire jurisdiction of the Authority is an airfield, and so is subject to the requirements of the Industrial Permit as well as the Municipal Permit. Therefore, this SWMP describes storm water management over the entire airport area. The remainder of Section 6.0 provides detailed information on:

- The storm drain system and associated structural controls (Section 6.2)
- Sweeping of municipal areas, within the discussion of roads, streets, and parking lots (Section 6.3)
- Infiltration from the sanitary sewer system into the storm drain system (Section 6.4)
- Management of pesticides, herbicides, and fertilizers (Section 6.5)
- Special event venues (Section 6.6)
- Power washing (Section 6.7)
- Municipal waste management (Section 6.8)

Section 6.2 provides the most complete description of the municipal and commercial program elements required by the Municipal Permit. Given the overlap between the Municipal Permit and the Industrial Permit, Section 7.0 of the SWMP addresses the Authority's corporate yards; hazardous waste collection areas; other waste storage and disposal facilities; and power washing, ramp scrubbing, and sweeping of industrial airport areas; and further discusses some of the municipal areas listed above. Section 3.0 addresses landscaping activities.

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Table 6-1. San Diego International Airport Entities Conducting Municipal and Commercial Activities

Facility Name	Address	Hydro. Area	SICs	NAICSS	Principal Activity	Bacteria	Gross Pollutants	Metals	Nutrients	Oil & Grease	Organics	Pesticides	Sediments	Trash	Tributary to 303d Hydrologic Subarea?1	Priority Level
ACE	3665 North Harbor Dr. Suite #200 San Diego, CA 92101	908.0-908.21	7521	812930	Parking Lot Management	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes	Yes	High
FlagShip	3835 North Harbor Dr. Suite #130 San Diego, CA 92101	908.0-908.21	4581	561720	Janitorial	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	High
High Flying Foods	3225 North Harbor Dr. San Diego, CA 92101	908.0-908.21	5812	722310	Food & Beverage	No	No	No	No	Yes	Yes	No	No	Yes	No	Low
HMS Host	3665 North Harbor Dr. San Diego, CA 92101	908.0-908.21	5812	722310	Food & Beverage	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Low
Mission Yogurt	3225 North Harbor Dr. San Diego, CA 92101	908.0-908.21	5812	722310	Food & Beverage	Yes	No	No	No	No	Yes	No	Yes	Yes	Yes	Low
Authority	3835 North Harbor Dr. San Diego, CA 92101	908.0-908.21	4581	488111	Facility Maintenance	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
SSP	3225 North Harbor Dr. San Diego, CA 92101	908.0-908.21	5812	722310	Food & Beverage	No	No	No	No	Yes	Yes	No	No	Yes	No	Low

1. San Diego Bay is designated as an ESA.

MUNICIPAL AND COMMERCIAL COMPONENT

Table 6-2. San Diego International Airport Municipal Land Use and Activity Areas

Type of Municipal Activity	Facility/Element/Company Name or Description	Priority Level
MS4	1 element (550 inlets and 192,000 linear feet of pipe)	High
Roads	1 element (6 miles total)	High
Parking Lots ⁽²⁾	14 elements (14 individual parking lots)	High
Airside Operations Area ⁽¹⁾	1 element (ramp/runway)	High
Construction Activities	25 acres (construction areas include the Rental Car Complex)	High
Grounds/Landscape	1 element (approximately 18 acres)	Low
Maintenance Storage Areas ⁽¹⁾	Corporate Yard – “Bone Yard”	High
	Runway Generator Shop	High
Solid Waste Operation ⁽¹⁾	Trash and Recycling Compactor Area	High
	Terminal 2 East Trash Compactor	High
	North Ramp Airside Sweeping And Scrubbing Waste Accumulation Area	High
	Landscape Waste Dumpsters	High
Structural Treatment Controls	Below Grade Box Structures	High
	Drain Inserts	High
	Curb inlet Screen Covers	High
	Trench Drain Filters	High
	Oil-Water Separators	High
	High Rate Media Filters	High
	Hydrodynamic Separators	High
	Pervious Surfaces	High
	Bioswales	High
	Modular Wetland Treatment Units	High
Buildings	Commuter Terminal	Low
	Terminal 1	Low
	Terminal 2	Low
	West Wing (offices)	Low
	Truxton Road Offices	Low
	Central Plant (HVAC and Power Plant)	Low
	FMD (offices)	Low
	FMD Shops (maintenance shops)	Low
	Procurement Office and Storage Building	Low
	Terminal Development Project (offices)	Low
	USO/Parking Management Office	Low

(1) Also considered industrial activities in terms of both the Municipal Permit and the Industrial Permit.

(2) Because of construction activities, the number of parking lots changed during Fiscal Year 2013-2014.

Municipal airfields were not included in the list of SAN's Municipal Permit-defined areas because the entire jurisdiction of the Authority is an airfield, and so is subject to the requirements of the Industrial Permit as well as the Municipal Permit. Therefore, this SWMP describes storm water management over the entire airport area. The remainder of Section 6.0 provides detailed information on:

- The storm drain system and associated structural controls (Section 6.2)
- Sweeping of municipal areas, within the discussion of roads, streets, and parking lots (Section 6.3)
- Infiltration from the sanitary sewer system into the storm drain system (Section 6.4)
- Management of pesticides, herbicides, and fertilizers (Section 6.5)
- Special event venues (Section 6.6)
- Power washing (Section 6.7)
- Municipal waste management (Section 6.8)

Sections 6.2 through 6.8 provide the most complete description of the municipal and commercial program elements required by the Municipal Permit. Given the overlap between the Municipal Permit and the Industrial Permit, Section 7.0 of the SWMP addresses the Authority's corporate yards; hazardous waste collection areas; other waste storage and disposal facilities; and ramp scrubbing, and sweeping of industrial airport areas; and further discusses some of the municipal areas and activities listed above. Section 3.0 addresses landscaping activities.

6.2 OPERATION AND MAINTENANCE OF MS4 AND STRUCTURAL CONTROLS

6.2.1 BACKGROUND

As required by Provision E.5.b.(1).(c).(ii) of the Municipal Permit, the Authority has implemented a schedule of operation and maintenance activities for its MS4 and related structures to verify proper operation of all its municipal structural treatment controls to reduce pollutants in storm water discharges to or from its MS4s and related drainage structures. Operation and maintenance activities may include, but are not limited to, inspections, cleanings, and proper disposal of materials removed from cleaning of the MS4 and related structures.

The Authority's storm drain system consists of roads with drainage systems, curbs, catch basins, gutters, inlets, culverts, trench drains, and pipes of varying materials and sizes. The structural treatment controls incorporated into the storm drain system by the Authority include 7 OWSs (2 at the north ramp, 1 on old Commuter Terminal ramp, 1 by the American Airlines maintenance area, 1 in the Terminal 2 ramp, 1 at Allied Aviation's area, and 1 by ASIG remote fueling facility), various inlet filters, 15 high-rate media filters (6 Contech StormFilters®, and 7 BioClean and 2 ClearWater BMP Units), 6 grate inlet skimmers, 3 trench drain filters, 3 hydrodynamic separators (Contech CDS), and 12 modular wetland treatment units. Additionally, there are pervious areas made up of artificial turf, pavers, infiltration trenches, asphalt strips, and bioswales. The Authority uses the underground detention basin located at Long-Term Parking Lot 2 and bioswales along the perimeter of the Rental Car Center located at the northern side as flood control devices. The locations of these structural treatment controls, along with an overview of the storm drain system network, are shown in Figure 4.

An update to the Master Drainage Plan is in development because the most recent plan was prepared in 2008, as discussed in Section 4.0 of this SWMP.

6.2.2 SOURCE CHARACTERIZATION

As indicated in Table 6-1, the Authority has 192,000 linear feet of storm drain pipe and 550 inlets under its jurisdiction. As a consequence of its function, the storm water conveyance system collects and transports storm water runoff at SAN. To prevent transport of certain pollutants in the runoff, BMPs must be implemented properly and adequate inspections and maintenance of the storm drain system performed. At SAN, pollutants with the potential to enter the storm drain system include sediment, trash and debris, oil and grease, hydrocarbons/fuels, hydraulic fluids, solvents, soap/cleaning fluids, lavatory chemicals and waste, paints, used batteries and battery acid, antifreeze, hazardous wastes (mostly oils), metals, deicing chemicals, herbicides and pesticides, adhesives, rust preventers, aircraft firefighting foam (AFFF), and sealants. Structural treatment controls that are not properly maintained can also be sources of sediment, oil and grease, trash and debris, and other associated pollutants such as metals.

6.2.3 BEST MANAGEMENT PRACTICE REQUIREMENTS

The San Diego Bay WQIP includes strategies for reaching water quality goals for copper and zinc in wet weather discharges (the focused priority water quality condition for the Authority). Those strategies that are related to the MS4 and structural treatment controls that the Authority will implement in accordance with the WQIP schedule are (1) determining optimal catch basin inlet inspections and cleanings; (2) developing and maintaining green infrastructure and treatment systems to collect and treat parking lot runoff; 3) providing BMP inspections and enforcement at tenant and high pollutant generating areas; and (4) providing continued training and public education.

6.2.3.1 Minimum BMPs

Table 6-3 shows the minimum BMPs for MS4 and structural treatment controls. Descriptions of these BMPs can be found in Appendix B.

Table 6-3. Minimum BMPs Requirements

SC01 Non-Storm Water Management	SC10 Employee Training
SC17 Storm Drain Maintenance	TC01 Treatment Controls

6.2.3.2 Schedule of Maintenance

MS4

Storm drain inspections are performed quarterly and before/after the rainy season by FMD. Additionally, over four-fifths of the tenants also perform some storm drain inspections, either sporadically or as part of their own routine facility inspections. A contractor is hired by the Authority to inspect the whole storm water conveyance system annually, to clean the priority storm drains and catch basins quarterly, and to clean the oil water separators, underground storm drain pipes, and catch basins annually. Silts, trash, green waste, and heavy metals removed from the storm drain system are properly disposed and measures are implemented to prevent any waste discharges to receiving waters during these maintenance activities. Screens are installed in front of curb inlets in the southern portion of the Authority's jurisdiction to protect storm drains, and they are easily cleaned by street sweepers.

STRUCTURAL TREATMENT CONTROL BMPS

Annual inspections and maintenance of hydrodynamic separators, high-rate media filters, infiltration trenches, artificial turf, and various inlet filters and skimmers are performed by the EAD and a contractor hired by the Authority. Maintenance consists of as needed cleaning. Filter fabric inserts are maintained quarterly, and before and after rain events, with high-priority areas inspected daily. The criteria used for cleaning inlet skimmers, trench drain filters, hydrodynamic separators, and high rate media filters are (1) presence of blockages/obstructions in the inflow pathway, (2) condition of BMP structure and filter media, (3) trash/debris/sediment amount accumulated in BMP, and/or (4) presence of standing water and unpleasant odors in the BMP.

Inspections and maintenance of permeable surfaces, swales, and modular wetlands are done by the landscape contractor and parking lot management contractor hired by the Authority. EAD also performs annual inspections. Maintenance consists of as-needed cleaning. The criteria used for cleaning permeable surfaces, swales, modular wetlands, and infiltration devices are (1) condition of BMP structure and outlet, (2) trash/debris/sediment amount accumulated on BMP or drainage area, (3) presence of standing water after 72 hours of rain event, (4) vegetative cover height and type, (5) presence of erosion, and/or (6) presence of burrowing animals.

Annual inspections of five OWSs are conducted by EAD and FMD. OWSs have an alarm system. If the oil reaches a certain level, or oil leaks to the ground, an alarm goes off. Alarms are checked monthly. Service companies hired by the Authority are contracted to pump out the OWSs on an as-needed basis. The criteria used for cleaning the oil water separators are (1) the amount of sediment at the bottom of the tanks, (2) the amount of oil, grease, and floatables at the top of the tank, and (3) capacity and functionality of the units. The FSF/RFF operator contracts with outside vendors to service the remaining two OWSs and the 12,000-gallon wastewater UST annually.

All the maintenance activities above include proper disposal of sediment, debris, and wastewater removed from the treatment control BMPs, and implementation of measures to prevent waste discharges to receiving waters during these maintenance activities.

6.3 OPERATION AND MAINTENANCE OF ROADS AND PARKING FACILITIES

6.3.1 BACKGROUND

As required by Provision E.5.b.(1).(c).(iii) of the Municipal Permit, the Authority has implemented a schedule of operation and maintenance for the streets, unpaved roads, paved roads, and parking facilities within the Authority's jurisdiction to minimize pollutants that can be discharged in storm water. This section addresses only road and parking facility sweeping and repair. The Authority's program for ramp sweeping is described in Section 7.7.4.1.

6.3.2 SOURCE CHARACTERIZATION

Littering by the general public contributes to trash and debris pollutants in public parking facilities at SAN. Any erosion from landscaped areas within parking lots can be a sediment pollutant source. Fluid leaks from vehicles on roads or in parking facilities are a potential source of pollutants such as oils, fuel, antifreeze, etc. Atmospheric deposition (fallout from automobile emissions and other sources), vehicle use and emissions, asphalt and concrete surfaces, and peeling or crumbling paint from parking lot painting can introduce particulate copper and zinc into the storm drain system at SAN. The physical removal of particulates because of attachment to fine particulates (in particular, the binding of heavy metals from outdoor road and parking lot facility surfaces to fine grain sediment) may lessen the pollutant load transferred to receiving waters.

6.3.3 BEST MANAGEMENT PRACTICE REQUIREMENTS

The San Diego Bay WQIP includes strategies for reaching water quality goals for copper and zinc in wet weather discharges (the focused priority water quality condition for the Authority). Strategies that are related to road and parking facility sweeping that the Authority will implement in accordance with the WQIP schedule include (1) determining and implementing optimal street sweeping locations and frequencies to maximize pollutant removal, (2) enhancing street sweeping through equipment replacement, (3) enhancing tenant and high pollutant-generating area BMP inspections and enforcement; and (4) continuing training and public education.

6.3.3.1 Minimum BMPs

Table 6-4 shows minimum BMPs for road and parking facility sweeping and repair. Descriptions of these BMPs can be found in Appendix B.

Table 6-4. Minimum BMPs Requirements

SC01 Non-Storm Water Management	SC10 Employee Training
SC12 Outdoor Washdown/Sweeping	SC16 Parking Lots
SR01 Spill Prevention, Control, and Cleanup	TC01 Treatment Controls

6.3.3.2 Schedule of Maintenance

SWEEPING OF ROAD AND PARKING FACILITIES

The entities responsible for implementing BMPs for parking facilities are the Authority, the parking lot management service provider, the FSF operator, the refueling operator, the Central Receiving and Distribution Center operator, the FBO, and one or two other tenants with parking lots. A contractor is hired by the Authority to sweep all roads in front of the terminals, including the old Commuter Terminal, overpasses leading into and exiting SAN, and the area from McCain Road to Gat P-18 overnight on Mondays through Fridays using a motorized sweeper unit. The debris/sweepings are disposed of at a landfill. The parking lot management contractor sweeps all parking lots once a week and maintains all parking lots owned or leased by the Authority. Sweeping is done manually or by motorized sweeper unit. Additionally, tenants perform sweeping of their parking areas.

ROADS AND PARKING FACILITIES REPAIRS AND IMPROVEMENTS

Inspection of parking lots, roads, and curbs is continuous. Minor repairs in parking lots are performed by the parking lot management service provider. However, major maintenance work would likely be contracted out by the Authority. Construction projects of one acre or larger would be subject to the CGP. The Authority is responsible for any repairs to the roads, other than minor repairs to parking lots, and conducts those repairs or replacement as follows:

- Outdoor repairs and construction are avoided during rain events or during any period for which the National Weather Service is forecasting a 50 percent chance of precipitation. Sealants should not be applied if rainfall is predicted during the application or curing period.
- Storm drain inlets and manholes must be protected during outdoor repairs and construction. Storm drain inlets, including slit trenches, within 10 yards of the work area must be covered with spill pads and/or mats or otherwise protected to prevent discharges of solid and liquid materials and waste to the storm drain system. Storm drain inlet protection devices will be regularly inspected for proper installation and condition by those persons performing the work and will be removed when it is no longer needed.

- Run-on and runoff controls will be put in place to direct flow away from work areas and erodible materials by using silt fence, fiber rolls, and gravel bags. Run-on and runoff controls will be regularly inspected for proper installation and condition by those persons performing the work and will be removed when it is no longer needed.
- Before onset of a rain event or when not actively being used, stockpiles of "cold mix" asphalt (premixed aggregate and asphalt binders), dry-powder concrete mixing products (such as Readymix and Portland cement), and/or basic materials (e.g. fly ash, stucco, or lime) will be laid on top of and covered with plastic or other relevant material and protected with a temporary perimeter sediment barrier.
- Stockpiles of soil, and/or debris, and/or rubble will be covered and protected with a temporary perimeter sediment barrier when not actively being used and before the onset of a rain event.
- Materials are to be stored inside buildings or sheds or on containment pallets. Chemicals and fluids are to be stored indoors or in watertight containers on secondary containment.
- Slurry, waste, and debris generated by pavement and concrete cutting activities will be collected/vacuumed immediately, properly disposed of, and prevented from entering the storm drain system.
- Work sites will be kept clean at all times to prevent loose materials and contaminants from leaving work area or discharging into storm drain system. Dry cleanup methods (e.g., vacuuming, sweeping, dry rags) will be used. Use of hoses is restricted to the alleviation of safety or sanitation hazards only, per City of San Diego permanent mandatory water restrictions. All water hoses will be equipped with positive shutoff type nozzles, and any wash water will be prevented from entering the storm drain system and disposed of properly. The Authority EAD should be contacted prior to any washing activities.
- All waste will be disposed of properly. The site will be policed for litter daily and all litter will be disposed of properly in covered waste containers.
- All products used to clean surfaces must be approved for use by the EAD (619-400-2782) prior to application.
- Temporary sanitation facilities must have secondary containment and be located away from drainage courses, inlets, and traffic circulation. Temporary sanitation facilities will be regularly inspected for leaks and spills and facilities will be cleaned and replaced when necessary. Facilities that are no longer needed will be removed.
- Equipment will be maintained in good working condition to minimize leaks and drips. Equipment will have drip protection (e.g., drip pans or plastic sheeting) available at designated areas for storage, fueling, and maintenance. Designated areas are away from drainage courses and inlets.
- Spill cleanup materials will be readily available at the work area.
- All spills will be cleaned up immediately, provided that it is safe to do so. Workers are trained in spill response procedures.
- Equipment and vehicles will be cleaned offsite.
- If tools, equipment, and/or vehicles coated with concrete material are to be cleaned onsite, then concrete washout facilities will be provided and maintained. Alternatively, liquid waste can be contained in buckets or drums with tight-fitting lids for transport and proper disposal offsite.

- Concrete washout facilities may be above or below grade, but designated areas must be at least 50 feet away from storm drains, water bodies, and open ditches. Facilities will be constructed and maintained in sufficient quantity and size to contain all liquid and concrete waste generated by washout operations. Facilities can be a temporary pit or bermed area lined to prevent discharge to ground or surrounding area. Concrete washout from concrete pumper bins can be washed into trucks and discharged into concrete washout facilities or be properly disposed of offsite.
- Facilities will be cleaned or replaced when the washout is 75 percent full or when there is damage (e.g., torn liner or evidence of leaks). Facilities will be maintained to provide a holding capacity with a minimum freeboard of 4 inches for above-grade facilities and 12 inches for below-grade facilities. Maintaining facilities should include removing and disposing of hardened concrete and returning facilities to a functional condition. No overflow from concrete washouts is permitted. Onsite washout facilities will be covered during rain events. All concrete washout debris will be disposed of properly. Holes, depressions, or other ground disturbances caused by the removal of the facilities will be backfilled and repaired.

STRUCTURAL TREATMENT CONTROL BMPS

Many green infrastructure, LID, or treatment control BMPs listed in Section 6.2.1 have been incorporated into parking lots, including inlet filters, high rate media filters, hydrodynamic separators, porous pavement, bioswales, and modular wetland treatment units. They are inspected and maintained as described in Section 6.2.3.2.

6.4 PREVENTION OF INFILTRATION FROM SANITARY SEWER TO MS4

6.4.1 BACKGROUND

The Authority does not own or manage a municipal sanitary sewer system. The City of San Diego MWW provides municipal sanitary sewer service to SAN. However, the Authority is responsible for those portions of the onsite sanitary sewer system that connect to the MWW system. As a result, the Authority has implemented controls to prevent and eliminate infiltration of sewage from sanitary sewers into the storm drain systems, as required by Provision E.5.b.(1).(c).(iv) of the Municipal Permit. These controls are implemented through thorough routine inspection and preventive maintenance of the sanitary sewer system and inspection of the storm drain system. In general, these measures will also identify issues related to the municipal sanitary sewer system operated by MWW. Issues related to the municipal sanitary sewer system will be reported to and resolved in coordination with MWW. FMD and FDD oversee a thorough programmed maintenance process for inspection, maintenance, repair, and upgrade of physical plant structures at SAN, including the sanitary sewer system.

Fats, oils, and grease can clog sanitary sewer pipes, which can create overflows. Regular pickup of waste grease from food and beverage vendors and using grease traps can prevent fats, oils, and grease from entering into the sanitary sewer and thereby removing a contributing factor of sewage seepage into the MS4. FMD oversees the management of 19 grease traps with sizes ranging from 25 to 50 gallons to 3,000 gallons. Most of these grease traps are located on the airside or inside Terminals 1 and 2 and can be above or below ground. Each grease trap has three baffles in sequence to process wastewater before it exits into the sanitary sewer.

6.4.2 SOURCE CHARACTERIZATION

Infiltration from sanitary sewers to the storm drain system may be caused by several factors, including a lack of structural integrity. Most infiltration scenarios are the result of spills, leaks, and overflows. Spills, leaks, and inadequate overflow control response and containment can result in the following potential pollutants: metals, sediments, nutrients, bacteria, organics, and oxygen-demanding substances.

6.4.3 BEST MANAGEMENT PRACTICE REQUIREMENTS

The constant surveillance at SAN includes the routine daily inspection of the airport terminals, runways, and airside operations by the Airside Operations Supervisors. These inspections are one element of the Illicit Discharge Detection and Elimination program, because any environmental issues are both reported to the EAD and captured in the Airside Operations’ daily log, and are then entered into the Authority’s Web-based database.

The Authority must implement controls identified in the SAN SWMP that have been designed to limit infiltration into the storm water conveyance system from the sanitary sewer system and to prevent and respond to sewage spills.

6.4.3.1 Minimum BMPs

Table 6-5 shows the minimum BMPs to prevent or minimize infiltration from the sanitary sewer to the MS4. Descriptions of these BMPs can be found in Appendix B.

Table 6-5. Minimum BMPs Requirements

SC01 Non-Storm Water Management	SC10 Employee Training
SC11 Lavatory Service Operation	SC17 Storm Drain Maintenance
SR01 Spill Prevention, Control, and Cleanup	

6.4.3.2 Schedule of Maintenance

A contractor is hired by the Authority to perform maintenance on small grease traps every month and large grease traps every two to three months. Grease is vacuumed out and rinsed into a storage tank for proper disposal. Additionally, a contractor hired by the Authority picks up grease from commercial tenants one to three times per week for proper disposal. Grease is either picked up in lined buckets or extracted from grease containers to be stored in a storage tank and later collected for processing at an offsite facility once a month. When sanitary sewer system malfunctions occur, such as stoppages, the cause of the problem is investigated and analyzed. Maintenance schedules are then adjusted accordingly. If necessary, repairs are initiated by the FMD or the commercial tenants, as appropriate.

For aircraft sewage, the waste is emptied from the aircraft into mobile lavatory trucks and then into the sewer system at the triturator via a connection hose. If there are spill incidents, the Airside Operations Department or the EAD documents the incident, requests corrective actions if necessary, and monitors implementation of any required corrective actions.

In the event that any infiltration from the sanitary sewer into the storm drain system is observed or suspected, the Authority will investigate the source of the sewage. The Authority will conduct any required maintenance or repair on the onsite lateral lines, and issues related to the municipal sanitary sewer system main lines will be reported to the MWWD. The Authority will coordinate with the MWWD, as necessary.

6.5 MANAGEMENT OF PESTICIDES, HERBICIDES, AND FERTILIZERS

6.5.1 BACKGROUND

As required by Provision E.5.b.(1).(d) of the Municipal Permit, the Authority is required to reduce pollutants in storm water discharges to the MEP and prohibit non-storm water discharges associated with the application, storage, and disposal of pesticides, herbicides, and fertilizers from municipal and commercial facilities and areas to the storm drain system, and implement BMPs. Important municipal and commercial areas and activities associated with these potential pollutants at SAN include municipal facility structures and buildings, landscaped areas, and commercial areas and activities. This section and Section 7.7.3 discuss these potential pollutant sources and the BMPs implemented by the Authority to reduce or eliminate impacts of pollutants on the storm drain system.

The FMD maintains approximately 18 acres of environmentally friendly landscaping. The landscaped areas include a variety of indigenous and drought-tolerant plants, shrubs, and ground cover. The various plants, shrubs, and ground cover were chosen because they are drought tolerant, generate smaller amounts of plant litter and debris, and require less fertilizer, pesticide, and herbicide to maintain than do other exotic species. All of the green waste collected from landscape maintenance activities is recycled into mulch and compost. The Authority uses a satellite water-tracking system called Weather Track to automatically adjust watering based on weather conditions. This system is expected to save approximately 9 million gallons of water each year.

The Authority operates 2 acres of bioswales and 1.25 acres of bioretention swales in the northern side of SAN that have been installed in the last three years as part of the Green Build LID projects. The Authority also operates 6 small pet-service animal relief areas on the southern side of Terminal 2.

6.5.2 SOURCE CHARACTERIZATION

The Authority and commercial tenants generally use pesticides and/or herbicides to control pests and weeds. Although the use of pesticides and herbicides at SAN does not result in significant discharges to the ground, during rainfall events, pesticide and herbicide residuals that accumulate at the application sites can be washed into the storm drain system. However, based on the small quantities used at SAN and recent sampling results, this activity appears to have little potential for impacting storm water discharge.

6.5.3 BEST MANAGEMENT PRACTICE REQUIREMENTS

The FMD has implemented an integrated pest management (IPM) program designed for landscaping services that encourages methods of pest control that use natural processes and chemicals and that limits the need for manmade biocides. The IPM program promotes the use of native plant species in the landscaped areas and around structures/buildings to (1) control pests without the need for pesticides and herbicides; (2) help minimize the application of fertilizers; and (3) limit the need for irrigation. In addition to encouraging minimal use of manmade biocides, the IPM program also ensures that the FMD uses and disposes of these chemicals properly. The FMD also maintains a minimal inventory of these chemicals as part of the IPM program. To reduce waste, the department strives to purchase only the amounts of these chemicals that are needed. Any unused fertilizers, pesticides, and herbicides are disposed of properly. The department files a "Monthly Summary Pesticide Use Report" with the State of California Department of Pesticide Regulation that states the amount of pesticides or herbicides used during the period. A copy of the report is also provided to the EAD.

The Authority has implemented an IPM program designed for food and beverage services that encourages methods of pest control that use mechanical and cultural controls to limit or remove the need for chemical controls such as manmade biocides. The IPM program uses cultural controls to target pest attractants such as food, water, and shelter using sanitation practices, education, and communication. Examples of cultural

controls include housekeeping within work areas, proper food storage, handling of food wastes, prevention of standing water, cleaning and drying of drains and mops, storage areas with clearance away from floor and walls, stock rotation, sealing of any penetrations (including replacing ceiling tiles), closing of outside doors, and maintenance of ventilation screens in good condition. Mechanical controls target building entry and repair to create physical barriers such as door sweeps or rubber trims, seal holes and cracks around piping and exterior walls, replace screens for windows and doors used for ventilation, install caps for open pipes, and apply traps (e.g., bait stations, snap traps, and glue boards). These controls are enforced with education and regular inspections. The Authority has partnerships with other organizations to continuously make improvements in their own and other IPM programs.

6.5.3.1 Minimum BMPs

Table 6-6 describes the minimum BMPs for the management of pesticides, herbicides, and fertilizers. Descriptions of these BMPs can be found in Appendix B.

Table 6-6. Minimum BMPs Requirements

SC01 Non-Storm Water Management	SC06 Outdoor Loading/Unloading of Materials
SC07 Outdoor Material Storage	SC09 Building and Grounds Maintenance
SC10 Employee Training	SC18 Housekeeping
SC19 Safer/Alternative Products	SR01 Spill Prevention, Control, and Cleanup

6.5.3.2 Schedule of Maintenance

The FMD stores small amounts of these materials in storage lockers at the runway generator area east of the old Commuter Terminal. FMD and EAD routinely inspect the pesticide, herbicide, and fertilizer storage areas, report required maintenance to FMD, and follow the IPM program. Commercial tenants do not store these materials at SAN. Landscaping contractors do bring in and apply small amounts of pesticides and herbicides in their activities. Commercial food and beverage tenants do not use pesticides. A janitorial contractor hired by the Authority is used to implement IPM mechanical controls, power wash, and handle municipal waste.

6.6 MANAGEMENT OF SPECIAL EVENT VENUES

6.6.1 BACKGROUND

As required by Provisions E.5.b of the Municipal Permit, the Authority requires the designation, implementation, and proper operation and maintenance of minimum BMPs for special events that are expected to generate significant trash and litter. Provision E.5.(c) of the Municipal Permit requires the Authority to inspect municipal and commercial areas and activities. This section discusses the potential pollutant sources and BMPs implemented to mitigate pollutant transport to the storm drain system from special event venues.

6.6.2 SOURCE CHARACTERIZATION

The size of several parking lots, along with the general public's familiarity with the location, makes SAN a potential venue for large special events. Although rare, some large events (such as the Rock-n-Roll Marathon) have made use of the Authority's parking areas. Potential pollutants of concern generated by large special events are trash, litter, and debris.

6.6.3 BEST MANAGEMENT PRACTICE REQUIREMENTS

6.6.3.1 Minimum BMPs

Table 6-7 describes the minimum BMPs for the management of special event venues. Descriptions of these BMPs can be found in Appendix B.

Table 6-7. Minimum BMPs Requirements

SC01 Non-Storm Water Management	SC06 Outdoor Loading/Unloading of Materials
SC08 Waste Handling and Disposal	SC09 Building and Grounds Maintenance
SC10 Employee Training	SC11 Lavatory Service Operation
SC12 Outdoor Washdown/Sweeping	SC16 Parking Lots
SC18 Housekeeping	SR01 Spill Prevention, Control, and Cleanup

6.6.3.2 Additional Controls

Special events sponsored/coordinated by Authority staff and/or tenants are required to implement the BMPs listed above. If the special event sponsors/coordinators are not Authority staff or tenants, they must generally obtain Authority approval in the form of a "use permit." The conditions of the "use permit" typically include fencing and barricades as necessary to delineate the event area; appropriate signage regarding recycling, trash disposal, and storm water pollution prevention; an adequate number of recycling containers and trash cans; portable restrooms, as necessary; an adequate number of onsite event management staff to monitor and control trash and litter; an adequate number of onsite event staff to promptly clean up after the event; and street sweepers, as necessary.

6.7 POWER WASHING

6.7.1 BACKGROUND

As required by Provisions E.5.b.(1) of the Municipal Permit, the Authority requires the designation, implementation, and proper operation and maintenance of minimum BMPs for power washing to prevent pollutants from entering the storm drain system. Provision E.5.(c) of the Municipal Permit requires the Authority to inspect municipal and commercial areas and activities. This section discusses the potential pollutant sources and BMPs implemented to mitigate pollutant transport to the storm drain system from power washing activities.

6.7.2 SOURCE CHARACTERIZATION

Power washing is performed by janitorial services for the health and safety of passengers, visitors, and tenants. Power washing is done in high-volume areas of foot traffic or in waste collection and storage areas to remove debris, grime, stains, and odors from concrete sidewalks and metal storage bins areas. Wastewater generated from power washing can collect and direct pollutants to storm drains if BMPs are not applied correctly. Potential pollutants of concern are metals, trash and debris, sediments, oil and grease, bacteria, and floatables.

6.7.3 BEST MANAGEMENT PRACTICE REQUIREMENTS

6.7.3.1 Minimum BMPs

Table 6-8 describes the minimum BMPs to control pollutants from power washing activities. Descriptions of these BMPs can be found in Appendix B.

Table 6-8. Minimum BMPs Requirements

SC01 Non-Storm Water Management	SC08 Waste Handling and Disposal
SC10 Employee Training	SC12 Outdoor Washdown/Sweeping
SC18 Housekeeping	SR01 Spill Prevention, Control, and Cleanup

6.7.3.2 Schedule of Maintenance

A contractor hired by the Authority power washes the terminal smoking areas and baggage claim sidewalks five times and the trash compactor area, dumpster areas at Terminal 1 and between Terminal 2 East and West, and grease container areas once a week. Another contractor hired by the Authority power washes the dumpsters and trash compactors quarterly and as needed. Collected air conditioning condensate is used for pressure washing operations at the rate of 80 to 100 gallons per day. Before starting the pressure washing operation, all runoff areas are identified and storm drains are protected with berms or mats. All trash, debris, and cigarette butts are swept up and removed. The path that the water will run is determined and the water is funneled using berms and bags into the vacuum/reclaim system. Pressure washers are equipped with water recollection and filtration systems for direct reuse. All wastewater is disposed of in the sanitary sewer.

6.8 MUNICIPAL WASTE MANAGEMENT

6.8.1 BACKGROUND

As required by Provisions E.5.b.(1) of the Municipal Permit, the Authority requires the designation, implementation, and proper operation and maintenance of minimum BMPs for municipal waste management that are expected to generate pollutants. Provision E.5.(c) of the Municipal Permit requires the Authority to inspect municipal and commercial areas and activities. This section discusses the potential pollutant sources and BMPs implemented to mitigate pollutant transport to the storm drain system from the collection, storage and transport of municipal waste.

The Authority implemented a single-stream recycling program in 2002, which has resulted in a 10-fold increase in recyclables collected, and therefore a reduction in the volume of waste generated. Additionally, commercial tenants are encouraged to participate in the food waste composting program. Participating tenants were given training in compost segregation and had their compost initially tested for contamination. Compost is collected and delivered to an offsite facility run by the City of San Diego commercial food waste composting program.

6.8.2 SOURCE CHARACTERIZATION

Municipal waste is generated from all kinds of users at SAN, from the public to employees and commercial tenants involved with food and janitorial services, as well as other tenants. Waste collection is in the form of bins, dumpsters, compactors, storage tanks, and grease traps. Potential pollutants of concern are trash and debris, landscape wastes, medical wastes, food wastes, oil and grease, degreasers, recyclables, metals, bacteria, and nutrients.

6.8.3 BEST MANAGEMENT PRACTICE REQUIREMENTS

6.8.3.1 Minimum BMPs

Table 6-9 describes the minimum BMPs for the management of municipal waste. Descriptions of these BMPs can be found in Appendix B.

Table 6-9. Minimum BMPs Requirements

SC06 Outdoor Loading/Unloading of Materials	SC08 Waste Handling and Disposal
SC10 Employee Training	SC18 Housekeeping
SR01 Spill Prevention, Control, and Cleanup	

6.8.3.2 Schedule of Maintenance

Bins and dumpsters are placed throughout SAN to separate municipal waste into trash, recyclables, and food waste. A contractor is hired by the Authority to pick up, sort, and deliver municipal waste to the dumpsters and/or compactors regularly. The Authority contracts for pick-up and haul of municipal waste from compactors and dumpsters to an offsite facility one to three times a week. Drivers inspect the conditions of dumpsters and compactors daily and report any needed repair/replacement weekly. The food waste compactor is cleaned when serviced. The Authority has an e-recycling program where pickup of e-waste generated by tenants is quarterly. Pickup and disposal of grease is described in Section 6.4.3.

6.9 FACILITY INSPECTIONS

The EAD inspects all municipal and commercial areas and activities to ensure compliance with Authority Rules and Regulations, Storm Water Code (Article 8), this SWMP, the Municipal and Industrial Permits, other permits and approvals, and contracts and leases. This section discusses the processes and procedures for these inspections. In addition to these inspections, FMD and tenants conduct their own inspections as part of their routine facility activities.

6.9.1 INSPECTION FREQUENCY

The Municipal Permit requires the Authority to establish the inspection frequency for municipal and commercial areas and activities on the basis of the potential for non-storm water discharges and pollutant discharge in storm water and should reflect the priorities set forth in the WQIP. The frequency of inspections must also be appropriate to confirm that BMPs are being implemented to reduce the discharge of pollutants in storm water, effectively prohibit non-storm water discharges, and respond to public complaints. Based on these factors, and the required inspection frequency under the Industrial Permit, the Authority conducts monthly inspections of all municipal and commercial areas and activities, an annual comprehensive inspection, and unscheduled as-needed inspections of all Authority areas. Inspections are performed during daylight hours. Based on inspection findings, the Authority implements all follow-up actions necessary to require and confirm compliance with Authority Rules and Regulations, Storm Water Code (Article 8), this SWMP, the Municipal and Industrial Permits, other permits and approvals, and contracts and leases. Follow up action can include, but is not limited to, (1) education and outreach, (2) requirement to perform corrective actions, (3) re-inspection, (4) enforcement action, and (5) capital improvement projects. Follow-up actions are in accordance with the ERP as described in Section 6.10. Investigations from inspections of municipal and commercial areas and activities that determine whether any subsequent structural improvements need to be made will be brought forth through the capital improvement program, as described in Sections 4.0 and 6.12 and Appendix C of this SWMP. The Authority Board budget approval process is described in Section 10.0.

6.9.2 INSPECTION CONTENT

The inspection by the EAD includes (1) a review of the SWMP, any associated documentation, and the Authority's web-based database; and (2) an onsite visit to determine the actual field conditions. Review of the SWMP and the database can include past monthly and maintenance inspection reports, past annual comprehensive reports and site audits, SWMP appendices, and other supporting documents. The objectives of the inspection include:

- Visual inspection for the presence of actual non-storm water discharges
- Visual inspection for the presence of actual or potential discharge of pollutants
- Visual inspection for the presence of actual or potential illicit connections
- Verification that the description of the municipal and commercial areas and activities has not changed
- Assessment of compliance with this SWMP and the Authority's rules and regulations and code related to non-storm water and storm water discharges and runoff
- Assessment of the implementation of designated BMPs
- Verification of coverage under the Industrial Permit (if applicable)
- Documentation of follow-up and/or enforcement actions taken in accordance with the ERP if problems or violations are found

The EAD inspector carries the following forms and equipment during the inspection: (1) a tablet or cellular telephone, with a backup paper inspection form in case of technical difficulties, to be completed during the inspection (see Appendix G), and (2) a camera, to document site conditions.

After reviewing the documentation associated with the tenant or municipal area, including the inspection history and compliance status, the inspector evaluates conditions for that site, including:

- MS4 (storm drain inlets and basin areas)
- Materials, equipment, and waste storage areas
- All municipal and commercial areas and activities
- BMPs

Any non-storm water discharges and potential illicit discharges observed are followed up on and/or sampled through the dry weather monitoring programs described in Section 3.6 and Appendices D-1 and D-2 of this SWMP. The program includes designated monitoring locations and frequencies, field screening/sampling procedures, data interpretation techniques, and follow-up investigation and reporting procedures.

Inspection content for industrial users is described in Section 7.8.4 of this SWMP.

6.9.3 INSPECTION TRACKING AND RECORDS

The EAD inspector documents the results of the inspection, including any issues identified, via the Web-based database maintained by EAD. When issues are identified, the inspector can also capture images and location information (such as GPS coordinates) that can be stored in the Web-based database. The Web-based database allows the EAD to effectively and efficiently share the inspection results with the Authority and tenants, so that prompt corrective actions can be taken, and inspection results, corrective actions, and any follow-up inspections can be documented.

At a minimum, the inspection records include:

- Name and location of the facility or area
- Inspection and re-inspection date(s)
- Inspection method (e.g. onsite, drive-by, etc)
- Observations and findings from the inspection
- Description of any problems or violations found during the inspection
- Description of any enforcement actions issued in accordance with the ERP
- The date that problems and violations were resolved

The EAD inspector can discuss the results of the inspection with the Authority employee or tenant while onsite, on the phone, or in email or hard copy form. The Authority and tenants have access to the Web-based database to view additional inspection details and can provide information (text, maps, and pictures) regarding how and when issues have been resolved. The EAD inspector uses the information in the database provided by the Authority employees and tenants to confirm compliance, request further action, or escalate enforcement activities.

6.9.4 MAINTENANCE INSPECTIONS

Both the Authority EAD and the FMD inspect the storm drain system as part of their routine facility inspections. Several airport tenants also perform some MS4 and associated structure and/or parking lot inspections, either sporadically or as part of their own routine facility inspections. Airport tenants also share in maintaining the storm drains by working to prevent dirt, trash and other pollutants from entering the storm drain system. FMD performs the inspections and maintenance of certain sections of the sanitary sewer system (such as the grease traps and receptacles described in Section 6.4.1). The following standard procedures will be incorporated into maintenance and cleaning activities of all MS4 and structural treatment controls, road and parking facilities, and sanitary sewers, as applicable:

- Appropriate records will be kept for all maintenance activities. The inspection and waste removal records contain the following information as appropriate:
 - Date and time of the inspection
 - Name of the inspector
 - Items inspected
 - Location of facility inspected or cleaned
 - Condition of facility

- Overall amount (estimated in volume or dry weight) of material removed
- Type(s) of materials removed
- Disposal site(s)
- Problems noted
- Illegal/illicit connection detected
- Corrective action required
- Date corrective action was taken
- Photographs
- Additional field notes
- Drawings and maps

Records of maintenance inspections and activities can be found at the EAD or FMD.

Additional items to be investigated for maintenance of structural treatment control BMPs are in Section 6.2.3. Those items can be, but are not limited to, (1) condition of the BMP, filter media, or outlet; (2) trash/debris/sediment/floatables/oil and grease amount accumulated in the BMP; (3) presence of standing water and unpleasant odors in the BMP; (4) presence of blockages/obstructions in the inflow pathway; (5) vegetation cover height and type; or (6) presence of erosion or burrowing animals.

For MS4 maintenance and cleaning activities, appropriate disposal of the waste removed pursuant to applicable laws will be incorporated into the maintenance and cleaning activities. If wastes are suspected of containing hazardous materials, they will be sampled to determine any special handling and/or disposal needs. Non-emergency storm drain system facility repairs and construction will generally be scheduled to take place between May 1 and September 30 (dry season). Emergency repairs will be completed on an as-needed basis, regardless of time of year.

For MS4 and sanitary sewer maintenance and cleaning activities, appropriate practices will be implemented to ensure that maintenance and cleaning activities will not discharge wastes into the downstream storm drain system. The practices include gravelbagging/berming, capture of any runoff from cleaning activities, use of material beneath waste piles to prevent seepage of liquids, covering of waste piles to prevent water or wind transport of wastes, and blockage of downhill drainages and inlets to prevent entry of maintenance or cleaning wastes. If appropriate, the infrastructure component is referred for repair or replacement by maintenance crews or commercial tenants. Larger, more complex issues generally become recommendations for capital improvement projects as part of the Authority budget planning and approval process (described in Section 10.0). Sewer line improvements are the responsibility of MWWD.

For roads and parking facilities maintenance and cleaning activities, the Authority's Storm Water Code (see Appendix F of this SWMP) in Section 8.74 requires the Authority, or any persons owning or operating parking lots or impervious surfaces used for similar purposes, to clean the areas frequently and thoroughly and to prevent discharge of pollutants to the storm drain system by removing sweepings and debris.

6.10 ENFORCEMENT RESPONSE PLAN

All municipal and commercial areas and activities undertaken in the Authority's jurisdiction are required to maintain compliance with the Authority Rules and Regulations, Storm Water Code (Article 8), this SWMP, the Municipal and Industrial Permits, other permits and approvals, and contracts and leases. Provision E.6 of the Municipal Permit requires each Copermitttee to develop an ERP to enforce its legal authority to achieve compliance. Each component of the ERP must describe the enforcement response approaches that will be

used to compel compliance. The description must include the protocols for implementing progressively stricter enforcement responses (“escalating enforcement”).

This section describes the ERP as it applies to municipal and commercial areas and activities at SAN. In accordance with the Municipal Permit, the ERP has been updated concurrently, with submittal of the final San Diego Bay WQIP, so that the ERP aligns with WQIP strategies.

Any findings or violations noted during a site inspection by the EAD inspector will be discussed onsite or via the Web-based database with the Authority employee or tenants. The EAD inspector will discuss the issues and the inspection report will detail the corrective actions required and the timeframe in which corrective actions must be completed. Findings and violations will be described and recorded in the Web-based database (and will include photographs and other information, as applicable).

The Authority requires that corrective actions be started immediately and be completed prior to the next predicted rain event or within a maximum of 30 days, whichever is sooner. Depending on the nature of the finding, some corrective actions may take longer to complete. In those cases, the Authority employee or tenants will provide an explanation to the EAD inspector and a suggested timeframe for completion, which the EAD inspector will either agree upon, or will reject and provide a preferred timeframe. (Note: corrective actions must be completed within 24 hours for Enforcement Level 2 violations, as described below.) The Authority or tenants must document the corrective action taken by responding to EAD through the Web-based database. The Authority or tenants who cannot complete corrective actions in the time required must explain in detail through the Web-based database the specific causes of delay and propose a schedule for compliance. EAD has the sole discretion to grant an extension or pursue escalated enforcement. All corrective actions, as well as the time periods allowed and dates of actual completion, are recorded in the Web-based database.

The enforcement mechanisms used by the Authority are listed below. The Authority generally obtains compliance using the first four mechanisms listed here. The remaining enforcement mechanisms can be used, as necessary, to increase the severity of penalties and to compel compliance as soon as possible.

- 1) Verbal and written warnings
- 2) Written notices of violation
- 3) Written notices to clean, test, or abate
- 4) Orders to cease and desist (stop work orders)
- 5) Fines
- 6) Denial or revocation of permits, approval, and occupancy
- 7) Administrative and criminal penalties
- 8) Bonding requirements
- 9) Liens

The Authority’s ERP for municipal and commercial areas and activities has two main levels of enforcement, with escalating enforcement measures utilized as necessary on a case by case basis, using the professional judgment of the Authority inspector. Enforcement is initiated and escalated by standard mechanisms for each level. The Authority has the discretion to initiate or escalate enforcement using any enforcement mechanism available, depending on the nature of the concerns, existing site and weather conditions, and actions by the Authority or tenants to control or correct the violation. The general enforcement process is outlined below:

- Enforcement Level 1 is initiated by the findings of a BMP deficiency in the BMP categories outlined in Appendix B, as appropriate for the particular activity or area being inspected. Also, a lack of SWMP implementation also initiates Level 1 enforcement. A verbal and/or written notification of the finding is used to initiate enforcement and corrective actions are expected to be observed during a reinspection after 30 days. Photos of the corrective action should be date-stamped to show completion within 30 days, or the agreed upon timeframe, if longer. If the finding is not corrected, a written notice of violation is issued to escalate enforcement. Upon the second re-inspection, if the finding is still not corrected, a second written notice of violation is issued, which may include an order to clean, test, or abate. Continued failure to correct the violation in the time allowed will result in a mandatory meeting between the Authority or tenants and the Director of the EAD to discuss the reasons for failing to comply and the means of resolving the issue.
- Enforcement Level 2 is initiated when a prohibited offsite discharge occurs. A written notice to clean, test, or abate, or an order to cease and desist (stop work order), is used to initiate enforcement and compliance is expected within 24 hours. If the violation is not corrected, the Authority or tenants must attend a mandatory meeting with the Director of the EAD to discuss the reasons for failing to comply and the means of resolving the issue.

Penalties for violations including failure to correct a finding or violation generally range as follows: (1) submittal of a written report that outlines the cause of the violation and the actions taken to prevent or minimize a reoccurrence of the violation; (2) attendance at a relevant training session and documentation of such; (3) attendance at an Authority-sponsored or presented relevant training session; (4) attendance at a mandatory meeting between the project proponent or project management team and the Director of the EAD; and (5) monetary penalties. The Authority may exercise the discretion to use any and all penalties available, depending on the nature of the concerns and actions by the project proponent or project management team to control or correct the violation.

6.10.1 RE-INSPECTIONS

The enforcement process requires the Authority or tenants to take corrective actions within a specified time period. To confirm that corrective actions have been completed effectively and on time, Authority employee or tenant corrective actions taken for findings or violations will be reviewed by EAD in the database and if needed, re-inspections will be performed. Re-inspections are also documented in the Web-based database in the same manner as are regularly scheduled inspections.

6.11 EDUCATION AND STAFF TRAINING

All Authority staff members attend an annual mandatory SWMP training session plus other trainings at meetings and other events, or as a result of enforcement proceedings, to cover items such as prohibited discharges, inspections, spill response, good housekeeping, implementation of minimum and other BMPs, and recordkeeping procedures. This annual training program is run by EAD. In addition, FMD staff members attend an annual mandatory training session on proper pesticide and herbicide storage, application, and disposal. For additional details on staff training, see Section 9.1.2 of this SWMP.

6.12 RETROFITTING AND REHABILITATION AREAS OF EXISTING DEVELOPMENT

The Authority has developed a program to retrofit areas of existing development within its jurisdiction when redevelopment and new development occurs, to address identified sources of pollutants and/or stressors that contribute to the highest priority water quality conditions in its WMA. The Authority will identify those areas of existing development that are candidates for retrofitting where feasible. These candidates may be used to reduce pollutants and/or stressors that contribute to the highest and focused priority water quality conditions. If retrofitting projects are deemed infeasible to address the highest and focused priority water quality conditions in the WQIP, the Authority will collaborate and cooperate with other Responsible Parties

in the WMA to identify, develop, and implement regional retrofitting projects adjacent to and/or downstream from the Authority's areas of existing development. For additional details on the program to retrofit areas, see Section 4.0 and the BMP Design Manual in Appendix C of this SWMP.

There are no streams, channels, and/or habitats in areas of existing development within the Authority's jurisdiction. Therefore, Municipal Permit Provision E.5.e.(2) is not addressed in this SWMP.

6.13 MUNICIPAL COMPONENT EFFECTIVENESS ASSESSMENT

The Authority has developed internal and external effectiveness assessment programs to evaluate the Authority staff, Board, and tenant compliance with water quality issues. The Authority's Effectiveness Assessment component is described in Section 11.2 of this SWMP.

6.14 MUNICIPAL COMPONENT PROGRAM REVIEW AND MODIFICATION

The Authority has reserved this section to identify and document future changes to the Municipal Component of the SWMP. Section 13.0 of this SWMP addresses the program modifications made to the March 2008 version of the SWMP to bring this document into compliance with the renewed Municipal and Industrial Permits.

7.0 INDUSTRIAL COMPONENT

7.1 INTRODUCTION

This section addresses the requirements of the Industrial Permit, Provision E.5 (Existing Development Management) of the Municipal Permit as it pertains to industrial facilities, and relevant strategies for industrial discharges outlined in the San Diego Bay WQIP.

Many sources were consulted in preparing this section, including Authority plans and regulations as well as state and federal plans and permits. Authority regulations utilized include the SAN Rules and Regulations and the San Diego County Regional Airport Authority Storm Water Code. The state and federal permits, plans, and regulations consulted include the Water Quality Control Plan for the San Diego Basin (Basin Plan), the California 2010 Integrated Report 303(d) List/305(b) Report, hazardous waste regulations and permits, and air quality regulations and permits.

In general, Section 7.0 addresses most of the requirements outlined in the Industrial Permit for industrial dischargers. Additional information is included in Appendix A, Appendix B, Appendix D.1, Appendix E, Figures 3 through 7, and other sections of the SWMP as noted in this section. As listed below, the sections of the Industrial Permit requires the Authority to:

II—Obtain coverage under the Industrial Permit through submission of all Permit Required Documents (PRDs) via SMARTS. As a facility discharging storm water associated with industrial activity to San Diego Bay, a water of the United States, SAN must certify and submit a NOI by July 1, 2015. All changes or terminations of Industrial Permit coverage and required reports will be submitted through SMARTS. Section 7.2 has been prepared to address this requirement.

III—Prohibit all discharges of storm water to waters of the United States, except as authorized by the Industrial Permit or the Municipal Permit. All non-storm water discharges (NSWDs) are prohibited, except those designated as authorized by the NPDES permits. Both storm water discharges and NSWDs are prohibited if they contain pollutants that cause or threaten to cause pollution, contamination, or nuisance. Other discharge prohibitions, including those stated in regional or statewide water quality control plans and federal regulations, are also enforced. Section 7.5.1 has been prepared to address this requirement.

IV—Prohibit NSWDs, except for certain authorized classes, provided that these authorized NSWDs (1) do not otherwise violate regional or statewide water quality control plans, or the Authority's Storm Water Code or Rules and Regulations; (2) have appropriate BMPs in place, as outlined in this document; (3) are visually inspected monthly; and (4) are reported by the Authority in the Industrial Annual Report. Section 7.5.2 has been prepared to address this requirement.

V—Implement BMPs using BAT and BCT to reduce or prevent discharge of pollutants in industrial storm water runoff. The Authority will comply with any applicable Federal Storm Water Effluent Limitation Guidelines (ELGs) outlined in USEPA regulations in 40 CFR Chapter I Subchapter N (Subchapter N). The Authority will comply with any applicable total maximum daily loads (TMDLs). Section 7.5.3 has been prepared to address this requirement.

VI—Ensure that industrial storm water discharges and NSWDs do not cause or contribute to the exceedance of a water quality standard in the receiving water (San Diego Bay), do not adversely affect human health or the environment, and do not contain pollutants in quantities that threaten to cause pollution or public nuisance. Section 7.5.4 has been prepared to address this requirement.

VII—Comply with any incorporated TMDL-specific requirements, once the Industrial Permit is amended to incorporate any TMDLs applicable to the Authority. New dischargers applying for coverage under the Industrial Permit are also required to comply with special regulations associated with 303(d)-listed impairments in the receiving water. However, the Authority is not classified as a new discharger. Section 7.5.3 has been prepared to address this requirement.

VIII—If discharging to the ocean, comply with the California Ocean Plan. Per the definitions outlined in the California Ocean Plan, the Authority discharges to an enclosed bay, and therefore California Ocean Plan requirements are not applicable. Section VIII is not addressed in this plan.

IX—Ensure appropriate training. Section 7.6 has been prepared to address this requirement.

X—Prepare a SWPPP. This section of the Authority's SWMP (Section 7.0), and other applicable sections or appendices, as indicated in this section, comprise the Authority's SWPPP as required by the Industrial Permit. Required components of the SWPPP include (1) facility name and contact information; (2) a site map; (3) a list of industrial materials; (4) a description of potential pollutant sources; (5) an assessment of potential pollutant sources; (6) minimum BMPs; (7) advanced BMPs, if applicable; (8) a monitoring implementation plan; (9) an Annual Evaluation; and (10) the date that the SWPPP was initially prepared and date of each subsequent revision. A copy of this SWPPP will be maintained with the EAD and is available on the Authority's webpage. The locations of required SWPPP elements are provided in Appendix A. Most of the SWPPP requirements are addressed in Section 7.7.

XI—Conduct monitoring, including monthly dry weather visual observations of each drainage area, wet weather visual observations during each wet weather sampling event, and wet weather sampling four times per year during qualifying storm events (QSEs). Sampling results will be compared with numeric action levels (NALs) as outlined in the Industrial Permit. Sections 7.8.3 and 7.8.4 and Appendix D-1 have been prepared to address this requirement.

XII—Respond to NAL exceedances in a given year by escalating to a Level 1 status and conducting a Level 1 Exceedance Response Action (ERA) evaluation and report. The evaluation and report will be completed by or with the assistance of a Qualified Industrial Storm Water Practitioner (QISP). Respond to continuing NAL exceedances by escalating to a Level 2 status and completing a Level 2 ERA Action Plan. This Action Plan will be followed by a Level 2 ERA Technical Report the following year. Section 7.9 has been prepared to address this requirement.

XIII—Comply with regulations for inactive mining operations. This section is not applicable to the Authority and is not addressed in this plan.

XIV—Choose to form a Compliance Group with other dischargers of the same industry type. The Authority has elected not to join a Compliance Group, and Section XIV is not addressed in this plan.

XV—Complete an Annual Comprehensive Facility Compliance Evaluation (Annual Evaluation). Section 7.10.1 has been prepared to address this requirement.

XVI—Complete an Annual Report and submit via SMARTS. Section 7.10.2 has been prepared to address this requirement.

XVII—File for a conditional exclusion to the Industrial Permit if there is no exposure of storm water to industrial activities. The Authority does not intend to file for a conditional exclusion because of no exposure and so Section XVII is not addressed in this plan.

XVIII—Comply with additional regulations applicable to facilities handling plastic materials. The Authority does not handle plastic materials as described in Section XVIII and therefore this section is not addressed in this plan.

XIX—Recognize the Regional Water Board’s authority to review and enforce the Authority’s compliance with the Industrial Permit.

XX and XXI—Be subject to various special and standard conditions. Violations of the Industrial Permit are subject to a civil penalty not to exceed \$37,500 per calendar day of such violation.

The Municipal Permit requires that the Authority, as a Copermittee, establish, maintain, and enforce its legal authority to manage existing developments within its jurisdiction, including industrial developments. For the purposes of enforcement, the Authority considers existing industrial lease holders to be existing development. Per Provision E.5 of the Municipal Permit, the Authority will inventory and track all industrial developments, designate a minimum set of BMPs for all inventoried industrial developments, and inspect all industrial developments at a minimum of once every five years. The monthly inspections required by the Industrial Permit will supersede this municipal inspection requirement. The Authority will also retrofit and rehabilitate areas of existing development that are identified sources of pollutants or stressors that contribute to the focused priority water quality condition for the Authority jurisdiction. This is discussed in Section 6. Requirements of the Municipal Permit as they pertain to industrial discharges are generally addressed in Section 7.7.

7.2 OBTAINING PERMIT COVERAGE

The Authority maintains coverage for industrial activities and industrial tenants under both the Industrial Permit and the Municipal Permit. The Authority has elected to assume a lead role with regard to the Industrial Permit. Airport tenants that conduct industrial activities are also subject to the requirements of the Industrial Permit and must comply with the Authority direction regarding storm water management at SAN. This approach (1) conforms to federal regulations, (2) was the preferred option of the State Water Board, and (3) allows for implementation of consistent storm water pollution prevention measures throughout the entire airport site. This approach provides for consistency in the programs that the Authority has developed and implemented to comply with the requirements of both the Industrial Permit and the Municipal Permit.

7.2.1 OBTAINING INDUSTRIAL PERMIT COVERAGE

The Authority will obtain regulatory coverage under the Industrial Permit through filing of an NOI through SMARTS no later than July 1, 2015. All required PRDs for the NOI will be certified and submitted by the Vice President of Development, Jeffrey Woodson, as the Legally Responsible Person (LRP). The NOI submittal will include:

- 1) The NOI, signed Electronic Authorization Form, and signed certification statement
- 2) A site map (provided in Figure 3)
- 3) This document as the SWPPP
- 4) Annual fees for coverage (established through regulation adopted by the State Water Board and subject to change)

The complete requirements of the NOI are described in Attachment D of the Industrial Permit. All future documents related to the Industrial Permit required to be submitted via SMARTS will be certified and submitted by the Vice President of Development or his Duly Authorized Representative (DAR).

7.3 SWPPP AVAILABILITY AND IMPLEMENTATION

The SWPPP, as part of the SWMP, will be available to all Authority employees, tenants, contractors, and vendors during all hours of facility operation through Authority's internal electronic network (Intranet) and/or on the Authority's webpage. A paper copy of the SWPPP will be maintained in the Authority's EAD.

This SWPPP will be implemented beginning July 1, 2015.

7.4 POLLUTION PREVENTION TEAM

The Authority's Pollution Prevention Team is primarily composed of members of the Authority's EAD and FMD, as well as their designated outside consultants. A full list of staff responsible for implementation of the SWPPP is provided in Table 7-1. Figure 8 presents the Authority's organizational chart. The following key roles within the Authority perform essential roles in SWPPP implementation and monitoring:

- Vice President, Development: The Vice President of Development is the LRP for implementation of the SWPPP. The LRP will certify and submit the PRDs for NOI coverage on the SMARTS website.
- Director, Environmental Affairs Department: The Director of the Authority's EAD will serve as the DAR. The DAR is responsible for signing and certifying all permit-related documents other than the PRDs, and for managing the day-to-day implementation of the SWPPP. In the event of the DAR's extended absence, the next most senior individual within the EAD will manage the industrial storm water program and be designated DAR by the LRP.
- Manager, Environmental Affairs Department: The EAD Manager is responsible for managing the day-to-day implementation of the SWPPP. Duties include conducting meetings with and training of appropriate stakeholders, ensuring proper implementation of required BMPs, directing staff and consultants in performance of wet and dry season monitoring and wet weather storm water sampling, overseeing annual facility inspections of all industrial areas and activities, preparing annual reports for submittal to the Regional Water Board, submitting monitoring results onto SMARTS, and revising and updating the SWMP as necessary.
- Staff, Environmental Affairs Department: All members of the EAD, from Senior Environmental Specialist to Environmental Assistant level, are responsible for implementation of the SWPPP. Staff-level individuals are responsible for performing inspections, implementing training programs, observing and recording daily implementation of required BMPs, requiring corrective actions for BMP deficiencies, developing or directing the development of reports, and enforcing BMP implementation. All members of the EAD are tasked to recognize and report tenant and staff failures to implement required BMPs.
- Facilities Management Department: The Authority's FMD is responsible for implementing minimum BMPs in common areas and Authority property not otherwise covered under another leasehold. Department supervisors are responsible for remediating any BMP deficiencies identified in common use and Authority areas during inspections and recording corrective actions taken.
- Airside Operations, Security, and Public Safety Department: The Authority Airside Operations (Air Ops) Department is generally the first point of contact for tenant and staff reporting of spills. Air Ops generates a daily log of any reported spills, leaks, and other actual and potential discharges; this log is included in the Authority's Web-based database so that the records are immediately available upon request.

- Tenant Environmental Program Managers: All tenants are required to implement minimum BMPs to prevent storm water pollution as a condition of their leasehold. Tenant environmental managers will be responsible for remediating any BMP deficiencies identified in their tenant areas during inspections and for recording corrective actions taken. The managers in charge of environmental program implementation are identified in the Tenant Summary Sheets in Appendix E.
- Facilities Development and Airport Planning Departments: These two departments are generally responsible for project planning, design, and approval, with assistance as necessary from the EAD. Facilities Development and Airport Planning will be responsible for the design of Industrial Permit-compliant treatment control BMPs.
- Terminal Operations and Business and Financial Management Departments: These two departments, in collaboration with EAD and Air Ops, are generally responsible for helping tenants properly implement the BMPs required in this SWMP. Both departments may be consulted if escalated enforcement of BMPs is required.

Table 7-1. Authority Key Personnel Responsible for SWMP Implementation

Department	Title	Responsible Individual
Development	Vice President	Jeffrey Woodson
Environmental Affairs	Director	Paul Manasjan
	Manager	Richard Gilb
Facilities Management	Director	Murray Bauer
	Maintenance Supervisor	Hillary Gish
		Anthony Esposito
Airside Operations, Security, and Public Safety	Director	George Condon
	Airside Operations Duty Manager	David Billings
		Mario Caldera
		Mark Chewiwe
		Steve Duboce
		Mark Hander
		Rodrigo Rendon
		Wayne Thomas
		David Van Bibber
	Manager, Emergency Preparedness and Public Safety	Susie Preiser
Manager, Airside Operations	Dean Robbins	
Manager, Aviation Security, and Law Enforcement	Clint Welch	
Facilities Development	Director	Iraj Ghaemi
	Program Manager	Michael Tilley
Airport Planning	Director	Keith Wilschetz
	Manager	Ted Anasis
Angela Jamison		
Terminal Operations	Manager	Amiel Porta
	Terminal Operations Coordinator	Elsie Gonzalez
		Scott La Rocco
Business and Financial Management	Director	Michael Sears
	Senior Manager	Troy Ann Leech
	Real Estate Manager	Susan Diekman
		Mary Erickson
		Traci Kuchta
Eric Podnieks		

7.5 STORM WATER AND AUTHORIZED NON-STORM WATER DISCHARGE REQUIREMENTS

In general terms, any discharge of materials other than storm water and certain, authorized, non-storm water is prohibited under both the Industrial Permit and the Municipal Permit. Section 7.5.1 discusses these discharge prohibitions in more detail, and Section 7.5.2 lists those classes of non-storm water discharges that are authorized. Storm water and authorized non-storm water discharges are subject to effluent limitations. These limitations can be either technology-based, requiring the discharger to implement a certain minimum technology to control pollutants, or water-quality-based, requiring discharges to meet either numeric or narrative receiving water quality standards. Technology-based effluent limitations are discussed in Section 7.5.3. Receiving water limitations and water quality standards are discussed in Section 7.5.4.

7.5.1 DISCHARGE PROHIBITIONS

All discharges of storm water to San Diego Bay are prohibited, except as authorized by the Industrial Permit or Municipal Permit and outlined in this document.

All non-storm water discharges, except for those authorized by the Industrial Permit and the Municipal Permit as outlined in this document, are effectively prohibited.

Both storm water and authorized non-storm water discharges are subject to the following restrictions:

- Discharges that cause or threaten to cause pollution, contamination, or nuisance as defined in Section 13050 of the Water Code are prohibited.
- Discharges that violate discharge prohibitions contained in the Water Quality Control Plan for the Basin Plan are prohibited.
- Discharges that contain hazardous substances equal to or in excess of a reportable quantity listed in 40 CFR Sections 110.6, 117.21, or 302.6 are prohibited.

7.5.2 AUTHORIZED INDUSTRIAL NON-STORM WATER DISCHARGES

The Municipal Permit effectively prohibits all non-storm water discharges through implementation of the Illicit Discharge Detection and Elimination Program discussed in Section 3.5 of this SWMP, unless they are authorized through another NPDES permit. Because the Authority is permitted under both the Industrial Permit and the Municipal Permit, the following non-storm water discharges are authorized, provided that appropriate BMPs are in place and the discharges are not an identified source of pollutants to receiving waters:

- Fire prevention system flushing/testing
- Potable water sources and system flushing/testing
- Drinking water fountains
- Air conditioning, refrigeration and compressor condensate
- Landscape irrigation, provided that integrated pest management has been utilized
- Uncontaminated natural springs, groundwater, and foundation and footing drainage

- Tidal intrusion
- Incidental windblown mist from cooling towers

Further discussion of authorized non-storm water discharges and their associated BMPs is provided in Section 3.0.

7.5.3 INDUSTRIAL EFFLUENT LIMITATIONS

The Authority meets the Industrial Permit Section V effluent limitations by employing BMPs that meet the BAT and BCT standard, as appropriate. The BAT standard generally applies to industrial discharges of toxic and nonconventional pollutants, while the BCT standard applies to conventional pollutants including biological oxygen demand (BOD), total suspended solids (TSS), fecal coliform, pH, and oil and grease. The Authority's required BMPs are further outlined in Section 7.7 and in Appendix B.

The Authority is not subject to storm water ELGs in Subchapter N because no pavement deicing occurs at SAN and because the Authority is not a new discharger.

Additionally, there are no TMDLs applicable to the Authority so the Authority is not subject to any TMDL specific requirements. If the Authority does become named in a TMDL, this SWPPP will be amended at that time to incorporate requirements of the TMDL.

7.5.4 RECEIVING WATER LIMITATIONS FOR INDUSTRIAL DISCHARGES

The Authority's storm water discharges and NSWDS will not cause or contribute to an exceedance of any applicable water quality standard in San Diego Bay, including standards set forth in the Basin Plan. Industrial storm water discharges and NSWDS will not adversely affect human health or the environment, or contain pollutants in quantities that threaten to cause pollution or public nuisance.

7.6 TRAINING QUALIFICATIONS

Per 2014 Industrial Permit requirements, the Authority will designate a qualified individual, known as a QISP, to complete an approved State Water Board training course and register as a QISP in SMARTS, once QISP training has been developed by the State Water Board and the Authority enters Level 1 discharger status, as described in Section 7.9. The QISP will be designated to train appropriate team members and to perform the duties related to ERAs, as described in Section 7.9. The SWPPP will be modified to reflect this designation. If the Authority remains in baseline status (i.e., no NAL exceedances), additional training by a QISP will not be required.

All engineering work subject to the Professional Engineer's Act (California Business and Professions Code Sections 6700-6799) and required by the Industrial Permit will be performed by a California licensed professional engineer. A professional engineer will certify hydrologic calculations for any new volume-based treatment control BMPs installed at SAN after July 1, 2015, per Section X.H.6.a of the Industrial Permit.

7.7 STORM WATER POLLUTION PREVENTION PLAN COMPONENTS

7.7.1 BACKGROUND

As an industrial discharger, the Authority has developed Section 7.0, along with other associated sections or appendices of the SWMP, as its SWPPP. Per Section X.A of the Industrial Permit, the Authority's SWPPP contains the following elements:

- Facility name and contact information
- Site map
- List of industrial materials
- Description of potential pollutant sources
- Assessment of potential pollutant sources
- Minimum BMPs
- Advanced BMPs, if applicable
- Monitoring Implementation Plan
- Annual Evaluation
- Date that the SWPPP was initially prepared and the date of each SWPPP amendment

A checklist of required SWPPP elements and their locations in this SWMP is provided in Appendix A. This section of the SWMP contains most of the required SWPPP elements.

The Municipal Permit also requires identification and description of existing industrial facilities or areas as part of the Authority's JRMP. Most of the elements required under the Municipal Permit are already provided as a requirement of the SWPPP under the Industrial Permit. Specifically, Provision E.5.a of the Municipal Permit states that the JRMP must include the following elements for industrial facilities:

- Name and location, including hydrologic subarea and address, if applicable
- Status of facility or area as active or inactive
- Identification if a business is a mobile business
- SIC code or NAICS code, if applicable
- Industrial Permit NOI and/or WDID number, if applicable
- Identification of pollutants generated and potentially generated by the facility or area
- Whether the facility or area is adjacent to an ESA

- Whether the facility or area is tributary to and within the same hydrologic subarea as a water body segment listed as impaired on the 303(d) list and generates pollutants for which the water body segment is impaired
- An annually updated map showing the location of inventoried existing development, watershed boundaries, and water bodies

Table 7-4 presents an inventory of industrial sites and sources at SAN. Based on this inventory of existing facilities, the Municipal Permit calls for the prioritization of known or suspected sources of pollutants contributing to the highest or focused priority water quality conditions identified in the San Diego Bay WQIP. The WQIP identifies metals as the focused priority water quality condition in the Authority jurisdiction, and both Industrial Tenant Operational Areas and Industrial Airport Operational Areas (i.e., runways and taxiways) are identified as high-priority sources of metals (Responsible Parties, 2015). Strategies identified in the WQIP to address industrial sources of metals include enhanced tenant inspections, optimization of runway rubber removal, and increased frequency of sweeping runways, taxiways, and ramp areas.

Per Provision E.1.a of the Municipal Permit, the Authority must establish legal authority to control the contribution of pollutants in discharges from industrial facilities within its jurisdiction, including those with existing coverage under the Industrial Permit. The Authority has legal authority over all land uses within its jurisdiction through property leases or use agreements. A complete discussion of the Authority's legal authority is provided in Section 2.2 of this SWMP.

7.7.2 FACILITY INFORMATION

SAN is owned and operated by the San Diego County Regional Airport Authority. The primary economic activity of SAN is as an airport; therefore the primary SIC Code is 4581. Other secondary SIC codes associated with the activities of SAN and its industrial tenants include the following:

- 4512 Air Transportation, Scheduled
- 4513 Air Courier Services
- 4522 Air Transportation, Nonscheduled
- 5171 Petroleum Bulk Stations and Terminals

SAN covers approximately 663 acres and is located in the Pueblo Hydrologic Unit (HU 908.00), San Diego Mesa Hydrologic Area (HA 908.20), and Lindbergh Hydrologic Sub-Area (HSA 908.21). Storm water from SAN drains to San Diego Bay, which is designated as an ESA, with portions contained in the 303(d) list. Certain areas of San Diego Bay are subject to TMDLs; however, SAN does not directly drain to these areas. A complete discussion of the facility drainage is provided in Section 7.7.2.2 of this plan, and also can be viewed on the site map (Figure 3).

Table 7-2 provides the basic facility information for SAN, including name, address, contact information, SIC code, hydrologic subarea, and WDID number.

Table 7-2. SAN Industrial Facility and Facility Discharge Information

Industrial Facility Information	
Facility Name	San Diego International Airport (SAN)
Facility Operator	San Diego County Regional Airport Authority
Facility Address	3225 N. Harbor Dr., San Diego, CA 92101
Facility Mailing Address	PO Box 82776, San Diego, CA 92138
Latitude	32.7337
Longitude	-117.1933
Legally Responsible Person (LRP)	Jeffrey Woodson, Vice President, Development
Facility Contact	Richard Gilb
Contact Email	Rgilb@san.org
Contact Telephone	(619) 400-2790
Scheduled Facility Operating Hours	6:30 a.m.-11:30 p.m., 365 days per year
Industrial Facility Discharge Information	
Primary Standard Industrial Classification (SIC) Code	4581 (Airports, Flying Fields, and Airport Terminal Services)
Waste Discharger Identification (WDID)	9 37I018035
Hydrologic Unit (HU)	908 (Pueblo)
Hydrologic Sub Area (HSA)	908.21 (Lindbergh)
Receiving Water Body	San Diego Bay
Facility Status	Active
Mobile Discharger?	No
Discharges to Environmentally Sensitive Area (ESA)?	Yes (San Diego Bay)

7.7.2.1 Facility Operations

The primary operation of SAN is as a domestic and international commercial airport. Airport operations at SAN currently include two main airline terminals, an FBO facility, one main runway area, taxiways, and ancillary support facilities (including an aircraft fuel storage facility, a remote fueling facility, air cargo facilities, ground support facilities and operations areas), an airplane wash-rack, overnight airplane parking areas, and the ARFF.

7.7.2.2 Descriptions of Drainage Areas and Existing Drainage

The storm water conveyance system at SAN consists of 15 drainage basins. To be consistent with historical naming conventions at the airport, these drainage basins are named as Basins 1 through 15, with only small portions of Basin 2 owned by the Authority. Of the 15 basins at SAN, 9 contain industrial activities, namely Basins 1, 3, 5, 6, 7, 8, 12, 13, and 15. A full description of the drainage areas is provided in Section 1.4.

Storm water from SAN drains to San Diego Bay, portions of which are currently 303(d) listed for impacts due to PCBs, PAHs, chlordane, lindane, indicator bacteria, and metals, as well as benthic community effects and sediment toxicity. The 2010 303(d) list includes copper as a pollutant impacting water quality in the marinas along Harbor Island and bacteria impacting water quality at Spanish Landing. Runoff from the airport commingles with runoff from other sources and discharges into the waters along Harbor Island, including near Spanish Landing. San Diego Bay in its entirety is also 303(d) listed as impacted by PCBs.

There are two TMDLs established in San Diego Bay, namely dissolved copper impacting Shelter Island Yacht Basin and indicator bacteria impacting Shelter Island Shoreline Park. Runoff from the airport does not discharge in close proximity to these areas of San Diego Bay.

There are four Toxic Hot Spots in San Diego Bay, one of which (namely, the Laurel Hawthorn Central Embayment [LHE]) is located near outfalls associated with runoff commingled from SAN and other sources. A technical investigation prompted by an Investigative Order issued by the Regional Water Board (Order No. R9-2014-2007) is currently being conducted to determine the source of pollution in this area. The State Water Board has designated San Diego Bay in its entirety as having RARE beneficial use in the Basin Plan (2011). Both the Sweetwater Marsh National Wildlife Refuge and the South Bay Unit of the San Diego National Wildlife Refuge are considered ASBS, but neither is within close proximity to SAN.

7.7.2.3 Storm Water Run-On from Offsite Areas and Non-Industrial Areas

Basins 1, 3, 4, 5, 6, 8 and 13 have been identified as potentially receiving run-on from offsite areas. Basins 1, 3, and 4 receive storm water run-on from adjacent properties to the south and east of SAN. Basins 5, 6, 8, and 13 receive storm water run-on from adjacent properties to the north and west of SAN.

There are no identified areas of run-on from non-industrial drainage basins within SAN to industrial drainage basins. There are, however, identified areas of run-on from non-industrial source areas within the industrial drainage basins. Basins 3, 4, 5, 6, 8, 12, and 13 contain areas of natural soil and fill that are exposed to rainwater. Runoff from these areas may reach the storm drains in the corresponding drainage areas. These areas are outlined in Figure 3. Basins 3, 6, 7, 8, and 15 contain non-industrial roof runoff that commingles with industrial runoff before reaching the storm drains. Basins 1, 3, 4, 5, 6, 8, 12, 13, and 15 contain portions of the vehicle perimeter road or vehicle parking areas; runoff from these areas may commingle with industrial runoff. As of spring 2015, there is active construction in Basins 1, 3, 5, and 6. Construction runoff is addressed in Section 5.0 of this SWMP.

7.7.2.4 Geology and Groundwater

Approximately 90 percent of SAN property is covered by impervious surfaces consisting mainly of buildings and paved areas. The soils underlying SAN are generally undifferentiated bay deposits and hydraulic fill material originating from San Diego Bay. The soil is described as undetermined in the Soil Hydrologic Groups map in the San Diego County Hydrology Manual. The elevation of SAN ranges from approximately 10 to 25 feet above mean sea level.

7.7.3 POTENTIAL POLLUTANT SOURCES

Entities conducting industrial activities as listed in Attachment A of the Industrial Permit are subject to the Industrial Permit and Provision E.5 of the Municipal Permit. There are 32 tenants conducting industrial activities, plus the Authority itself as operator of the airport, for a total of 33 entities conducting industrial activities that could contribute a significant pollutant load to the storm drain system. These 33 entities and the type of industrial activity into which they have been categorized are listed in Table 7-3 (Note: the Authority includes the ARFF facility, which is the airport's firefighting facility and is indicated separately to assign its particular activity). The location of these 33 entities on the airport is shown in Figure 3 and Figures 5 through 8.

The Authority site maps shown in Figure 3, and Figures 5 through 8 depict the facility boundaries; the outline of all storm water drainage basins within the facility boundaries; portions of the drainage basins impacted by run-on from surrounding areas; direction of flow within each drainage basin; nearby surface water bodies; and areas of soil erosion. The site maps identify San Diego Bay as the receiving water into which storm water from SAN discharges. The site maps also show the storm water drainage system at the airport; associated inlets and points of discharge; any structural control measures (e.g., OWSs); compliance sampling locations; an outline of all impervious areas of the facility, including paved areas, buildings, covered storage areas, and other roofed structures; locations where materials are directly exposed to precipitation; the locations where significant spills or leaks have occurred; areas of industrial activity, including the locations of all storage areas and storage tanks, shipping and receiving areas, fueling areas, vehicle and equipment storage/maintenance areas, material handling and processing areas, waste treatment and disposal areas, dust or particulate generating areas, and cleaning and rinsing areas; and other areas of industrial activity that are potential pollutant sources.

The Municipal Permit requires that Copermittees identify and prioritize their industrial sources of pollutants contributing to the focused priority water quality conditions in the Authority's jurisdiction. The process implemented by the Authority for determining the potential threat of those operations conducting industrial activities is described Section 7.7.3.1. Per the WQIP source prioritization, all Industrial Tenant Operational Areas and Industrial Airport Operational Areas are designated as high-priority sources (Responsible Parties, 2015).

7.7.3.1 Description of Potential Pollutant Sources

Under the Industrial Permit, commercial passenger air carriers, cargo air carriers, FBOs (of which there is only one at SAN), fuel vendors, aircraft refuelers, aircraft and airport service and maintenance providers, and all airfield/airport related activities are defined as industrial operations. The Authority used information gained from site visits, annual inspections, and storm water sampling results, including information regarding industrial materials handled and stored at the airport, descriptions of those industrial activities that may be sources of pollutants, and pollutants detected in prior sampling events, to determine their potential pollutant sources and areas. This information is presented in Tables 7-3 and 7-4.

Using the information on hand, the Authority has determined that all the activities listed in Tables 7-3 and 7-4, and therefore all 33 entities conducting industrial activities at SAN, are considered high-priority threats to water quality.

The Municipal Permit requires the Authority to maintain an inventory of industrial and commercial sites and sources and to update this inventory annually. These industrial and commercial sites and sources were prioritized as part of the WQIP process. The results of the commercial prioritization are presented in Section 6.0. The results of the current prioritization for industrial activities are included in Tables 7-3 and 7-4, as discussed above. Some of the entities conduct multiple industrial activities and, therefore, may be listed more than once in Table 7-3. Table 7-4 provides the more detailed minimum information required by the Municipal Permit for each industrial site or source, specifically name; address; pollutants potentially generated by the site/source (and identification of whether the site/source is tributary to a 303(d)-listed water body segment and generates pollutants for which the water body segment is impaired); and a narrative description, including SIC codes that best reflect the principal products or services provided by each site/source/facility. The Municipal Permit also requires identification of mobile businesses, and whether businesses are active or inactive; all 33 industrial entities are active and stationary.

Table 7-3. Overview of Inventory of Industrial Sites/Sources

Land Use and Activity	Water Quality Threat Priority	Entity
Passenger Carrier	High	Air Canada Alaska Airlines Allegiant American Airlines British Airways Delta Airlines Envoy (previously American Eagle) Frontier Airlines Hawaiian Airlines Japan Airlines (JAL) JetBlue Airways SeaPort Airlines SkyWest Airlines Southwest Airlines Spirit Airlines Sun Country Airlines United Airlines US Airways Virgin America Volaris West Jet
Cargo Carrier	High	DHL Airways Federal Express Corporation United Parcel Service Co. (UPS)
Cargo Handling	High	Bradford
Corporate General Aviation/ Fixed-Base Operations	High	Landmark Aviation
Fuel Vendor	High	Allied Aviation Services Landmark Aviation
Aircraft Fueler	High	Aircraft Service International Group, Inc. (ASIG) Landmark Aviation
Aircraft and General Services Equipment and Maintenance	High	American Airlines Integrated Airline Services (IAS) United Airlines US Airways
Jetway Maintenance	High	Elite Line Services (ELS) ¹ Siemens ²
Airport Terminal Services	High	Flagship
Fire Fighting	High	Aircraft Rescue and Firefighting Facility (ARFF)
Airport	High	Authority

¹. Also maintains baggage claim belts in Terminal T1, T2E and T2W baggage claim.

². Also Maintains baggage claim belts in T2 Green Build Area.

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Table 7-4. Inventory of Industrial Sites/Sources

Facility Name	Address Number	Suite Number	Street Name	City	State	Zip Code	Hydro. Area	SIC Code	NAICS Code	Principal Products/ Services	Bacteria	Gross Pollutants	Metals	Nutrients	Oil & Grease	Organics	Pesticides	Sediment	Tributary	Threat
Air Canada	3665	#223	North Harbor Dr.	San Diego	CA	92101	908.0-908.21	4512, 4522	481111, 487990	Passenger Carrier	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes
Alaska	3665	#228	North Harbor Dr.	San Diego	CA	92101	908.0-908.21	4512, 4522	481111, 487990	Passenger Carrier	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes
Allegiant	3707	T2E	North Harbor Dr.	San Diego	CA	92101	908.0-908.21	4512, 4522	481111, 487990	Passenger Carrier	No	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes
Allied Aviation	3698	#C	Pacific Hwy.	San Diego	CA	92101	908.0-908.21	5171	424710	Fuel Storage	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
American	3707	#103	North Harbor Dr.	San Diego	CA	92101	908.0-908.21	4512, 4522	481111, 487990	Passenger Carrier	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes	Yes
ARFF	3698		Pacific Hwy.	San Diego	CA	92102	908.0-908.21	9224	922160	Airport Rescue & Fire Fighting	No	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes
ASIG	2340		Stillwater Rd.	San Diego	CA	92101	908.0-908.21	4581	488190	Fueling Services	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	Yes
Bradford	2247		West Washington St.	San Diego	CA	92101	908.0-908.21	4581	488190	Cargo Handling	Yes	No	No	Yes	Yes	No	No	No	Yes	Yes
British Airways	3707	#117	North Harbor Dr.	San Diego	CA	92101	908.0-908.21	4512, 4522	481111, 487990	Passenger Carrier	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes
Delta	3835	#107	North Harbor Dr.	San Diego	CA	92101	908.0-908.21	4512, 4522	481111, 487990	Passenger Carrier	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes
DHL	225		Washington St.	San Diego	CA	92101	908.0-908.21	4513	492110	Air & Ground Freight	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes
ELS	3707	#121	North Harbor Dr.	San Diego	CA	92101	908.0-908.21	4581	488111	Maintenance (Boarding Bridges & Conveyors)	No	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes
Envoy	3225	#109	North Harbor Dr.	San Diego	CA	92101	908.0-908.21	4512, 4522	481111, 487990	Passenger Carrier	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes
FedEx	2221		West Washington St.	San Diego	CA	92110	908.0-908.21	4513	492110	Cargo Handling	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes
FlagShip	3835	#130	North Harbor Dr.	San Diego	CA	92101	908.0-908.21	4581	561720	Janitorial	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Frontier	3707	#105	North Harbor Dr.	San Diego	CA	92101	908.0-908.21	4512, 4522	481111, 487990	Passenger Carrier	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes
Hawaiian	3707	T2	North Harbor Dr.	San Diego	CA	92101	908.0-908.21	4512, 4522	481111, 487990	Passenger Carrier	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes
IAS	3225		North Harbor Dr.	San Diego	CA	92101	908.0-908.21	4513	492110	Maintenance (Aircraft & GSE)	No	No	Yes	Yes	Yes	No	No	Yes	Yes	Yes
JAL	3707	#123	North Harbor Dr.	San Diego	CA	92101	908.0-908.21	4512	481111	Passenger Carrier	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes

INDUSTRIAL COMPONENT

Table 7-4. Inventory of Industrial Sites/Sources (continued)

Facility Name	Address Number	Suite Number	Street Name	City	State	Zip Code	Hydro. Area	SIC Code	NAICS Code	Principal Products/ Services	Bacteria	Gross Pollutants	Metals	Nutrients	Oil & Grease	Organics	Pesticides	Sediment	Tributary	Threat
Jet Blue	3835	#108	North Harbor Dr.	San Diego	CA	92101	908.0-908.21	4512, 4522	481111, 487990	Passenger Carrier	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes
Landmark Aviation	2904		Pacific Hwy.	San Diego	CA	92101	908.0-908.21	4512, 4522	481111, 487990	Corporate General Aviation	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes
Authority	3835		North Harbor Dr.	San Diego	CA	92101	908.0-908.21	4581	488111	Facility Maintenance	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SeaPort	3225		North Harbor Dr.	San Diego	CA	92101	908.0-908.21	4512	481111	Passenger Carrier	No	No	Yes	No	Yes	No	No	No	Yes	Yes
Siemens	3225		North Harbor Dr.	San Diego	CA	92101	908.0-908.21	4581	488111	Facility Maintenance	Yes	Yes	Yes	No	Yes	No	No	Yes	Yes	Yes
SkyWest	3225	#104	North Harbor Dr.	San Diego	CA	92101	908.0-908.21	4512, 4522	481111, 487990	Passenger Carrier	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes
Southwest	3665	T1	North Harbor Dr.	San Diego	CA	92101	908.0-908.21	4512, 4522	481111, 487990	Passenger Carrier	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes
Spirit	3707	#227	North Harbor Dr.	San Diego	CA	92101	908.0-908.21	4512, 4581	481111, 488111	Passenger Carrier	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes
Sun Country	3835	#107	North Harbor Dr.	San Diego	CA	92101	908.0-908.21	4512, 4522	481111, 487990	Passenger Carrier	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes
United	3855	#115	North Harbor Dr.	San Diego	CA	92101	908.0-908.21	4512, 4522	481111, 487990	Passenger Carrier	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes
UPS	3140	#G105	E Jurupa St.	Ontario	CA	91761	908.0-908.21	4513	492110	Cargo Handling	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes
U.S. Airways	3835	#128	North Harbor Dr.	San Diego	CA	92101	908.0-908.21	4512, 4522	481111, 487990	Passenger Carrier	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes
Virgin America	3707	#104	North Harbor Dr.	San Diego	CA	92101	908.0-908.21	4512, 4522	481111, 487990	Passenger Carrier	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes
Volaris	3225		North Harbor Dr.	San Diego	CA	92101	908.0-908.21	4512, 4581	481111, 488111	Passenger Carrier	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes
West Jet	3707	T2E	North Harbor Dr.	San Diego	CA	92101	908.0-908.21	4512, 4522	481111, 487990	Passenger Carrier	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes

INDUSTRIAL MATERIALS AS POTENTIAL POLLUTANT SOURCES

Industrial materials associated with industrial activities at SAN that could be potential pollutants consist primarily of metals, petroleum products (such as fuels, oil, and greases), solvents, soap/cleaning fluids, and trash. Lesser amounts of other potential pollutants also present at the airport include lavatory chemicals and waste, paints, used batteries and battery acid, anti-freeze, hazardous wastes (mostly oils), metals, deicing chemicals, herbicides and pesticides, adhesives, rust preventers, AFFF and other fire suppression chemicals, and sealants (see list below for more details). These pollutants can be transported to the storm water system either as direct spills, from contact with rainfall runoff, or from apron or ramp scrubbing, if not completely contained. Appendix E contains a list of potential pollutants for each industrial tenant. Also described in Appendix E are material storage areas, lists of materials stored in quantities over 55 gallons, and shipping and receiving information if available.

In general, the industrial materials that could be potential sources of pollutants at SAN include the following:

Acetic acid	Hydraulic fluids
Acetone	Hydraulic fluid (Skydrol)
Adhesives	Jet fuel
Antifreeze	Lavatory chemicals
Asphalt debris	Landscape waste
Battery acid	Lavatory wastes
Brake cleaners	Lubricants
Brake fluid	Metals
Bulk auto gas and diesel	Oil and grease
Carburetor cleaner	Paints
Caulking	Pesticides
Cleaning solutions	Purple K (fire suppression chemical)
Coolant	Radioactive goods
Deicing/anti-icing fluids	Recyclable paper/cardboard
Degreasers (citrus based)	Rubber particulates
Diesel	Rust preventer
Dumpster wastes	Sealant
Fertilizers	Sediment
Firefighting foam	Solvents
Fuel	Sump fuel
Fuel hydraulic fluids	Transmission fluid
Galvanizing compound	Trash
Herbicides	Turpentine

INDUSTRIAL ACTIVITIES AS POTENTIAL POLLUTANT SOURCES

The industrial activities, in and of themselves, conducted by both the Authority and tenants have the potential to impact water quality. Information gathered as described above indicates that the potential pollutant generating activities/operations consist primarily of specific airport-industry processes, material handling and storage, and spills and leaks. To a lesser extent, pollutants may also potentially result from dust and particulate generating activities, soil erosion, and non-storm water discharges. There may be pollutant sources related to commercial activities conducted within industrial drainage basins, such as commercial

parking lots management and vehicle storage, food service, and janitorial service. These commercial activities are addressed in Section 6.0 of this SWMP.

Aircraft Deicing/Anti-icing

Deicing and anti-icing chemicals are generally used on aircraft to eliminate or minimize the ice buildup on the wings and fuselage of aircraft. These activities are fairly uncommon at SAN. Only one tenant conducts deicing and another has deicing fluid but has not used it as of Fall 2014. Deicing can be performed using deicing fluids (typically, ethylene glycol and/or propylene glycol), water, or air. The deicing fluids are typically stored in drums or large plastic containers. Deicing fluid is generally applied by spraying the aircraft with a mixture of (hot) water and a glycol-based fluid. The spray drains from the aircraft onto the ramp area and could have the potential to result in an illicit discharge or transport other surface contaminants, thereby impacting storm water quality. Airlines typically use scrubbers, vacuums, or absorbents to cleanup and properly dispose of residual chemicals. Mixing of deicing chemicals takes place in the SAN triturator, which drains to the sanitary sewer.

Facilities performing deicing activities with aircraft deicing fluids may be subject to the requirements and storm water ELGs outlined in Subchapter N. ELGs for existing airports apply only to airports conducting pavement deicing. However, neither the Authority nor any industrial tenants at SAN perform airfield pavement deicing. Therefore, SAN is not currently subject to the Subchapter N ELGs.

Because deicing is fairly uncommon at SAN, the activity is not considered a significant non-storm water threat to water quality. On average, deicing is performed on one to two aircraft per day during the seven-month “deicing season” from October to April. The Authority does require the use of BMPs to address deicing activities. Deicing activities are authorized on the paved ramp in areas that are (1) sufficiently far enough from the nearest storm drains to allow for capture and cleanup of the residual deicing fluids whenever chemical deicers are used; (2) sufficiently far enough from the nearest storm drains to allow for the liquid to be captured and cleaned up to prevent the transport of surface contaminants, whenever air or water are used as deicing agents; or (3) sufficiently far enough from the nearest storm drains to allow for the water to evaporate prior to reaching the storm drain system, whenever air or water are used as deicing agents. These areas are depicted in the figure attached to the Aircraft Deicing/Anti-icing BMP (SC05) description in Appendix B. In general, BMP SC05 can be implemented effectively at the gates, although pushing an aircraft back away from the terminal on the ramp area around Terminal 1 allows for additional distance between the deicing activity and the storm drain system. Tenants are responsible for properly implementing BMP SC05 at all times, including during inclement weather.

Aircraft, Vehicle, and Equipment Fueling

Fueling activities occur on a daily basis. Aircraft fueling activities are conducted on paved surfaces such as concrete ramps or at the gates. Approximately 450,000 gallons of jet fuel are brought to Terminals 1 and 2 ramp areas daily by tanker and loaded by positive lock hose into aircraft. Vehicle and ground support equipment (GSE) fueling is conducted at the gates or in maintenance areas. For the Authority, fueling activities also occur at all generators, light towers, and truck bays in the ARFF facility. The industrial materials or potential pollutants involved in these activities are jet fuel, diesel fuel, and gasoline. Fuel trucks are refilled at the RFF or FSF. There is a sloped spill containment area leading to a 12,000-gallon wastewater sump and above-ground OWS at the RFF and a 12,000-gallon OWS plus an 8,000-gallon holding tank at the FSF. The four FBO aircraft refueling trucks take on fuel at the RFF or FSF, and perform fueling operations onsite at the FBO. Most tenant vehicles or equipment are fueled onsite, although some perform vehicle or equipment fueling offsite. Fuel spills are contained by absorbent materials, inflatable pools, or facility-specific spill containment areas/OWSs/tanks (for the RFF and FSF). The Authority procedures for spill reporting and response are outlined in Sections 3.5.3.2 and 3.5.3.3. Tenants may also have their own environmental response contractors for spill response. The concrete pad at the loading islands in the RFF is steam cleaned periodically and the discharge enters the wastewater holding tank.

Aircraft, Vehicle, and Equipment Maintenance

The majority of industrial tenants at SAN maintain aircraft, equipment, and/or vehicles, although no major maintenance of aircraft is performed onsite. Maintenance activities are performed both indoors and outdoors. Based on the nature of maintenance activities at airports, materials such as lubricating oils, hydraulic oils, degreasers, and other cleaning products are commonly used during maintenance activities. At tenant and Authority waste accumulation areas, waste oils, lubricants, oil filters, antifreeze, transmission fluids, and used absorbent materials are stored prior to transport to recycling or waste disposal facilities. Small leaks or spills of some of these fluids can occur during maintenance activities. Tenants respond to these leaks and spills by using absorbent socks, dry absorbent materials, rags, and mops, and requests for service by the Authority's portable truck-mounted vacuum. Many tenants use drip pans during maintenance activities in areas where the use of a drip pan is unlikely to become FOD. Maintenance activities occur on a daily basis, but tend to involve minor maintenance and industrial materials in small quantities. Where possible, maintenance activities are conducted indoors or under cover, and generally represent a low potential for significant pollutant discharge.

Some tenants have floor drains located in maintenance areas. At some of these facilities, the runoff entering the floor drain is conveyed to an OWS before entering the sanitary sewer system. At a few facilities, the runoff that discharges through the floor drains discharges directly to the sanitary sewer. Tenants are required to confirm that there are no illicit connections from these drains to the storm drain system at their leasehold.

Electric Vehicle Charging and Maintenance

Electric vehicle charging and maintenance represents a relatively new activity at SAN. The Authority has formally committed to reducing greenhouse gas emissions, with a goal of converting all airside ground support equipment to alternative and cleaner fuels by 2015 (San Diego County Regional Airport Authority, 2013). Multiple tenants utilize electric vehicles as part of their daily operations. These tenants charge the vehicles onsite. During charging and maintenance, the batteries of electric vehicles have the potential to leak or spill materials such as acid or water containing heavy metals, particularly if the batteries are over-charged or over-filled with electrolyte solution. Tenants are responsible for maintaining good housekeeping at charging stations, monitoring for spills and leaks, and responding to spills and leaks by applying neutralizing materials (e.g., sodium bicarbonate/baking soda), or use dry absorbent materials, absorbent socks, rags, and mops, and requests for service by the Authority's portable truck-mounted vacuum. The Authority also recommends that tenants utilize sealed or maintenance free batteries whenever economically feasible. Charging occurs daily in many tenant areas, but generally represents a low potential for significant pollutant discharge because of the small volume of most leaks and spills.

Aircraft, Vehicle, and Equipment Washing

Several tenants at SAN conduct aircraft, vehicle, and equipment washing, with many using dry methods for cleaning the aircraft and others using water. In all but one instance, as described below, all aircraft, vehicles, and equipment washing activity conducted at SAN must be authorized in writing by the Authority EAD. To obtain approval, the EAD requires the submittal of a wash plan that identifies the tenant contact details; location where washing is performed; location of storm drains; equipment to be used and where it will be stored; quantity of wastewater to be generated; frequency of washing activities; water collection/retrieval/reclamation processes; water disposal/elimination processes; chemicals to be used, if any, and the relevant MSDSs; washing methods employed; and BMPs used to control potential pollutants related to the activity. Where possible, tenants are encouraged to use reclaimed water from potable water flushing or air conditioning condensate as washwater. Upon satisfactory review of the wash plan, the Authority will provide written approval to conduct washing activities in the manner described in the plan. In general, the approved wash plans indicate that the washing is performed as far away from storm drains as possible and temporary berms are used to block off nearby storm drains to prevent runoff to the storm drain system. Wash water is then vacuumed up and properly disposed of either through the Authority's dewatering bin (where solids are removed) into the sanitary sewer connection at the main waste disposal site in Basin 8, or at the Authority wash rack, also in Basin 8 (see Figure F-1). Any equipment degreasing is conducted indoors and

washing activities are prohibited in areas that do not provide a wash rack, OWS, or area to deploy proper containment. The lone exception to obtaining this approval involves the use of properly designed wash rack connected to a dead end sump and/or the sanitary sewer. Two wash racks at SAN are leased to tenants. One is an open-air facility designed for vehicles and the other is an open-air facility designed specifically for washing aircraft. A third wash rack is operated by the Authority itself, and can be used for tenant and Authority vehicles and equipment washing. The two tenant wash racks collect the wash water runoff and then discharge it to the sanitary sewer system. The Authority wash rack uses a closed loop water recycle system. All three wash racks are used to wash equipment other than vehicles and aircraft. In light of 2015 drought conditions, tenants are required to use a hand-held hose with positive shut off nozzle to wash vehicles. Washing of vehicles, aircraft, and equipment outside of the Authority wash rack is restricted to the hours of 4pm to 10am from November 1 to May 31 and 6pm to 10am from June 1 to October 31.

Outdoor Washdown/Sweeping

General Outdoor Washdown/Sweeping: Atmospheric deposition, vehicle and aircraft use and emissions, breakdown of asphalt and concrete surfaces, and peeling or crumbling paint from structures and runway surfaces can all introduce particulates into the storm drain system at SAN. The physical removal of particulates and attached fine pollutant particles (in particular heavy metals) from outdoor surfaces at SAN will prevent or eliminate the pollutant load that may be transferred to San Diego Bay. The Authority requires the use of the Outdoor Washdown and Sweeping BMP (SC12) in Appendix B to address pollutants associated with washing and sweeping activities. Aircraft and vehicle washing is discussed separately above and power washing is considered separately below.

Ramp Sweeping: The Authority conducts a sweeping program designed to reduce pollutant discharges to its MS4s from ramp and airfield industrial areas. The ramp sweeping program conducted by the Authority is further described in Section 7.7.3.1. This program differs from the Authority's road and parking facility sweeping programs described in Section 6.3. All ramp areas are swept at least once per week, and sometimes twice per week upon request by tenants using two regenerative air sweepers. Potential pollutant sources that can be mitigated by sweeping practices in ramp areas are trash and debris (FOD), sediment, particulates, and other associated pollutants such as metals. Loading and unloading of trash, cargo, and catering supplies from aircraft can lead to trash and debris on the ramp areas. Any uncovered dumpsters or trash cans can be potential sources of trash and debris, as well as littering by staff, tenants, or the public. All Authority staff and tenants are very much aware of the potential hazards of FOD at the airport, and conduct daily FOD walks to check for any trash, so the source from tenants and staff should be very minimal. Every individual working on the ramp is trained to immediately remove FOD when it is observed and to place it in covered FOD bins located in each tenant gate area and throughout the airport. Some tenants also perform manual sweeping of their operational areas. The Outdoor Washdown and Sweeping (SC12) and Housekeeping (SC18) BMPs are required to be implemented during ramp sweeping activities.

Power washing: Both the Authority and the airport janitorial services provider conduct power washing, the Authority on an as-needed basis and the janitorial services provider on a routine basis. Portions of the sidewalk areas in front of the terminals and the pedestrian bridges leading from the parking lots to the terminals are power washed by the janitorial services provider almost daily using high-pressure water only. Wastewater from power washing may contain and transport contaminants on the ground surface to the storm drain system, if not properly contained and collected. The primary pollutants associated with power washing at the airport are particulates and associated pollutants, trash, and debris. Both the Authority and the janitorial services provider use power-washing equipment designed to minimize the amount of water used and to capture all the wastewater. Non-potable air conditioning condensate is used for power washing, and washing is generally conducted between the hours of 11pm and 4am. To address the potential release or transport of pollutants during power-washing activities, the Authority requires the use of several BMPs in Appendix B, including the Non-Storm Water Management BMP (SC01), the Employee Training BMP (SC10), the Outdoor Washdown/Sweeping BMP (SC12), and the Housekeeping BMP (SC18).

Ramp Scrubbing: In addition to ramp-sweeping activities discussed above, the Authority also performs ramp scrubbing and power washing activities. CASQA guidance states that, “no currently available conventional sweeper is effective at removing oil and grease.” As such, the Authority conducts an outdoor ramp-scrubbing program in the gate areas (and in the north ramp area when requested by Authority staff or tenants) designed to remove oil and grease, debris, and particulate matter (to which heavy metals may be adsorbed, or which may contain metals). The airport janitorial contractor uses either one of two 3,500 psi industrial pavement washers, or a pressure washing truck for ramp scrubbing. Both pieces of equipment are equipped with vacuum collection systems. The pressure washing truck also contains a reclamation system, for direct reuse of washwater. Oil and grease, fuels, hydraulic fluids, and other substances may leak onto the ramp from parked aircraft, vehicles, and equipment. An effective outdoor ramp-scrubbing program, in conjunction with the ramp sweeping program discussed above, can help to reduce the levels of these pollutants in storm water runoff from the airport. Following washing activities, the wash water is either directly reused or vacuumed and collected by the Authority’s environmental contractor, who filters and reuses the water.

Runway Rubber Removal

On the runway, materials such as tire rubber, oil and grease, paint chips, jet fuel, and vehicle exhaust products can build up on a runway surface over time, causing a reduction in the pavement’s surface friction. When the friction value falls below a specific level, safety may be compromised and maintenance must be performed. The buildup is generally removed using high-pressure water or specialized biodegradable detergents within a containment/recovery system. The detergent solution is not stored onsite. Only the amount needed is brought onsite during each rubber removal. To address the potential release or transport of pollutants during runway rubber removal activities, the Authority requires the use of the Runway Rubber Removal BMP (SC15) in Appendix B.

Pesticide/Herbicide Use

Currently, only one industrial tenant and the Authority use pesticides and/or herbicides. The company managing the FSF uses herbicides to control weeds. They store small quantities in small containers within secondary containment outdoors at the FSF. The Authority also stores a small amount in flammable material storage lockers at the runway generator area. The Authority’s landscape contractor also utilizes pesticides for weed control. These pesticides are not stored on site. The use of pesticides and herbicides at the airport does not result in significant discharges to the ground. During rainfall events, pesticide and herbicide residuals that accumulate at the application sites can be washed into the storm drain system. However, based on the small quantities used at the airport, and the application of an integrated pest management system at SAN, this activity appears to present a low potential for impacting storm water discharge.

Shipping/Receiving Areas

The main shipping/receiving area is in Drainage Basin 6. Additional secondary shipping and receiving areas are in Drainage Basins 7, 8, and 12, as described in Section 1.4 and depicted in Figure 3 and Appendix B, Figure SC-06. The front of the main shipping and receiving area, the Central Receiving and Distribution Center (CRDC), is located in the northern portion of Drainage Basin 6 off of Pacific Coast Highway, where cargo and supplies are loaded and unloaded for the Authority and the various airlines and cargo carriers. The airport food service providers use loading/unloading areas at Terminal 1, Terminal 2 West and at the connection between the eastern and western halves of Terminal 2, where food, drink, and other catering supplies for the airport restaurants are delivered by truck. Equipment used for loading and unloading at the docks typically includes forklifts. Loading and unloading of aircraft occurs in Basins 1, 3, 6, 8, 12, and 15 using hydraulic lifting equipment. To address the potential release or transport of pollutants during loading and unloading activities, the Authority requires the use of the Outdoor Loading/Unloading of Materials BMP (SC06) in Appendix B. The main loading and unloading areas are shown in the figure attached to the Material Loading/Unloading BMP description in Appendix B. Shipping and Receiving areas for each industrial tenant are listed in Appendix E.

MATERIAL HANDLING AND STORAGE AREAS AS POTENTIAL POLLUTANT SOURCES**Fuel, GSE, and Chemical Storage Areas**

Tenants at SAN store varying quantities of chemicals and petroleum products (i.e., hydraulic fluids, gasoline, diesel, and jet fuels). Many tenants have indoor and outdoor storage areas to house these items. Chemicals, oils, and waste oils are typically stored in 55-gallon drums or smaller containers. Fuels are typically stored in underground or aboveground storage tanks, but some tenants who store only small quantities have 5-gallon fuel containers. Deicing fluids are stored in 55-gallon metal or plastic drums. Other materials such as cleaners, paints, and paint-related products are stored in smaller containers. Secondary containment may be required by law for certain hazardous materials, and the Authority requires the use of secondary containment in all chemical storage areas. Outdoor storage areas, if not adequately protected from contact with storm water, have the greatest potential to impact storm water. In these areas, the Authority requires implementation of the Outdoor Material Storage BMP (SC07), including the proper use of secondary containment and cover, whenever possible.

Fueling Facilities: The FSF and RFF contain several aboveground and underground storage tanks, as outlined in the description of Basin 6 in Section 1.4. Jet fuel is delivered to the two 1,000,000-gallon ASTs within a valved secondary containment area at the FSF via underground pipelines from the 10th Avenue Marine Terminal storage tanks. The facility can also receive jet fuel from commercial transport trucks at approximately 8,200 gallons per load. The fuel is off-loaded at the three dual-position unloading islands. The jet fuel tanks at the FSF and RFF are connected via an underground hydrant fueling system. Fueling is generally performed at SAN from fuel transfer trucks that load at the RFF. Loading of gasoline and diesel into cars and trucks takes place at various locations around the airport. The aircraft refueling trucks at the FBO are stored outdoors on the concrete ramp area at the FBO and are used to fuel general aviation aircraft and ground support equipment at the FBO. The emergency power generators at the airport are operated by the Authority and feature ASTs with fuel storage capacities ranging from 25 to 1,000 gallons. Currently at the airport, other UST fuel storage capacities range from 3,000 to 15,000 gallons, aircraft refueling trucks range in storage capacity from 1,200 to 15,000 gallons, and vehicle refueling trucks range in storage capacity from 300 to 2,200 gallons. ASTs and USTs are fitted with a combination of overfill protection, leak detection, and alarm systems to prevent spills, leaks, and discharges. All fuel delivery trucks or fueling areas must be equipped with spill kits. The loading/unloading areas are inspected on a regular basis to identify any leaks from fuel transfers. At the FSF, leaks from fuel transfers are directed to bermed, sloped, spill containment areas that are linked to the 12,000-gallon OWS. At the RFF, the four loading islands are sloped and bermed to direct any discharges to a 12,000-gallon underground wastewater holding tank. Fuel spills that occur in any other area of the airport must be cleaned immediately using dry methods to reduce the potential to impact storm water. The Authority procedures for spill reporting and response are outlined in Sections 3.5.3.2 and 3.5.3.3. Tenants may also have their own environmental response contractors for spill response. BMP SC03 covers Aircraft, Ground Vehicle, And Equipment Fueling and the attached figure in Appendix B outlines fueling areas.

Ground Support Equipment (GSE): Areas designated for the storage and maintenance of GSE are primarily located in Basin 7; however, parking of GSE occur throughout the other ramp areas. During rain events, any residues (fuel, oil, or grease) on the GSE under repair or leaks from the GSE are potential pollutant sources in storm water discharges and must be controlled by proper BMP implementation. The Authority requires frequent inspections and preventive maintenance of GSE to prevent leaks, the implementation of containment measures if leaks do occur, and the proper, timely disposal of obsolete equipment, among other BMPS, as described in the Aircraft, Ground Vehicle, and Equipment Maintenance BMP (SC02B) as well as the Electric Vehicle Maintenance BMP (SC02C).

Chemical/Materials Storage: Chemicals and other materials are stored in the GSE maintenance areas, around the gate areas, in the North Side “boneyard” area, at the FBO, at the FSF, in the cargo areas north of the north ramp, and near the runway generator area. The materials stored include hydraulic fluids, lubricants, oils and greases, antifreeze, paints, rust preventers, solvents, batteries, metals, lavatory chemicals, cleaning

solutions, deicing chemicals, pesticides, and herbicides. During rain events, any residues on chemical storage containers, or residuals from chemical spills or leaks in uncovered outdoor storage areas, are potential pollutant sources in storm water discharges. Facilities that include outdoor chemical and materials storage must have secondary containment and overhead coverage. Generally, only small quantities of these industrial materials are stored at SAN. They are generally contained within flammable materials storage lockers or outdoor sheds, or on spill pallets with tarps or other coverage. The lockers are completely enclosed, provide containment for small spills, and do not appear to be a source of significant quantities of pollutants to the storm drain system. Large volumes of materials in 55-gallon drums tend to be stored indoors and associated with various tenant maintenance areas. Material storage areas for each industrial tenant are listed in Appendix E.

Appendix B, Figure SC-07 outline the main chemical and materials storage locations and the types of chemicals and materials stored. The figure attached to the Outdoor Loading/Unloading of Materials BMP (SC06) in Appendix B outlines areas where materials are shipped and received or loaded and unloaded. SC06 and SC07 detail the BMPs required by the Authority for these activities.

Waste Treatment, Storage, and Disposal

Lavatory Waste: Lavatory waste is pumped daily from aircraft on the ramp or apron areas and transported to a specially designed waste disposal facility, an enclosed facility referred to as the triturator. The triturator is located near the old Commuter Terminal. To prevent sewage spills during the transfer of lavatory waste through the triturator into the sanitary sewer, the transfer is performed in a drive-up facility that has overhead cover. During aircraft lavatory servicing operations, chemical odorizers and/or sanitizers may be used. Airline tenants generally store this chemical indoors at the gate areas, or occasionally outdoors on spill pallets under overhangs or tarps. BMP SC11 in Appendix B covers Lavatory Service Operation and the associated BMPs required.

Hazardous Waste Storage: Hazardous waste, mostly waste oils, oil filters, and used absorbent materials in 55-gallon drums, is stored at:

- The Authority's boneyard area in Basin 6
- The FSF in Basin 6
- The gate areas in Basins 8, 12, and 15, the GSE maintenance areas in Basin 7, the FBO in Basins 1 and 3, and the north ramp in Basins 5 and 6.

The only locations at the airport at which more than 6000 kilograms (13,200 pounds) of hazardous waste might be stored at any time are the USTs for waste fuels at both the FSF and the RFF. Currently, no facility at the airport generates more than 1000 kilograms (2200 pounds) of hazardous waste in any one month. To address the potential release or transport of pollutants during hazardous waste storage and handling activities, the Authority requires the use of both the Outdoor Material Storage BMP (SC07) and the Waste Handling and Disposal BMP (SC08) in Appendix B. The areas at which hazardous waste storage occurs at the airport are also shown in the figure attached to these two BMP descriptions in Appendix B.

Waste Disposal: The main waste disposal area at SAN is the trash compactor/recycling bin/dewatering bin area, as outlined in the description for Basin 8 in Section 1.4. The trash compactors and de-watering bin are located within a bermed area. Drainage in the bermed area is directed towards a sump that also pumps the water and liquids into the dewatering bin before being discharged to the sanitary sewer. Additional disposal areas are the Terminal 2 trash compactor in Basin 12 and the sweeping disposal lowboy in Basin 6, as depicted in Appendix B, Figure SC-08. There are also dumpsters and recycling bins at various locations throughout the airport. To address the potential release or transport of pollutants during waste disposal activities, the Authority requires the use of the Waste Handling and Disposal BMP (SC08). The areas at

which waste disposal occurs at the airport are also shown in the figure attached to the Waste Disposal and Handling BMP description in Appendix B.

DUST AND PARTICULATE GENERATING ACTIVITIES AS POTENTIAL POLLUTANT SOURCES

Construction/demolition, aircraft and vehicle use and emissions, and airport operations can generate dust and particulates at SAN. In addition, airline off-loading of trash and debris from aircraft generates a significant source of gross pollutants, requiring proper handling and disposal. The main industrial areas generating dust and particulates are the runway/taxiway area, the terminal gate areas, the FBO, and the gate areas for cargo operators on the north ramp. The pollutants and particulates generated can include trash and debris, metals, and hydrocarbons. To address the generation of dust and particulates, the Authority requires the use of the Erodible Areas BMP (SC20) and the Building Repair and Construction BMP (SC21), as described in Appendix B.

SIGNIFICANT SPILLS AND LEAKS AS POTENTIAL POLLUTANT SOURCES

Fueling and equipment maintenance activities generally involve the use or handling of jet fuel, aviation gas, hydraulic oils, oil, deicing fluids, degreasers, and other solvents. Considering that approximately 400,000 gallons of jet fuel are handled and transferred from truck to aircraft every day at the airport, it is highly likely that the history of significant spills (as defined by the Industrial Permit) would involve the handling of jet fuel. The refueler trucks operate nearly all around the airport, from the ramp areas of the terminals and at the FBO, to the air cargo/air freight operations area, and overnight aircraft parking areas. Areas where the largest spills have occurred are the Terminal gate areas, the Fuel Storage Facility, the RON aircraft parking area, and the north cargo ramp area. In the last five years, all of these spills have involved less than 350 gallons; all were contained within SAN; all were immediately cleaned up; and none of these spills reached San Diego Bay. Spill procedures are described in Section 3.5 and the BMP required by the Authority to address spills is the Spill Prevention, Control, and Clean-up BMP (SR01) in Appendix B.

POTENTIAL NON-STORM WATER DISCHARGES AS POLLUTANT SOURCES

Potential unauthorized non-storm water discharges could include aircraft, vehicle, and equipment washing; power washing, ramp scrubbing, and runway rubber removal; non-emergency firefighting activities; improper materials and waste handling, storage, and disposal; and spills and leaks. However, as discussed in Section 7.7.4, BMPs are in place to avoid potential discharges from these sources. Authorized non-storm water discharges and non-emergency firefighting flows are described in Section 3.0, including the BMPs to control these discharges. The Authority's illicit discharge detection and elimination program is also discussed in Section 3.5. With nearly every drainage basin susceptible to tidal intrusion, the drainage areas where most of the potential authorized non-storm water discharges occur are Basins 1, 3, 8, 12, and 15 for potable water flushing; Basins 1, 5, 6, 7, 8, 9, 10, 11, 12, 14, and 15 for air conditioning condensation; Basins 1, 3, 4, 5, 8, 9, 10, 11 and 14 for landscape watering; and Basin 6 for non-emergency firefighting activities (see Appendix B, Figure SC-13).

ERODIBLE SURFACES AS POTENTIAL POLLUTANT SOURCES

SAN is approximately 90 percent impervious and is either covered by structures or is made up of concrete/asphalt surfaces. Unpaved areas are the least tern nesting ovals in the southwestern corner of SAN (south of the runway), landscaped areas, and any active construction projects that may involve the removal of the impervious surface. The least tern nesting oval surfaces are generally very coarse gravel with little exposed soil. Landscaped areas are well maintained, and environmentally friendly landscaping, including a variety of indigenous and drought-tolerant plants, shrubs, and ground cover, are used where possible to prevent soil erosion. Where erosion does occur, sand bags or other storm drain inlet protection methods are employed and maintenance is performed to repair or revegetate the eroded areas. Active construction projects contain specific contract requirements for erosion and sediment control, as well as being required to

have a SWPPP or WPCP, per Section 5.0. Erodible surfaces are managed using the BMPs outlined in the Erodible Areas BMP (SC20) in Appendix B.

7.7.3.2 Summary of Industrial Sites and Sources

The industrial activities and pollutant sources occurring at SAN described above are summarized in Table 7-5. For each drainage basin at the airport (initially described in Section 1.4 and depicted in Figure 3), Table 7-5 presents the drainage basin number; the storm water runoff sampling location identification number for any sampling locations within the basin; the name of the industrial entity located or operating in that particular basin; the types of industrial activities occurring in the basin; and the potential pollutants associated with those activities. Similar and additional information is provided by individual industrial/commercial entity and the Authority on the Tenant Summary Sheets in Appendix E.

The potential pollutants listed in Table 7-5 are either stored or handled in the particular drainage basin identified. The main shipping and receiving area for most materials at the airport, including restaurant and catering food service supplies, occurs at the CRDC located in the northern part of Drainage Basin 6. A secondary cargo area is located in Drainage Basins 7 and 8 at the airline maintenance buildings; the fronts of the maintenance buildings are located in the southeastern portion of Drainage Basin 8, and the backs in the western portion of Drainage Basin 7. All shipping and receiving areas, including aircraft loading/unloading areas, are shown on the figure attached to the Outdoor Loading/Unloading of Materials BMP (SC06) in Appendix B. Pollutant sources stored, handled, shipped, or received by each individual industrial entity are itemized in the Tenant Summary Sheets in Appendix E. The Tenant Summary Sheets also include maps that depict the locations or operating areas for each entity. The locations for storage of particular types of materials and waste are indicated on Figure 3 and the figures attached to the Outdoor Material Storage BMP (SC07) and the Waste Handling and Disposal BMP (SC08) in Appendix B. The BMP descriptions in Appendix B also include maps of where particular activities occur at SAN, as well as a list of the pollutants associated with those activities, and therefore the areas where the BMPs should be implemented.

Table 7-5. Industrial Inventory by Drainage Basin

Drainage Basin/ Sampling Location ID	Facilities Located or Operating in Drainage Basin	Industrial Activities Conducted, Source Areas, or Potential Sources Within the Drainage Basin	Potential Industrial Pollutants
1 (C-B01-11)	Landmark Authority	Pesticide/herbicide usage Power washing Ramp/taxiway scrubbing Runway rubber removal	Antifreeze Asphalt debris Battery acid Brake fluid Cleaning solutions Fuel Hydraulic fluid Lubricants Metals Oil and grease Paints Rubber particulates Sediment Solvents Trash
2	No Industrial Tenants	None	None

INDUSTRIAL COMPONENT

Table 7-5. Industrial Inventory by Drainage Basin (continued)

Drainage Basin/ Sampling Location ID	Facilities Located or Operating in Drainage Basin	Industrial Activities Conducted, Source Areas, or Potential Sources Within the Drainage Basin	Potential Industrial Pollutants
<p>3 (C-B03-1c, C-B03-2, C-B03-12)</p>	<p>DHL IAS Landmark</p>	<p>Aircraft fueling Aircraft maintenance Aircraft sanitary services Bldg/grounds maintenance Cargo handling Chemical storage Equipment degreasing Equipment fueling Equipment maintenance Equipment storage Fluid leaks from aircraft Fuel spills Fuel storage Outdoor loading/unloading Outdoor waste storage Pesticide/herbicide usage Potable water flushing Ramp/taxiway scrubbing Runway rubber removal Vehicle fueling Vehicle maintenance</p>	<p>Antifreeze Asphalt debris Battery acid Brake fluid Cleaning solutions Dumpster wastes Fuel Hydraulic fluid Lavatory chemicals Lavatory wastes Lubricants Metals Oil and grease Paints Rubber particulates Solvents Trash</p>
<p>4 (No safe sampling location identified. See Appendix D-1 MIP for details.)</p>	<p>Authority</p>	<p>Ramp/taxiway scrubbing Runway rubber removal Power washing</p>	<p>Antifreeze Asphalt debris Battery acid Brake fluid Cleaning solutions Fuel Hydraulic fluid Lubricants Metals Oil and grease Paints Rubber particulates Sediment Solvents Trash</p>

Table 7-5. Industrial Inventory by Drainage Basin (continued)

Drainage Basin/ Sampling Location ID	Facilities Located or Operating in Drainage Basin	Industrial Activities Conducted, Source Areas, or Potential Sources Within the Drainage Basin	Potential Industrial Pollutants
5 (C-B05-4, C-B05-13)	DHL FedEx IAS Authority UPS	Aircraft fueling Aircraft maintenance Cargo handling Chemical storage Equipment degreasing Equipment fueling Equipment maintenance Equipment storage Fluid leaks from aircraft Fuel spills Fuel storage Metals storage Outdoor apron wash Outdoor waste storage Vehicle fueling Vehicle maintenance	Antifreeze Asphalt debris Battery acid Brake fluid Cleaning solutions Dumpster wastes Fuel Hydraulic fluids Lavatory chemicals Lavatory wastes Lubricants Metals Oil and grease Paints Pesticides/herbicides/ fertilizers Rubber particulates Sediment Solvents Trash
6 (C-B06-5a, C-B06-14, C-B06-15, C-B06-16, C-B06-17)	Allied Aviation American ARFF Bradford DHL ELS Envoy FedEx IAS Authority SeaPort United UPS US Airways	Aircraft fueling Aircraft maintenance Aircraft sanitary services Bldg/grounds maintenance Cargo handling Chemical storage Equipment fueling Equipment maintenance Equipment painting Equipment storage Firefighting equipment testing Fluid leaks from aircraft Fuel spills Fuel storage Loading/unloading of gasoline, diesel and jet fuel Metals storage Offloading of water/ fuel mixture from a 3,000-gallon UST Outdoor apron wash Outdoor steam cleaning Outdoor waste storage Pesticide/herbicide usage Potable water flushing Ramp/taxiway scrubbing Runway rubber removal Vehicle fueling Vehicle maintenance	Acetone Adhesives Antifreeze Battery acid Brake fluid Carburetor cleaner Cleaning solutions Deicing/anti-icing fluids Dumpster wastes AFFF Fuel Hydraulic fluids Lavatory chemicals Lavatory wastes Lubricants Metals Oil and grease Paints Pesticides/herbicides Propylene glycol Purple K Radioactive goods Recyclable paper/cardboard Rubber particulates Sealants Sediment Solvents Sump fuel Trash Transmission fluid

INDUSTRIAL COMPONENT

Table 7-5. Industrial Inventory by Drainage Basin (continued)

Drainage Basin/ Sampling Location ID	Facilities Located or Operating in Drainage Basin	Industrial Activities Conducted, Source Areas, or Potential Sources Within the Drainage Basin	Potential Industrial Pollutants
7 (C-B07-6, C-B07-7a)	Alaska Allied Aviation American ASIG Delta FlagShip Jet Blue Authority Southwest United	Aircraft maintenance Aircraft washing Bldg/grounds maintenance Cargo handling Chemical storage Equipment degreasing Equipment fueling Equipment maintenance Equipment storage Equipment washing Fuel spills Fuel storage Loading/unloading of gasoline, diesel, and jet fuel Metals storage Oils storage Outdoor steam cleaning Outdoor waste storage Power washing Vehicle fueling Vehicle maintenance Vehicle washing	Acetic acid Acetone Adhesives Antifreeze Battery acid Brake fluid Coolant Cleaning solutions Diesel Dumpster wastes Gasoline Hydraulic fluids Jet fuel Landscape wastes Lubricants Metals Oil and grease Paints Propylene glycol Rust preventer Sealants Solvents Sump fuel Trash
8 (C-B08-8, C-B08-19*) *Alternate sampling location. Will be used to represent runway runoff if C-B03-1c is inaccessible due to safety reasons.	Alaska British Airways Delta Flagship Frontier JAL Jet Blue Authority Southwest Spirit United Volaris	Aircraft deicing Aircraft fueling Aircraft maintenance Aircraft sanitary services Aircraft washing Bldg/grounds maintenance Cargo handling Chemical storage Equipment fueling Equipment maintenance Equipment storage Equipment washing Fluid leaks from aircraft Fuel spills Fuel storage Metals storage Oils storage Outdoor apron wash Outdoor loading/unloading Outdoor waste storage Power washing Pesticide/herbicide usage Potable water flushing Ramp/taxiway scrubbing Runway rubber removal Vehicle fueling Vehicle maintenance	Acetone Antifreeze Battery acid Brake fluid Caulking Cleaning solutions Coolant Degreasers Dumpster wastes Fuel Galvanizing compound Hydraulic fluids Landscape wastes Lavatory chemicals Lavatory wastes Lubricants Metals Oil and grease Paints Pesticides/herbicides/fertilizers Propylene glycol Rubber particulates Sealant Solvents Trash Transmission fluid Turpentine
9	No Industrial Tenants	None	None

Table 7-5. Industrial Inventory by Drainage Basin (continued)

Drainage Basin/ Sampling Location ID	Facilities Located or Operating in Drainage Basin	Industrial Activities Conducted, Source Areas, or Potential Sources Within the Drainage Basin	Potential Industrial Pollutants
10	No Industrial Tenants	None	None
11	No Industrial Tenants	None	None
12 (C-B12-9a)	Air Canada Allegiant American British Airways Delta ELS Flagship JAL Jet Blue Authority Spirit United US Airways Virgin America Volaris West Jet	Aircraft fueling Aircraft maintenance Aircraft sanitary services Aircraft washing Bldg/grounds maintenance Cargo handling Chemical storage Equipment fueling Equipment maintenance Equipment storage Fluid leaks from aircraft Fuel spills Fuel storage Metals storage Oils storage Outdoor apron wash Outdoor loading/unloading Outdoor waste storage Pesticide/herbicide usage Potable water flushing Power washing Ramp/taxiway scrubbing Vehicle fueling Vehicle maintenance	Acetone Antifreeze Battery acid Brake fluid Caulking Cleaning solutions Coolant Degreasers Dumpster wastes Fuel Galvanizing compound Hydraulic fluids Landscape wastes Lavatory chemicals Lavatory wastes Lubricants Metals Oil and grease Paints Pesticides/herbicides Rubber particulates Sealant Solvents Trash Transmission fluid Turpentine
13	No Industrial Tenants	None	None
14	No Industrial Tenants	None	None

INDUSTRIAL COMPONENT

Table 7-5. Industrial Inventory by Drainage Basin (continued)

Drainage Basin/ Sampling Location ID	Facilities Located or Operating in Drainage Basin	Industrial Activities Conducted, Source Areas, or Potential Sources Within the Drainage Basin	Potential Industrial Pollutants
15 (C-B15-18)	Delta Flagship Hawaiian Authority Siemens United	Aircraft fueling Aircraft maintenance Aircraft overnight parking Aircraft sanitary services Aircraft washing Bldg/grounds maintenance Cargo handling Chemical storage Equipment fueling Equipment maintenance Equipment storage Fluid leaks from aircraft Fuel spills Fuel storage Metals storage Oils storage Outdoor apron wash Outdoor loading/unloading Outdoor waste storage Pesticide/herbicide usage Potable water flushing Power washing Ramp/taxiway scrubbing Vehicle fueling Vehicle maintenance	Acetone Antifreeze Battery acid Brake fluid Caulking Cleaning solutions Coolant Degreasers Dumpster wastes Fuel Galvanizing compound Hydraulic fluids Landscape wastes Lavatory chemicals Lavatory wastes Lubricants Metals Oil and grease Paints Pesticides/herbicides Rubber particulates Sealant Solvents Trash Transmission fluid Turpentine

7.7.4 BEST MANAGEMENT PRACTICE REQUIREMENTS

A BMP is broadly defined as any program, technology, process, siting criteria, operating method, measure, or device that controls, removes, or reduces pollution in storm water and authorized non-storm water discharges. The Authority has identified BMPs that are required to control industrial/commercial pollutant sources at SAN, in accordance with Provision E.5.b of the Municipal Permit and Section X.H of the Industrial Permit. The required BMPs were first presented in the SWMP prepared under the 2001 Municipal Permit (Regional Water Board Order No. 2001-01).

Both the Industrial Permit and the Municipal Permit require the Authority to implement BMPs to address potential pollutant discharges; however, the performance standard established by each permit is different. The Industrial Permit requires that the implementation of BMPs achieve BAT for toxic and nonconventional pollutants and BCT for conventional pollutants. The Municipal Permit requires that the implementation of BMPs achieve MEP. These standards were taken into account when developing the BMP requirements at SAN.

BMPs are commonly defined two ways: nonstructural or structural, and source control or treatment control. Nonstructural BMPs generally consist of processes, prohibitions, procedures, schedules of activities, etc., that prevent pollutants associated with industrial activities from entering storm water or authorized non-storm water discharges. They are generally low cost and low technology in nature. Structural BMPs either prevent the pollutants from coming into contact with storm water or treat/remove the pollutants in storm water. On the other hand, source control BMPs prevent contact between storm water and the pollution source and can be structural or nonstructural. Treatment control BMPs treat the storm water to remove pollutant(s) and are structural by their basic nature. Treatment control BMPs are not 100 percent effective, even if maintained and operated properly. From a cost and aesthetic perspective, treatment control BMPs that use natural processes are usually preferred over other fabricated or manufactured designs when conditions allow. Source control BMPs are preferred over treatment control BMPs because they are generally 100 percent effective if implemented properly and are usually less costly than treatment control BMPs.

LID BMPs can include source control or treatment control BMPs and are defined in the Municipal Permit as, “schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of water of the United States through storm water management and land development strategies that emphasize conservation and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely reflect pre-development hydrologic functions. LID BMPs include retention practices that do not allow runoff, such as infiltration, rain water harvesting and reuse, and evapotranspiration. LID BMPs also include flow-through practices such as biofiltration that may have some discharge of storm water following pollutant reduction.” These types of BMPs are also referred to as Green Infrastructure. The types and designs of LID BMPs that can be implemented at SAN are discussed in detail in Appendix C.

The BMPs required by the Authority may consist of a single measure or activity, a set of BMPs, or a pollution prevention program. This section discusses BMPs that pertain to specific industrial activities and areas, as well as the minimum BMPs required airport-wide under the Industrial Permit. Also discussed are four specific pollution prevention programs implemented at SAN. One of these is the regularly scheduled power washing conducted by the airport janitorial services provider. The other three pollution prevention programs are conducted by the Authority and entail ramp sweeping, ramp scrubbing, and runway rubber removal. LID and structural treatment control BMPs implemented at SAN are discussed in Section 6.2 and in the Treatment Controls BMP (TC-01) in Appendix B and in Appendix C. They are also discussed below as advanced BMPs under the Industrial Permit.

Additional operational BMPs are discussed in other sections of this document, such as the Non-Storm Water Discharges section (Section 3) and the Public Participation and Education Component section (Section 9).

7.7.4.1 Updated BMP Requirements

The BMPs required by the Authority to address industrial pollutant sources at SAN were first summarized into 19 BMP titles in Appendix B of the August 2003 version of the SWMP and last presented in the same appendix of the March 2008 version of the SWMP. These 19 BMP titles are updated and revised as described below, to arrive at the current total of 25 required BMP titles. The updates and revisions are based on information gathered during recent site visits and annual inspections, the 2005, 2007, 2011, 2012, and 2014 Site Audits (Amec Foster Wheeler, 2005, 2007, 2009, 2011, 2013, 2015), the 2006 BMP Recommendations Report (Amec Foster Wheeler, 2006), as well as other information regarding current industry and technical standards. The updates and revisions include enhancements to existing BMPs currently being implemented at SAN and the addition of new BMPs where necessary.

One significant change has been the categorization of the BMPs according to the minimum BMPs required by Section X.H of the Industrial Permit. The required minimum BMPs include:

- Good housekeeping
- Preventive maintenance
- Spill and leak prevention and response
- Material handling and waste management
- Erosion and sediment controls
- Employee training programs
- Quality assurance and recordkeeping

A summary of updates to each BMP is as follows:

- SC01 – Non-Storm Water Management; BMP description enhanced to include 5 new elements
- SC02A – Outdoor Equipment Operations and Maintenance Areas; no changes.
- SC02B – Aircraft, Ground Vehicle, and Equipment Preventive Maintenance; no changes
- SC02C – Electric Vehicle Maintenance; added.
- SC03 – Aircraft, Ground Vehicle, and Equipment Fueling; no changes
- SC04 – Aircraft, Ground Vehicle, and Equipment Cleaning; BMP description enhanced to include 3 new elements
- SC05 – Aircraft Deicing/Anti-Icing; name changed

- SC06 – Outdoor Loading/Unloading of Materials; no changes
- SC07 – Outdoor Material Storage; no changes
- SC08 – Waste Handling and Disposal; name changed, 2 BMP descriptions modified, and BMP description enhanced to include 1 new element
- SC09 – Building and Grounds Maintenance; BMP description enhanced to include 7 new elements
- SC10 – Employee Training; no changes
- SC11 – Lavatory Service Operations; BMP description enhanced to include 1 modified element and 3 news elements
- SC12 – Outdoor Washdown/Sweeping (Apron Washing, Ramp Scrubbing); BMP description enhanced to include 2 new elements
- SC13 – Firefighting Foam Discharge; no changes
- SC14 – Potable Water System Flushing; no changes
- SC15 – Runway Rubber Removal; BMP description enhanced to include 1 new element
- SC16 – Parking Lots; BMP description enhanced to include 6 new elements
- SC17 – Storm Drain Maintenance; no changes
- SC18 – Good Housekeeping; no changes
- SC19 – Safer/Alternative Products; no changes
- SC20 – Erodible Areas; added
- SC21 – Construction and Remodeling/Repair; added
- SR01 – Spill Prevention, Control, and Clean-up; name changed and BMP description enhanced to include four new elements
- TC01 – Treatment Controls; name changed and BMP description enhanced to include one new element

All Authority staff and tenant personnel are required to implement the minimum BMPs as applicable and appropriate. Table 7-6 presents an assessment of the sources of pollutants that are likely to be found in storm water discharges at SAN and identifies the BMPs, in terms of individual BMP element, required to address those sources. Table 7-6 associates the pollutant sources with issues/areas identified by the BMP titles listed above. A list and description of all 25 BMP categories required by the Authority are in Appendix B. Appendix B also lists the pollutants reduced, the targeted pollutant-generating activities, and the applicable tenants responsible for each BMP, and materials or equipment needed for implementation of the BMP, and frequency of BMP implementation if applicable. The majority of BMPs are implemented during the course of daily operations (e.g., housekeeping and spill response). Each BMP has an associated map illustrating the areas of SAN where the BMP applies.

The particular BMPs, listed by individual element applicable to each tenant and to the Authority, are presented in Table 7-7, which also indicates whether the activity is being performed indoors or outdoors. The particular BMPs listed by individual element are presented in the Tenant Summary Sheets in Appendix E.

Table 7-8 summarizes the BMPs required at SAN in terms of the minimum BMP categories that they satisfy. Some SAN BMPs satisfy multiple requirements under the Industrial Permit.

Table 7-6. Potential Pollutant Sources at SAN

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Non-Storm Water Management throughout SAN	Prevention of non-storm water discharges	Misinformation (improper/lack of signs)	Metals, particulates, sediment, solid waste	SC01-01 Notify Airport Operations (619-400-2710) and the Airport Authority Environmental Affairs Department (619-400-2784) if there is any evidence of illicit connections or illegal discharges.
		Litter improperly disposed of, including bottles and cans, paper and plastic bags, fast-food wrappers, cigarette butts, etc.	Solid waste	SC01-02 Employees, tenants, and the public have been educated about non-storm water discharges, i.e., spill response and prevention, non-storm water pollution prevention, and hazardous materials management.
		Improper hosing, power washing or washing down of vehicles or equipment	Fuel oil, particulates/sediment	SC01-03 Outdoor water supplies (hose bibs) are limited and posted with appropriate use signs to discourage uses that may pollute the storm drain system/receiving water. SC01-04 The site is free of evidence of illicit connections and illegal discharges.
		Spills or leaks	Fuel, oils, sewage, trash	SC01-05 Irrigation does not occur during a scheduled rain event and 48 hours following a rain event. SC01-06 Irrigation systems and landscaped areas are periodically inspected to minimize excess watering and repair any leaks.
		Over irrigation	Pesticides	SC01-07 Air conditioning or refrigerator condensation is directed to landscaping, porous surface, or into the sanitary sewer.
		Air conditioning condensate	Particulate, metals, oil and grease, bacteria	SC01-08 Landscaped areas are irrigated using a satellite water-tracking system to reach proper levels of soil moisture applicable for landscaping, and following City of San Diego water restriction guidelines.
Outdoor Equipment Operations and Maintenance Areas	Equipment operations and maintenance	Vehicle and aircraft use and emissions	Metals, fuels, lubricants, antifreeze	SC02A-01 Equipment operations and maintenance areas are not located directly in the path of storm drains.
		Industrial and commercial spills and releases	Metals, oils and greases, fuels, battery acids, antifreeze	SC02A-02 There is a designated equipment operations and maintenance area with overhead cover for pollutant sources and/or activity areas.
		Dirt or fluids from equipment and vehicles	Particulates/sediment, oils, lubricants, antifreeze, fuel, battery acid	
		Maintenance activities	Oil and grease, lubricants, hydraulic fluids, antifreeze	

Table 7-6. Potential Pollutant Sources at SAN (continued)

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Aircraft, Ground Vehicle, and Equipment Maintenance	Aircraft, ground vehicle, and equipment operations and maintenance	Industrial and commercial spills and releases	Metals, oils and greases, fuels, battery acids, antifreeze	SC02B-01 Employees are trained in safe vehicle and equipment operations. SC02B-02 Aircraft, vehicle, and equipment maintenance areas are not located directly in the path of storm drains.
		Dirt or fluids from aircraft, equipment, and vehicles	Particulates/sediment, oils, lubricants, antifreeze, fuel, battery acid	SC02B-03 There is a designated vehicle and equipment maintenance area that is either indoors or covered, bermed, enclosed, or sloped/positioned away from the MS4. SC02B-04 Equipment is regularly inspected and tested.
		Maintenance activities	Oil and grease, lubricants, hydraulic fluids, antifreeze	SC02B-05 Visual observations are performed to detect fluids leaking from aircraft, vehicles and equipment; place drip pans under leaks as needed. SC02B-06 Aircraft, vehicles, and equipment are maintained in good condition to prevent or correct any leakage of oil or other fluids. SC02B-07 Drip pans are used during maintenance. SC02B-08 Drip pans containing fluids or other open containers are not left lying around; regularly transfer fluids for recycling or proper disposal. SC02B-09 Minimize the use of solvents or use less toxic solvents whenever possible; if solvents cannot be avoided, clean or drain parts in self-contained sinks or drum units, and check those units regularly for leaks. SC02B-10 Mechanical parts, equipment, and vehicles awaiting repair are stored under cover and away from storm drains. SC02B-11 Maintenance vehicles and maintenance areas are furnished with spill response materials. Adequately collect/remove absorbent materials from area after use and dispose of them in an appropriate manner. SC02B-12 Fluids and batteries are removed from salvage vehicles and equipment and disposed of properly. SC02B-13 Obsolete and inoperable vehicles and equipment are disposed of properly.

Table 7-6. Potential Pollutant Sources at SAN (continued)

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Electric Vehicle Maintenance and Charging Areas	Electric vehicle charging, vehicle parking, and battery maintenance	Electrolyte spills and improper storage of batteries	Acid, heavy metals	SC02C-01 Electric vehicle batteries are not overcharged. SC02C-02 Electric vehicles are parked in cool and dry areas when not in use, when possible.
		Overcharged vehicles	Acid, heavy metals	SC02C-03 Acid resistant drip pans sprinkled with battery acid neutralizing agent (e.g. lime or baking soda) are used when filling or cleaning electric vehicle batteries . SC02C-04 Maintain battery acid neutralizing kits adjacent to charging stations. Recover spill response material from area after use and dispose of them in an appropriate manner. SC02C-05 Avoid overfilling electric vehicle batteries. SC02C-06 Electric vehicle maintenance and/or battery filling is not performed during forecasted rain events. SC02C-07 Batteries are stored inside in a cool and dry place if possible. If batteries are stored outside, they are placed on a non-reactive impervious surface with cover. SC02C-08 Battery cases and terminals are cleaned regularly or when there is a buildup of corrosion using a rag wetted with a solution of water and battery acid neutralizing agent. Any wastewater is captured and treated as hazardous waste. SC02C-09 Apply petroleum jelly or grease on battery terminals to slow down corrosion process.
Aircraft, Ground Vehicle, and Equipment Fueling	Fueling	Fuel spills and improper storage of fuel	Jet fuel, gasoline, diesel	SC03-01 There is a designated fueling area that is covered, bermed, enclosed, or sloped/positioned away from the MS4.
		Leaking storage tanks	Jet fuel, gasoline, diesel	SC03-02 Fueling areas are not located directly in the path of storm drains. SC03-03 Tanks, piping, and valves are labeled, regularly inspected, and kept in good condition.
		Aircraft, equipment, and vehicle leaks and spills	Jet fuel, gasoline, diesel	SC03-04 Absorbent booms, spill kits, or vacuum equipment are located in fueling areas or on fueling vehicles.
		Hosing or washing down fuel areas without proper containment	Jet fuel, gasoline, diesel	SC03-05 Fueling areas are regularly inspected. SC03-06 Major fueling operations are monitored. SC03-07 Secondary containment or cover is used when transferring fuel from a tanker truck to a fuel tank.
		Storm water run-on and runoff from fueling areas	Jet fuel, gasoline, diesel	SC03-08 Leak detection, overfill protection, and spill prevention devices are used for tanks and piping.
		Spills and leaks during delivery, including	Jet fuel, gasoline, diesel	SC03-09 Automatic shut-off mechanisms are used for fuel tankers and hose connections. SC03-10 Fuel tanks are not topped off.

Table 7-6. Potential Pollutant Sources at SAN (continued)

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
		topping off		SC03-11 Access to tanks and fueling vehicles is restricted.
Aircraft, Ground Vehicle, and Equipment Cleaning	Cleaning	Aircraft, vehicle, or equipment washing	Particulates/sediment, oil and grease, metals, soaps/cleaning solutions	SC04-01 Vehicles, equipment, and washing areas are kept clean and free of waste. SC04-02 Dry washing and surface preparation techniques are used where feasible.
		Fall out from pressure washing	Particulates/sediment, oil and grease, metals	SC04-03 Wash areas are not located directly in the path of storm drains. SC04-04 Pigs and cover mats are used to cover all catch basins in the surrounding area to contain the wash water during washing activities. SC04-05 Washing activities are performed in designated areas that capture, filter, and recycle water (e.g., at the new Wash Bay Facility), or using reclaimed water and diverting wash water to structural treatment control BMP, sanitary sewer, or dead end sump with pump. SC04-06 Visual observations and inspections of nearby storm drains are performed to detect discharges from cleaning materials. SC04-07 Drippings, residue, etc., are removed using vacuum methods; properly dispose of all waste materials. SC04-08 Vehicles are washed using a hand-held hose equipped with positive shut-off nozzle. SC04-09 Vehicles, aircraft, and equipment are washed only between the hours of 4pm and 10am from November 1 to May 31, and between 6pm and 10am from June 1 to October 31.
Aircraft Deicing/Anti-Icing	Deicing/anti-icing	Spraying deicing fluid onto aircraft	Ethylene or propylene glycol	SC05-01 There is a designated deicing/anti-icing area that is covered, bermed, enclosed, or sloped/positioned away from the MS4.
		Deicing fluids dripping from aircraft without proper clean up	Ethylene or propylene glycol	SC05-02 Deicing and anti-icing operations are regularly monitored to ensure quantities of fluids used are at a minimum while not jeopardizing aircraft safety and operation. SC05-03 All fluids are captured or diverted to a treatment plant, recycling system, sanitary sewer, or dead end sump with pump. SC05-04 Deicing/anti-icing areas are cleaned with wet-type sweepers and the fluids are recycled or disposed of properly.

Table 7-6. Potential Pollutant Sources at SAN (continued)

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Outdoor Loading and Unloading of Materials	Loading/unloading	Spills or leaks during loading/unloading	Fuel, oils, trash/debris	SC06-01 Contractors/haulers are aware of and adhere to BMP specifications.
		Leaking of loading/unloading equipment	Fuel, hydraulic fluids	SC06-02 Loading/unloading areas are not located directly in the path of storm drains. SC06-03 Loading/unloading areas are graded, bermed, covered, or otherwise protected to prevent contact with rainfall and storm water run-on/runoff. SC06-04 Loading/unloading equipment is regularly checked for leaks. SC06-05 Drip pans or other containment measures are used under hoses. SC06-06 Loading and unloading areas are kept free of spills and debris by containing and absorbing leaks during transfers and spillage from hose disconnections or cargo pallets; dispose of residue or debris properly. SC06-07 Spill kits or other measures are available in accessible locations near potential spill areas to contain spills and/or prevent tracking off-site.
Outdoor Material Storage	Material storage	Industrial and commercial spills and releases from storage units	Fuels, oil and grease, solvents, soap/cleaning fluids, lavatory chemicals, paints, battery acid, antifreeze, ethylene or propylene glycol, pesticides/herbicides, adhesives, rust preventers, AFFF, sealants	SC07-01 Outdoor material storage areas are not located directly in the path of storm drains. SC07-02 Outdoor material storage areas have areas with overhead cover and secondary containment. SC07-03 Outdoor material storage areas are prevented from contacting storm water run-on and runoff (e.g., by the use of berms, wood pallets, etc). SC07-04 Cover and contain material stockpiles or implement erosion control practices at the perimeter of the site and at any inlets or catch basins to prevent the off-site transport of eroded material.

Table 7-6. Potential Pollutant Sources at SAN (continued)

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Outdoor Material Storage (continued)	Material storage	Lack of proper secondary containment	Fuels, oil and grease, solvents, soap/cleaning fluids, lavatory chemicals, paints, battery acid, antifreeze, ethylene or propylene glycol, pesticides/herbicides, adhesives, rust preventers, AFFF, sealants	<p>SC07-05 Wood products treated with preservative chemicals are covered with tarps or stored indoors.</p> <p>SC07-06 Install protection guards (bollards, posts, or guardrails) around ASTs and piping to prevent damage from vehicles or forklifts and any subsequent release.</p> <p>SC07-07 Regular inspections are performed on tanks, containers, and berms to check for corrosion, structural failure, loose fittings, poor welds, leaks, etc.; repairs or replacements are performed as needed.</p> <p>SC07-08 Liquid materials in ASTs should be stored in double-walled, valved storage tanks or within concrete bermed secondary containment areas to provide the capacity to contain the entire volume of the single largest container, with sufficient freeboard to contain precipitation; the area inside the curb should slope to a drain.</p> <p>SC07-09 Precipitation from bermed areas should be drained to the sanitary sewer if available, or inspected and tested according to applicable regulations prior to its release to a storm drain; the drain must have a positive control, such as a lock, valve, or plug, below the product level in the tank to prevent release of contaminated liquids.</p> <p>SC07-10 Properly dispose of ponded storm water removed from bermed or containment areas.</p> <p>SC07-11 The facility/operation has and displays a County hazardous materials permit for hazardous materials storage.</p> <p>SC07-12 Accurate, up-to-date inventory of the materials delivered and stored on site is maintained.</p>
		Raw material, and finished product stock piles	Metals, sediments, particulates, debris	
		Contact between stored materials and storm water run-on/off due to lack of cover/berms, etc.	Fuels, oil and grease, solvents, soap/cleaning fluids, lavatory chemicals, paints, battery acid, antifreeze, ethylene or propylene glycol, pesticides/herbicides, adhesives, rust preventers, AFFF, sealants	
		Improper storage of fuel	Fuels	

Table 7-6. Potential Pollutant Sources at SAN (continued)

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Waste Handling/ Disposal	Waste handling/ disposal	Lack or failure of proper secondary containment	Oils, fuels, antifreeze, deicing fluids	SC08-01 The facility/operation makes efforts to reduce waste (using only amount needed, using solvents more than once, practicing good inventory control, not overbuying, purchasing long-lasting products, etc.).
		Waste container leaks	Oils, fuels, antifreeze, deicing fluids	SC08-02 The facility recycles waste materials when possible.
		Improper training procedures	Oils, fuels, antifreeze, deicing fluids, lavatory wastes and chemicals	SC08-03 There is a designated waste/recycling area with restricted access.
		Contact between stored waste and storm water run-on/off due to lack of cover/berms etc	Oils, fuels, antifreeze, deicing fluids, trash/debris	SC08-04 Waste/recycling areas are not located directly in the path of storm drains.
		Improper disposal practices	Wastewater, oil and grease, fuels, rubber debris, trash	SC08-05 Secondary containment and cover for waste is provided.
		Irregular waste removal schedule	Oils, fuels, antifreeze, deicing fluids, trash/debris	SC08-06 Wastes that are not contained or covered are prevented from contacting storm water run-on and runoff (e.g., by the use of berms).
				SC08-07 All dumpsters are covered and kept closed and any drain holes plugged.
SC08-08 Waste containers are inspected frequently for leaks, structural integrity, and proper closure seal.				
SC08-09 Employees are trained to properly handle and dispose of wastes.				
SC08-10 Wastes and recycling materials are appropriately stored in containers, segregated, and labeled.				
SC08-11 Wastes are properly characterized and disposed of properly.				
SC08-12 Waste containers and sanitary facilities are prevented from overflowing by timely service and removal.				
SC08-13 Dumpster cleaning is performed in designated areas that are bermed to contain wash water; properly dispose of all fluids collected or discharge to the sanitary sewer.				
SC08-14 Track waste generated, stored, and disposed.				

Table 7-6. Potential Pollutant Sources at SAN (continued)

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Building and Grounds Maintenance	Maintenance	Painting	Metals	SC09-01 Landscaping, revegetating, or installation of erosion and sediment controls takes place in areas of exposed soil.
		Pesticide application	Organic compounds	SC09-02 Hand weeding is used when practical.
		Wood preserving	Metals	SC09-03 Integrated pest management methods are implemented to minimize the use of pesticides, herbicides, and fertilizers; pesticides, herbicides, and fertilizers are used according to directions.
		Underground utilities (copper grounding wires in electrical vaults connected to storm drains) and lighting systems	Metals	SC09-04 Temporary BMPs such as portable booms and vacuum trucks are used to contain water from outdoor building or structure washdown activities. Reclaimed water is used, where possible, and waste water is collected and properly disposed of through a permitted connection to the sanitary sewer.
		Roofing	Metals, tar	SC09-05 Grass trimmings, leaves, sticks, and other collected vegetation are composted, where possible, or disposed of appropriately.
		Cement in concrete pouring	pH	SC09-06 Temporary stockpiled materials are removed at the end of the day or placed away from watercourses and drainage inlets; stockpiles are bermed and covered to prevent material releases to the storm drain.

Table 7-6. Potential Pollutant Sources at SAN (continued)

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Employee Training	Training	Mismanagement	Oil and grease, hydrocarbons, pH, solid waste, particulates, sediment, ethylene glycol, metals, fuels, chemicals	SC10-01 The Authority SWMP and tenant SWPPPs covering the facility or operation are updated on a periodic basis and amendment pages for the SWMP or SWPPP are inserted as needed.
		Lack of education outreach programs	Oil and grease, hydrocarbons, pH, solid waste, particulates, sediment, ethylene glycol, metals, fuels, chemicals	SC10-02 Employees and contractors have been trained on storm water issues, implementation and effectiveness of BMPs, spill prevention and cleanup, hazardous materials management, right-to-know awareness, and SMWP or SWPPP implementation.
		Inefficient or irregular training	Oil and grease, hydrocarbons, pH, solid waste, particulates, sediment, ethylene glycol, metals, fuels, chemicals	SC10-03 Implement additional training programs for relevant employees and contractors covering SPCC implementation, the prohibition on cross-connections between sanitary sewers and storm drains, and contractor responsibility to comply with adopted BMPs. SC10-04 The facility/operation has current employee training records for employees that have participated in the storm water pollution prevention education program and other related training programs, and these records are maintained for 5 years.

Table 7-6. Potential Pollutant Sources at SAN (continued)

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Lavatory Service Operation	Operating/maintenance	Leaking or blocked hoses	Lavatory waste, BOD, lavatory chemicals	SC11-01 Triturator facilities are covered and have low roll-over type berming.
		Spills during operations	Lavatory waste, BOD, lavatory chemicals	SC11-02 The triturator facility/operation is not located directly in the path of storm drains.
		Improper waste disposal	Lavatory waste, BOD, lavatory chemicals	SC11-03 Hoses and fittings used for transferring lavatory waste are regularly inspected and kept in good condition.
		Storm water contact with dirty lavatory trucks or hoses	Lavatory waste, BOD, lavatory chemicals	SC11-04 Absorbent booms, spill kits, and other containment equipment are present on lavatory service equipment and in the triturator facility/operation.
		Lack of lavatory truck/hose maintenance	Lavatory waste, BOD, lavatory chemicals	SC11-05 Surfactant/disinfectant mixing and transfers are performed in the triturator area or under a cover.
				SC11-06 Drip pans are used when draining the aircraft and the drippage is dumped into the bulk storage tank of the lavatory service equipment.
				SC11-07 Spills of lavatory wastes and lavatory chemicals are immediately cleaned and properly disposed of at the triturator facility.
				SC11-08 All hoses, valves, and equipment are properly secured when transporting lavatory waste.
				SC11-09 Lavatory truck cleanouts/back flushing and lavatory waste discharging to sanitary sewer connections are performed ONLY at triturator facilities.
				SC11-10 Hoses are completely drained.
				SC11-11 Lavatory service trucks or trucks with spill prevention equipment installed are used, where possible.
				SC11-12 Temporary sanitary facilities must have secondary containment and be located away from watercourses, drainage facilities, traffic circulation, and high wind areas.
				SC11-13 Sanitary facilities are regularly inspected for leaks and spills and cleaned or replaced when necessary.

Table 7-6. Potential Pollutant Sources at SAN (continued)

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Outdoor Wash Down/Sweeping (Apron Washing Ramp Scrubbing)	Washing/sweeping	Fallout from pressure washing operations	Particulates/sediment, rubber, debris, oil and grease, fuel	SC12-01 Sweeping and scrubbing equipment is regularly inspected and maintained to ensure effectiveness at removing pollutants and to avoid leaks.
		Improper waste disposal	Particulates/sediment, rubber, trash/debris, oil and grease, fuel, waste water, soaps	SC12-02 Roads, ramp areas, apron areas, and, if feasible, runway/taxiway areas are swept on a regular basis. SC12-03 Sweeping is performed during dry weather using dry sweeping techniques where feasible.
		Irregular sweeping or scrubbing	Particulates/sediments, oils and grease, fuel, trash/debris	SC12-04 Sweepers are operated at manufacturer-recommended optimal speeds. SC12-05 Debris and sediment from sweeping are disposed of properly.
		Industrial air emissions	Particulates/sediments, metals	SC12-06 Outdoor washdown areas are bermed to contain wash water and to prevent run-on to other areas. SC12-07 The amount of water used during outdoor washdown activities is minimized. SC12-08 Wash water is collected and filtered and reused, or discharged to the sanitary sewer system through a permitted connection at designated and approved discharge facilities (i.e., dewatering bin). SC12-09 Records of the sweeping or scrubbing activities including the miles swept or scrubbed and the amount of waste collected are maintained. SC12-10 Running hoses are not used to wash down sidewalks or other hard surface areas. A water-efficient, filtering and recycling device must be used and all wash water must be prevented from entering the storm drain system (curb gutters, streets, alleys, and inlets). SC12-11 Reclaimed or recycled/filtered water is used.
Fire Fighting Foam Discharge	Fire fighting	Ineffective containment of discharge	AFFF, wastewater	SC13-01 Fire fighting foam discharge/testing areas are not located directly in the path of storm drains.
		Improper vacuum procedure	AFFF, wastewater	SC13-02 Fire fighting equipment is regularly inspected. SC13-03 There is a designated fire fighting foam testing area that captures or diverts all foam waste to a treatment/recycling plant, sanitary sewer, or dead end sump with pump.
		Improper waste disposal	AFFF, wastewater	SC13-04 Sump(s) and/or oil water separator(s) are serviced regularly. SC13-05 Fire fighting foam testing areas are prevented from contacting storm water run-on and runoff (e.g., by the use of berms).

Table 7-6. Potential Pollutant Sources at SAN (continued)

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Potable Water System Flushing	Flushing	Fallout from flushing operations	Particulates/sediment, metals, oil and grease, fuels	<p>SC14-01 The aircraft potable water system and water truck cleaning/flushing areas are not located directly in the path of storm drains.</p> <p>SC14-02 There is a designated cleaning/flushing area that captures or diverts all wastewater to a treatment/recycling plant, sanitary sewer, or dead end sump with pump.</p> <p>SC14-03 Cleaning/flushing areas are prevented from contacting storm water run-on and runoff (e.g., by the use of berms).</p>
Runway Rubber Removal	Cleaning	Failure of equipment to adequately capture all waste water and debris	Rubber particulates/sediment/debris, metals, oil and grease, fuels	<p>SC15-01 The amount of water used during runway rubber removal activities is minimized.</p> <p>SC15-02 Waste water produced from runway rubber removal activities is prevented from entering the storm drainage system by immediately collecting and properly disposing of it.</p> <p>SC15-03 Runways and adjacent paved areas are swept, either manually or using mechanical sweepers, following runway rubber removal activities.</p> <p>SC15-04 Storm drain inlets, catch basins, and runway drainage areas are inspected following runway rubber removal activities for any resulting debris; remove and properly dispose of debris.</p> <p>SC15-05 Reclaimed water is used, where possible.</p>
Parking Lots	Maintenance of parking lots	Dirt and leaking fluids from equipment and vehicles	Particulates/sediment, oil and grease, brake fluid, fuel, antifreeze, metals	<p>SC16-01 Parking lots are posted with “No Littering” signs. Trash receptacles are regularly emptied and covered.</p> <p>SC16-02 Parking lots are regularly swept.</p> <p>SC16-03 Sweepers are operated at manufacturer-recommended optimal speeds.</p>
		Dirt and grit from parking lots, driveways, sidewalks and landscaped areas	Particulates/sediment, metals	<p>SC16-04 Sweeping is performed in parking lot areas when the number of parked vehicles is lowest to maximize areas swept.</p> <p>SC16-05 Records of the sweeping activities are maintained including the miles swept and the amount of waste collected.</p>
		Litter improperly disposed of, including bottles and cans, paper and plastic bags, fast-food wrappers, cigarette butts, and more	Solid waste/trash	<p>SC16-06 Oily spots are cleaned with absorbent materials.</p> <p>SC16-07 Repairs are performed during dry weather.</p> <p>SC16-08 Nearby storm drain inlets, catch basins, and manholes are covered and sealed during parking lot repairs.</p> <p>SC16-09 Drip pans are used under paving equipment when not in use.</p>
		Galvanized metal roofs, gutters and downspouts	Metals, sediment	<p>SC16-10 Hot bituminous materials are preheated and transferred or loaded away from storm drain inlets.</p> <p>SC16-11 Absorbent materials, debris, and drips are disposed of properly.</p>
		Paving and recycling operations	pH, debris, tar/hydrocarbons	<p>SC16-12 Rooftops downspouts do not drain onto paved surfaces.</p> <p>SC16-13 Dry methods are used to remove waste generated from repairs.</p>

Table 7-6. Potential Pollutant Sources at SAN (continued)

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
				temporarily stored in containers or stockpiles with cover and berms around them. Materials are stored away from storm drain inlets.
Storm Drain Maintenance	Maintenance	Fallout from MS4 cleaning operations	Particulates/sediments, metals, trash and debris, fuel, oil and grease, bacteria, waste water	SC17-01 Storm drains are stenciled with “No Dumping” messages.
		Irregular or inadequate inspection and maintenance schedule	Particulates/sediments, metals, trash and debris, fuel, oil and grease, bacteria	SC17-02 The facility/operation conducts routine self-inspections of the storm water conveyance system; the Authority should inspect the entire MS4 at least annually, between the dates of May 1 and September 30. SC17-03 Appropriate measures are used to prevent discharges during MS4 cleaning and maintenance. SC17-04 Storm drains, inlets, and catch basins are cleaned and maintained before the wet season and as needed. SC17-05 Open channels are cleared of accumulated litter in a timely manner. SC17-06 Debris from cleaning activities is disposed of properly. SC17-07 Records are kept for all inspections, cleaning, and maintenance, including the quantity of waste removed.
Housekeeping	Cleaning/ tidying	Insufficient facility and BMP inspections	Trash/debris, oil and grease, paints, fuels, pesticides/herbicides, hydraulic fluids, antifreeze, rust preventers, sealants	SC18-01 The facility conducts routine self-inspections of BMPs.
		Improper trash handling/trash or FOD cans not covered	Trash and debris, bacteria	SC18-02 The facility/operation is kept clean and orderly.
		Lack or failure of proper secondary containment	Oils, fuels, antifreeze, brake fluids, hydraulic fluids, lubricants, paints, deicing fluids	SC18-03 Trash receptacles are placed in appropriate locations.
		Dirt and grit from ramp and facility areas	Particulates/sediment, metals, trash, and debris	SC18-04 The facility/operation is swept at least once per week.
				SC18-05 Sweepings and sediment are disposed of properly.
				SC18-06 Potentially significant materials are stored in appropriate containers, properly sealed, and labeled.
				SC18-07 Secondary containment is provided for significant materials.
				SC18-08 Significant materials are stored in a restricted access area.
				SC18-09 Material Safety Data Sheets (MSDSs) are readily available for all significant materials.

Table 7-6. Potential Pollutant Sources at SAN (continued)

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Safer/Alternative Products	Replacement of toxic with less or non-toxic materials	Use of toxic materials	Metals, hydrocarbons, synthetic organic compounds	SC19-01 This facility/operation uses "Regionally Accepted" products identified as non-toxic, less toxic, or biodegradable. SC19-02 Whenever possible, maximize the purchase and use of products containing recycled materials.
Erodible areas	Erosion	Erosion of disturbed areas	Sediment	SC20-01 Implement erosion control BMPs to stabilize soils. SC20-02 Implement wind erosion control BMPs to control dust. SC20-03 Maintain effective perimeter controls. SC20-04 Stabilize loose soils and slopes prior to a forecasted storm event. SC20-05 Prevent material tracking offsite. SC20-06 Stabilize loose soils and slopes prior to a forecasted storm event.
		Wind erosion	Sediment	
Construction and remodeling/repair	Construction	Erosion from erodible surfaces	Sediment	SC21-01 Avoid outdoor repairs and construction during rain events or during any period for which the National Weather Service is forecasting a 50% chance of precipitation. SC21-02 Stabilize inactive areas (where there will be no construction for 14 days) or finished slopes or erodible areas with erosion control. SC21-03 Implement wind erosion control BMPs to control dust, and limit traffic to stabilized roadways within the site, where possible. SC21-04 Maintain effective perimeter and run-on controls. SC21-05 Maintain effective inlet protection. SC21-06 Install a stabilized construction entrance to prevent offsite tracking. SC21-07 Sweep streets of any loose dirt or materials. SC21-08 Cover and contain all chemicals, liquids, erodible landscape materials, and fertilizers when not in use. SC21-09 Discontinue use of erodible landscape material within 2 days prior to forecast rain even or when it's raining.

Table 7-6. Potential Pollutant Sources at SAN (continued)

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Construction and remodeling/repair (continued)	Construction	Offsite material tracking	Sediment, metals, oil, fuel, paint, trash/debris, hydraulic fluids, antifreeze, rust preventers, sealants	SC21-10 Waste containers are covered at the end of each work day and when it is raining. Use plastic under-sheets when appropriate. SC21-11 Cover waste containers at the end of each work day and prior to a rain event, and have waste recycled or collected and properly disposed of frequently.
		Material spills	Metals, oil, fuel, paint, trash/debris, hydraulic fluids, antifreeze, rust preventers, sealants	SC21-12 Perform concrete washout in designated areas away from inlets and drainage courses, and in appropriately sized and designed pits or containers. Empty regularly. SC21-13 Temporary sanitary facilities must have secondary containment and be located away from storm drains and traffic circulation. SC21-14 Minimize water usage and use reclaimed water where possible. SC21-15 Contain any particulate generating activities. SC21-16 Designate areas for fueling equipment and vehicles away from inlets and drainage courses, or perform offsite.
Spill Prevention, Control & Clean-up	Spill control	Fuel spills and improper storage of fuel	Fuels	SR01-01 The facility/operation has a current Spill Prevention, Control, and Countermeasure (SPCC) Plan or Spill Response Plan.
		Improper waste storage and disposal	Oil and grease, fuel, hydraulic fluids, antifreeze, lubricants	SR01-02 A summary of the SPCC Plan, or spill response procedures, is posted at key locations, identifying the spill cleanup coordinators, location of cleanup equipment, and phone numbers of regulatory agencies to be contacted in the event of a spill.
		Aircraft, equipment and vehicle fluid leaks and spills	Oil and grease, fuel, hydraulic fluids, antifreeze, lubricants, battery acid	SR01-03 Relevant employees and contractors are trained in the implementation of the SPCC Plan, if applicable, or spill control procedures. SR01-04 Leak and spill prevention devices are used.
		Inadequate spill response or spill response materials	Oil and grease, fuel, hydraulic fluids, antifreeze, lubricants, battery acid	SR01-05 The facility/operation has placed adequate spill kits in appropriate locations.
		Lack or failure of proper secondary containment	Oil and grease, fuel, hydraulic fluids, antifreeze, lubricants, battery acid	SR01-06 Airport Operations (619-400-2710), the Airport Authority Environmental Affairs Department (619-400-2784), and any agencies or companies identified in the SPCC or facility spill prevention and response procedures, are notified in the event of a spill. SR01-07 Procedures identified in the SPCC or facility spill prevention and response procedures are followed in the event of a spill or release. SR01-08 The facility/operation uses only dry cleaning methods. SR01-09 Used spill control/clean-up materials are disposed of properly. SR01-10 Wash water is captured by vacuum and properly disposed of, or is diverted to a structural treatment control, sanitary sewer, or dead end sump with pump.

Table 7-6. Potential Pollutant Sources at SAN (continued)

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Treatment Controls	Inspections/cleaning/maintenance	Irregular or inadequate inspections and maintenance	Particulates/sediment, oil and grease, metals, trash and debris, fuels	<p>TC01-01 Structural and treatment control BMPs are regularly inspected, cleaned and maintained to prevent the accumulation or resuspension of oil, grease, floating debris and sediments.</p> <p>TC01-02 During cleaning operations of the treatment control device, close any effluent valves at the device; standing water and accumulated waste are removed and properly disposed of, and oil absorbent pads are replaced prior to the start of the wet season and as needed.</p> <p>TC01-03 Records are kept for all inspections and maintenance of structural and treatment control BMPs.</p> <p>TC01-04 An annual inventory of all treatment control BMPs is conducted.</p>

Table 7-7. BMPs Applicable to Individual Industrial Sites/Sources

TENANTS	SUMMARY OF INDUSTRIAL ACTIVITY CATEGORIES (See Appendix B For Associated BMPs)	AIRCRAFT				VEHICLES AND EQUIPMENT					OTHER																	
		Aircraft, Ground Vehicle and Equipment Fueling	Aircraft, Ground Vehicle and Equipment Cleaning	Aircraft Deicing/Anti-Icing	Lavatory Service Operation	Outdoor Equipment Ops and Maintenance Areas	Aircraft, Ground Vehicle and Equipment Maintenance	Electrical Vehicle Maintenance	Aircraft, Ground Vehicle and Equipment Fueling	Aircraft, Ground Vehicle and Equipment Cleaning	Non-Storm Water Management	Outdoor Loading/Unloading of Materials	Outdoor/Indoor Material Storage	Waste Handling and Disposal	Building and Grounds Maintenance	Employee Training	Outdoor Washdown/Sweeping (Apron Washing, Ramp Scrubbing)	Fire Fighting Foam Discharge	Potable Water System Flushing	Runway Rubber Removal	Parking Lots	Storm Drain Maintenance	Housekeeping	Safer/Alternative Products	Erodible Surfaces	Construction and Remodeling Repair	Spill Prevention, Control, and Clean-up	Treatment Controls
		SC03	SC04	SC05	SC11	SC02A	SC02B	SC02C	SC03	SC04	SC01	SC06	SC07	SC08	SC09	SC10	SC12	SC13	SC14	SC15	SC16	SC17	SC18	SC19	SC20	SC21	SR01	TC01
Elite Line Services	SC01, 02A, 02B, 02C, 04, 07, 08, 10, 14, 18, 19, SR01					O	X	O		I/O	I/O		O	O		X			O				O	X			O	
Envoy	SC01, 02A, 02B, 03, 04, 07, 08, 10, 11, 18, 19, SR01	O	O		O	O	I/O		O	O	I/O		O	O		X						O	X				O	
FedEx	SC01, 02A, 02B, 02C, 03, 04, 06, 07, 08, 10, 14, 16, 18, 19, SR01	O	O			O	O	O	O	O	I/O	O	O	I/O		X			O		O		O	X			O	
Flagship	SC01, 02A, 02B, 02C, 03, 04, 07, 08, 09, 10, 12, 18, 19, SR01					I/O	I/O	O	O	O	I/O		I/O	O	O	X	O						O	X			O	
Frontier	SC01, 02A, 02B, 03, 06, 08, 10, 11, 14, 18, 19, SR01	O			O	O	I/O		X		I/O		I/O		X			O				O	X				O	
Hawaiian	SC01, 02A, 02B, 03, 04, 06, 08, 10, 11, 14, 18, 19, SR01	O	O		O	O	X		O	O	I/O		I/O		X			O				O	X				O	
IAS	SC01, 02A, 02B, 03, 04, 06, 07, 08, 10, 18, 19, SR01					O	O		O	O	I/O	O	I/O	I/O		X						O	X				O	
JAL	SC01, 02A, 02B, 03, 04, 06, 07, 08, 10, 11, 18, 19, SR01	O	O		O	O	O		O	O	I/O	O	O	I		X						O	X				O	
Jet Blue	SC01, 02A, 02B, 03, 04, 06, 07, 08, 10, 11, 14, 18, 19, SR01	O	O		O	O	O		O	O	I/O	O	O	I/O		X			O			O	X				O	
Landmark	SC01, 02A, 02B, 02C, 03, 04, 06, 07, 08, 09, 10, 11, 16, 17, 18, 19, 20, 21, SR01, TC01	O	O		O	O	O	O	O	O	I/O	O	I/O	O	O	X					O	O	X	O		I/O	O	O
SDCRAA	SC01, 02A, 02B, 03, 04, 06, 07, 08, 09, 10, 11, 12, 14, 15, 16, 17, 18, 19, 20, 21, SR01, TC01				O	O	O		O	O	I/O	O	I/O	I/O	I/O	X	O		O	O	O	O	I/O	X	O	I/O	I/O	O
SeaPort	SC01, 02B, 02C, 03, 05, 08, 18, 19, SR01	O		O			I/O	O			I/O			O								O	X				O	

INDUSTRIAL COMPONENT

Table 7-7. BMPs Applicable to Individual Industrial Sites/Sources (continued)

TENANTS	SUMMARY OF INDUSTRIAL ACTIVITY CATEGORIES (See Appendix B For Associated BMPs)	AIRCRAFT				VEHICLES AND EQUIPMENT						OTHER																
		Aircraft, Ground Vehicle and Equipment Fueling	Aircraft, Ground Vehicle and Equipment Cleaning	Aircraft Deicing/Anti-Icing	Lavatory Service Operation	Outdoor Equipment Ops and Maintenance Areas	Aircraft, Ground Vehicle and Equipment Maintenance	Electrical Vehicle Maintenance	Aircraft, Ground Vehicle and Equipment Fueling	Aircraft, Ground Vehicle and Equipment Cleaning	Non-Storm Water Management	Outdoor Loading/Unloading of Materials	Outdoor/Indoor Material Storage	Waste Handling and Disposal	Building and Grounds Maintenance	Employee Training	Outdoor Washdown/Sweeping (Apron Washing, Ramp Scrubbing)	Fire Fighting Foam Discharge	Potable Water System Flushing	Runway Rubber Removal	Parking Lots	Storm Drain Maintenance	Housekeeping	Safer/Alternative Products	Erodible Surfaces	Construction and Remodeling Repair	Spill Prevention, Control, and Clean-up	Treatment Controls
		SC03	SC04	SC05	SC11	SC02A	SC02B	SC02C	SC03	SC04	SC01	SC06	SC07	SC08	SC09	SC10	SC12	SC13	SC14	SC15	SC16	SC17	SC18	SC19	SC20	SC21	SR01	TC01
Siemens	SC01, 02A, 02B, 02C, 08, 10, 18, 19, SR01					I	I/O	I/O			I/O			O		X							O	X			I/O	
Sky West	SC01, 02B, 03, 11, 14, SR01	O			O		O		O		I/O							O									O	
Southwest	SC01, 02A, 02B, 02C, 03, 05, 06, 07, 08, 10, 11, 14, 16, 18, 19, SR01	O		O	O	O	I/O	I/O	O		I/O	O	I/O	I/O		X			O		O		I/O	X			I/O	
Spirit	SC01, 02A, 02B, 03, 07, 08, 10, 11, 14, 18, SR01	O			O	O	O		O		I/O		I/O	O		X			O				O				O	
Sun Country	SC01, 02A, 02B, 03, 08, 10, 11, 18, 19, SR01	O			O	I	I				I/O			O		X							O	X			O	
United	SC01, 02A, 02B, 02C, 03, 06, 07, 08, 10, 11, 18, 19, SR01 14, 18, 19, SR01	O			O	I/O	I/O	I/O	O		I/O	O	I/O	I/O		X							I/O	X			I/O	
UPS	SC01, 02A, 02B, 03, 04, 06, 07, 08, 10, 11, 18, 19, SR01	O	X		O	O	O		O	X	I/O	O	O	O		X							O	X			O	
US Airways	SC01, 02A, 02B, 02C, 03, 07, 08, 10, 14, 18, 19, SR01	O				O	I	I			I/O		I/O	I		X			O				I/O	X			I/O	
Virgin America	SC01, 02A, 02B, 03, 04, 06, 07, 08, 10, 14, 17, 18, 19, SR01	O	X			O	O			I/O	I/O	O	O	O		X			O			O	O	O			O	
Volaris	SC01, 02A, 02B, 03, 04, 07, 08, 10, 11, 14, 18, SR01	O	X		O	I/O	I/O			O	I/O		O	O		X			O				O				O	
WestJet	SC01, 02A, 02B, 03, 04, 06, 08, 10, 11, 18, 19, SR01	O	O		O	O	O			O	I/O	O		I		X							O	O			O	

Table 7-8. Minimum BMPs Implemented at SAN

Industrial Permit Minimum BMPs		BMPs Applicable to Authority and Tenants
Good Housekeeping	Observe all outdoor areas associated with industrial activity; including storm water discharge locations, drainage areas, conveyance systems, waste handling/disposal areas, and perimeter areas impacted by off-facility materials or storm water run-on to determine housekeeping needs. Any identified debris, waste, spills, tracked materials, or leaked materials shall be cleaned and disposed of properly.	SC-01: Non-Storm Water Management SC-02A: Outdoor Equipment Ops and Maintenance Areas SC-07: Outdoor/Indoor Material Storage SC-09: Building and Grounds Maintenance SC-15: Runway Rubber Removal SC-16: Parking Lots SC-17: Storm Drain Maintenance SC-18: Housekeeping SC-19: Safer/Alternative Products
	Minimize or prevent material tracking.	SC-18: Housekeeping SC-20: Erodible Areas SC-21: Building Repair and Construction
	Minimize dust generated from industrial materials or activities.	SC-20: Erodible Areas SC-21: Building Repair and Construction
	Ensure that all facility areas impacted by rinse/wash waters are cleaned as soon as possible.	SC-12: Outdoor Washdown/Sweeping (Apron Washing, Ramp Scrubbing) SC-18: Housekeeping
	Cover all stored industrial materials that can be readily mobilized by contact with storm water.	SC-07: Outdoor/Indoor Material Storage SC-18: Housekeeping
	Contain all stored non-solid industrial materials or waste (e.g., particulates, powders, shredded paper, etc.) that can be transported or dispersed by the wind or contact with storm water.	SC-12: Outdoor Washdown/Sweeping (Apron Washing, Ramp Scrubbing) SC-18: Housekeeping
	Prevent disposal of any rinse/wash waters or industrial materials into the storm water conveyance system.	SC-07: Outdoor/Indoor Material Storage SC-09: Building and Grounds Maintenance SC-12: Outdoor Washdown/Sweeping (Apron Washing, Ramp Scrubbing) SC-17: Storm Drain Maintenance SC-18: Housekeeping
	Minimize authorized NSWDS from non-industrial areas (e.g., potable water, fire hydrant testing, etc.) that contact industrial areas of the facility.	SC-01: Non-Storm Water Management SC-02A: Outdoor Equipment Ops and Maintenance Areas SC-17: Storm Drain Maintenance

Table 7-8. Minimum BMPs Implemented at SAN (continued)

Industrial Permit Minimum BMPs		BMPs Applicable to Authority and Tenants
Preventative Maintenance	Identify all equipment and systems used outdoors that may spill or leak pollutants.	SC-02A: Outdoor Equipment Ops and Maintenance Areas SC-02B: Aircraft, Ground, and Equipment Maintenance SC-02C: Electrical Vehicle Maintenance SC-09: Building and Grounds Maintenance SC-17: Storm Drain Maintenance
	Observe the identified equipment and systems to detect leaks, or identify conditions that may result in the development of leaks.	SC-02B: Aircraft, Ground, and Equipment Maintenance SC-02C: Electrical Vehicle Maintenance SC-09: Building and Grounds Maintenance SC-17: Storm Drain Maintenance
	Establish an appropriate schedule for maintenance of identified equipment and systems.	SC-02B: Aircraft, Ground, and Equipment Maintenance SC-02C: Electrical Vehicle Maintenance SC-09: Building and Grounds Maintenance SC-17: Storm Drain Maintenance
	Establish procedures for prompt maintenance and repair of equipment, and maintenance of systems when conditions exist that may result in the development of spills or leaks.	SC-02B: Aircraft, Ground, and Equipment Maintenance SC-02C: Electrical Vehicle Maintenance SC-09: Building and Grounds Maintenance SC-17: Storm Drain Maintenance
Spill and Leak Prevention and Response	Establish procedures and/or controls to minimize spills and leaks.	SC-03: Aircraft, Ground, and Equipment Fueling SC-04: Aircraft, Ground, and Equipment Cleaning SC-10: Employee Training SC-11: Lavatory Service Operation SR-01: Spill Prevention, Control, and Clean-up
	Develop and implement spill and leak response procedures to prevent industrial materials from discharging through the storm water conveyance system. Spilled or leaked industrial materials shall be cleaned promptly and disposed of properly.	SC-03: Aircraft, Ground, and Equipment Fueling SC-04: Aircraft, Ground, and Equipment Cleaning SC-11: Lavatory Service Operation SR-01: Spill Prevention, Control, and Clean-up
	Identify and describe all necessary and appropriate spill and leak response equipment, location(s) of spill and leak response equipment, and spill or leak response equipment maintenance procedures.	SR-01: Spill Prevention, Control, and Clean-up
	Identify and train appropriate spill and leak response personnel.	SR-01: Spill Prevention, Control, and Clean-up SC-10: Employee Training

Table 7-8. Minimum BMPs Implemented at SAN (continued)

Industrial Permit Minimum BMPs		BMPs Applicable to Authority and Tenants
Material Handling and Waste Management	Prevent or minimize handling of industrial materials or wastes that can be readily mobilized by contact with storm water during a storm event.	SC-05: Aircraft Deicing/Anti-Icing SC-08: Waste Handling and Disposal SC-11: Lavatory Service Operation
	Contain all stored non-solid industrial materials or wastes (e.g., particulates, powders, shredded paper, etc.) that can be transported or dispersed by the wind or contact with storm water.	SC-05: Aircraft Deicing/Anti-Icing SC-06: Outdoor Loading/Unloading of Materials SC-07: Outdoor/Indoor Material Storage SC-08: Waste Handling and Disposal SC-11: Lavatory Service Operation SC-13: Fire Fighting Foam Discharge
	Cover industrial waste disposal containers and industrial material storage containers that contain industrial materials when not in use.	SC-07: Outdoor/Indoor Material Storage SC-08: Waste Handling and Disposal SC-11: Lavatory Service Operation
	Divert run-on and storm water generated from within the facility away from all stockpiled materials.	SC-05: Aircraft Deicing/Anti-Icing SC-06: Outdoor Loading/Unloading of Materials SC-07: Outdoor/Indoor Material Storage SC-08: Waste Handling and Disposal SC-13: Fire Fighting Foam Discharge SC-14: Potable Water System Flushing
	Clean all spills of industrial materials or wastes that occur during handling in accordance with the spill response procedures (Section X.H.1.c).	SC-07: Outdoor/Indoor Material Storage SC-08: Waste Handling and Disposal SC-11: Lavatory Service Operation
	Observe and clean as appropriate, any outdoor material or waste handling equipment or containers that can be contaminated by contact with industrial materials or wastes.	SC-08: Waste Handling and Disposal
Erosion and Sediment Controls	Implement effective wind erosion controls.	SC-20: Erodible Surfaces SC-21: Building Repair and Construction
	Provide effective stabilization for inactive areas, finished slopes, and other erodible areas prior to a forecasted storm event.	SC-20: Erodible Surfaces SC-21: Building Repair and Construction
	Maintain effective perimeter controls and stabilize all site entrances and exits to sufficiently control discharges of erodible materials from discharging or being tracked off the site.	SC-01: Non-Storm Water Management SC-20: Erodible Surfaces SC-21: Building Repair and Construction
	Divert run-on and storm water generated from within the facility away from all erodible materials.	SC-01: Non-Storm Water Management SC-20: Erodible Surfaces SC-21: Building Repair and Construction
	If sediment basins are implemented, ensure compliance with the design storm standards.	SC-21: Building Repair and Construction

Table 7-8. Minimum BMPs Implemented at SAN (continued)

Industrial Permit Minimum BMPs		BMPs Applicable to Authority and Tenants
Employee Training Program	Ensure that all team members implementing the various compliance activities of this General Permit are properly trained to implement the requirements of this General Permit, including but not limited to: BMP implementation, BMP effectiveness evaluations, visual observations, and monitoring activities. If a Discharger enters Level 1 status, appropriate team members shall be trained by a QISP.	SC-10: Employee Training
	Prepare or acquire appropriate training manuals or training materials.	SC-10: Employee Training
	Identify which personnel need to be trained, their responsibilities, and the type of training they shall receive.	SC-10: Employee Training
	Provide a training schedule.	SC-10: Employee Training
	Maintain documentation of all completed training classes and the personnel that received training in the SWPPP.	SC-10: Employee Training
Quality Assurance and Record Keeping	Develop and implement management procedures to ensure that appropriate staff implement all elements of the SWPPP, including the Monitoring Implementation Plan.	SC-10: Employee Training
	Develop a method of tracking and recording the implementation of BMPs identified in the SWPPP.	SC-10: Employee Training SC-12: Outdoor Washdown/Sweeping (Apron) SC-16: Parking Lots SC-17: Storm Drain Maintenance
	Maintain the BMP implementation records, training records, and records related to any spills and clean-up related response activities for a minimum of five (5) years.	SC-10: Employee Training

ADVANCED BMPs

In addition to the minimum BMPs described above, the Authority implements a number of advanced BMPs to further prevent the discharge of pollutants in its storm water discharge. The advanced BMPs include exposure minimization and treatment control BMPs.

Exposure Minimization BMPs

Exposure minimization BMPs include storm-resistant shelters that prevent the contact of storm water with industrial materials or activities. Basins 3 and 7 contain permanent storm resistant shelters for vehicle and equipment maintenance. Basins 3, 5, 6, 7, 8, 12, and 15 contain fire-resistant cabinets, roll-top containers, storage sheds, and other storm resistant shelters for outdoor materials storage. Figures 3 and 5-7 show the locations of these shelters.

Storm Water Containment and Discharge Reduction BMPs

These BMPs include any that divert, infiltrate, reuse, contain, retain, or reduce the volume of storm water runoff. During the recent Green Build expansion of Terminal 2, artificial turf was added in Drainage Basin 15, near the RON parking lot, as well as porous pavement in that area to infiltrate runoff. Porous pavement and infiltration trenches were also installed as part of the Landmark FBO construction. Ten modular wetland systems are installed in the SANPark 2 parking lot on the north side of the runway. Additionally, air conditioning condensate is captured and reused in power washing activities.

Treatment Control BMPs

Treatment control BMPs include mechanical, chemical, and biological systems that are utilized to reduce pollutants in storm water. Existing treatment control BMPs include 15 high-rate media filters, 12 modular wetland treatment systems, 7 oil water separators, 6 grate inlet skimmers, 3 trench drain filters, 3 hydrodynamic separators, and numerous drain inlet inserts, downspout filters, and bioswales. These treatment control BMPs were selected, designed, and implemented per Appendix C of this SWMP. Any new treatment control BMPs will comply with the Industrial General Permit design storm standards as follows:

- Volume-based BMPs: The Authority, at a minimum, shall calculate the volume to be treated using one of the following methods:
 - The volume of runoff produced from an 85th percentile 24-hour storm event, as determined from local, historical rainfall records;
 - The volume of runoff produced by the 85th percentile 24-hour storm event, determined as the maximized capture runoff volume for the facility, from the formula recommended in the Water Environment Federation's Manual of Practice; or,
 - The volume of annual runoff required to achieve 80% or more treatment, determined in accordance with the methodology set forth in the latest edition of California Stormwater Best Management Practices Handbook, using local, historical rainfall records.
- Flow-based BMPs: The Authority shall calculate the flow needed to be treated using one of the following methods:
 - The maximum flow rate of runoff produced from a rainfall intensity of at least 0.2 inches per hour for each hour of a storm event;
 - The maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity, as determined from local historical rainfall records, multiplied by a factor of two; or,

- The maximum flow rate of runoff, as determined using local historical rainfall records, that achieves approximately the same reduction in total pollutant loads as would be achieved by treatment of the 85th percentile hourly rainfall intensity multiplied by a factor of two.

More information on treatment control BMPs is provided in Section 6.2 and Appendix C. Figures 3 and 5-7, and Appendix B, Figure TC-01, show the locations of these systems. Appendix C will be updated by December 2015, in accordance with the Municipal Permit.

POLLUTION PREVENTION PROGRAMS

Regular Power Washing

Outdoor tenant operational areas that are regularly cleaned by power washing include the concrete pad at the RFF and several cargo ramp areas. The airport janitorial services provider also regularly power washes the sidewalks in front of the terminals, the trash compactor areas near the terminals, the loading/unloading dock at the western end of Terminal 2 West, and the grease trap areas operated by the food service provider. Power washing is performed between 11pm and 4am. The janitorial services provider uses recovered air conditioning condensate instead of potable water for power washing. This water is collected into 55 gallon drums and, once full, the drums are transferred to the power washing reservoirs. In 2014, more than 5,225 gallons of condensate were recovered and used. The pressure washers used are equipped with a water recollection and filtration system. They are designed to collect all residual water, and filter, recycle, and reuse the water throughout the operation of the equipment. Before starting the pressure washing operation, janitorial staff locate all storm drain inlets and cover the areas with berms or mats. They then remove and sweep all trash, debris and cigarette butts. Next, staff will determine the path that the water will run and will funnel the water using berms and bags into the vacuum/reclaim system. Once the job is complete, the wash water is vacuumed up, hoses are drained into the sanitary sewage system or airport wash rack, and equipment is cleaned. The concrete pad at the RFF is steam cleaned, and the discharge enters the 12,000-gallon underground wastewater tank, which is serviced as needed and at least annually. Those tenants power washing the cargo ramp areas either perform the work themselves or contract for the service. All power washing is conducted in accordance with the BMPs described in Section 7.7.3.1.

Ramp Sweeping

The Authority FMD sweeps the aircraft gate and ramp (apron) areas seven days a week during evening hours. Using mechanical sweeping equipment utilizing regenerative air technology, the program is directed mainly at removing FOD, but it also removes sediment, particulate matter, and other pollutants. The schedule allows sweeping of each gate area approximately twice per month; some areas are swept more frequently upon request. Perimeter roads and taxiways are swept at least once per week. The debris/sweepings are vacuumed up into the unit and are disposed of in a lowboy container located in the northern portion of drainage basin 6. All sweeping is conducted in accordance with the BMPs described in Section 7.7.3.1.

Ramp Scrubbing

The janitorial services provider performs ramp scrubbing as needed, at a minimum of once every six months, using 3,500 psi industrial pavement washers. A biodegradable waxy soap, specifically made for oil removal, is used during the procedure. The soap is stored in two 100-gallon plastic containers on wooden pallets, under cover, at Terminal 2 West. The wash water is vacuumed up and collected by the Authority's environmental contractor, who filters and reuses the water. The north ramp/cargo areas near the control tower are scrubbed when tenants request it or as needed. The janitorial services provider recently acquired a pressure washing truck for ramp scrubbing. This truck is equipped with a vacuum water reclamation system, a series of two drums for solids and grease removal, and four filters to filter water for direct reuse. The FMD also contracts for a professional concrete cleaning company to conduct large-scale ramp scrubbing operations to thoroughly clean ramp and apron areas once per year or as needed.

Runway Rubber Removal

Runway rubber removal is conducted by a professional company under contract to the Authority. An all-in-one system is used that uses either high-pressure water or a chemical rubber removal solution and scrubbing action followed by a rinse(s). Both systems vacuum up the rubber and any residual liquids. Runway rubber removal is performed as warranted by runway friction testing, although quarterly rubber removal tends to be normal.

7.8 PROGRAM IMPLEMENTATION

The Authority has identified those updated BMPs applicable to industrial activities at SAN (Table 7-6 and Appendix B) and has also identified those BMPs applicable to individual tenants and to the Authority (Table 7-7 and Appendix E). Tenants and Authority departments are required to adopt applicable BMPs, when necessary, as new activities are added or existing activities change. BMPs or elements of BMPs requiring major operational and/or structural modifications must be implemented in a timely manner. New BMP requirements will be incorporated into any SWMP updates, as required by both the Industrial Permit and Municipal Permit.

All tenants and Authority departments (with storm water management responsibilities) maintain current, up-to-date copies of the SWMP in either hard-copy or electronic copy, or have immediate access to the SWMP via the internet. The Tenant Summary Sheets in Appendix E list the contact information for each tenant. Tenants are required to notify the Authority EAD at least annually regarding any need to update or modify the SWMP. All industrial tenants should be knowledgeable of the BMPs required for use by the Authority to address their individual operations and activities (see Tables 7-6 and 7-7, and Appendix B and E, respectively).

The specific elements of the Authority's industrial storm water management activities are presented in Sections 7.8.1 through 7.8.5.

7.8.1 EDUCATION AND OUTREACH

Details on education and outreach programs for Authority staff, tenants, and the general public related to industrial activities are provided in Section 9.0.

7.8.2 STAFF TRAINING

All Authority staff members are provided annual SWMP implementation training regarding topics such as prohibited discharges, BMP requirements, good housekeeping, inspections, spill response, and recordkeeping procedures. Authority staff training is mandatory. Additional details on staff training are in Section 9.0.

7.8.3 WET WEATHER SAMPLING AND ANALYSIS

The Authority is required to collect and analyze storm water samples from four QSEs each year. A qualifying storm event is defined as a storm producing discharge from at least one drainage area and preceded by at least 48 hours with no discharge from any drainage area. The samples will be collected according to the following timeline:

- Two QSEs during the first half of each reporting year (July 1 through December 31)
- Two QSEs during the second half of each reporting year (January 1 through June 30)

Samples will be collected within the first 4 hours after the start of discharge.

The details of the industrial compliance monitoring are provided in Appendix D-1, the Monitoring Implementation Plan.

7.8.4 FACILITY INSPECTIONS

Generally, the Authority staff and industrial tenants inspect their operating and storage areas either daily or as part of their own routine facility inspections. Tenants are encouraged to request the assistance of the Authority FMD for any cleaning that cannot be addressed by their own efforts (in response to lease obligations) or that are not being addressed by the Authority's regularly scheduled ramp-sweeping or ramp-scrubbing programs. The Authority Airside Operations Department staff also inspect the terminals, ramps, runway, and the FBO continuously during operating hours (and are generally available 24 hours per day).

Any inspections specifically required by either the Municipal Permit or the Industrial Permit will be conducted by the Authority EAD, as discussed below. The Authority may choose to require tenants and/or other Authority staff to conduct inspections that might complement the permit-required inspection program and further ensure that BMPs are being properly implemented. The Authority recommends that tenants conduct at least semi-annual inspections of their activities and operational areas and that they maintain records of these inspections as further means to ensure that BMPs are being properly implemented. Inspection records should be retained for at least five years.

7.8.4.1 Municipal Permit Inspection Requirements

The Authority is required to conduct inspections of industrial activities/operations/facilities to monitor compliance with the Municipal Permit, as well as the Authority's ordinances, permits, and approvals. The Municipal Permit (Provisions D.3.b.(3)(b) and D.3.b.(3)(c)) outlines procedures for determining the number of high-priority industrial sites that must be inspected in any given year of program implementation under the renewed Municipal Permit. Nevertheless, the Authority has determined that all industrial entities at SAN are considered high priority (as noted in Section 7.7.3.1) and each one will be inspected at least monthly. These inspections will be coordinated with inspections for the Industrial Permit (described below).

7.8.4.2 Industrial Permit Inspection Requirements

The Industrial Permit requires the Authority to conduct an inspection program to ensure that the BMPs being implemented are evaluated and revised to meet changing conditions, aid in the implementation and revision of the SWMP, and measure the effectiveness of BMPs to prevent or reduce pollutants in storm water discharges and authorized non-storm water discharges, and identify additional BMP needs. The inspections must be recorded and the program revised whenever appropriate. Inspections are readily available for review by Authority staff and tenants via the Authority's Web-based database. The Industrial Permit inspection requirements include the following:

- Monthly dry weather visual observations
- Sampling event visual observations to coincide with storm water sampling
 - Two observations between July 1 and December 31
 - Two observations between January 1 and June 30
- Annual Evaluation (addressed in Section 7.10.1)

Monthly Dry Weather Discharge Visual Observations: The Authority's EAD conducts monthly inspections of SAN to observe authorized non-storm water discharges and their sources and to verify that BMPs required to control those authorized discharges are being properly implemented and are effective. The Authority also conducts monthly visual observations of all drainage areas to identify any prior, current, or potential

unauthorized non-storm water discharges and their sources. Authority staff evaluate authorized non-storm water discharges to ensure that (1) they comply with the Industrial Permit and the Municipal Permit; (2) required BMPs are effective in preventing or reducing the contact of non-storm water discharges with industrial materials or equipment and to minimize, to the MEP, the flow or volume of discharges; (3) authorized non-storm water discharges do not contain or transport significant quantities of pollutants that cause or contribute to an exceedance of a water quality standard; (4) they comply with the Authority's Storm Water Code and Rules and Regulations; and (5) they meet BAT/BCT standards. The monthly inspections also verify the list of potential pollutants at the industrial sites/sources, and identify any necessary modifications to the SWMP.

The monthly observations are conducted during daylight hours on days with no storm water discharges. The observations are conducted at least once per calendar month. Each year, at least one of the monthly inspections becomes the Annual Evaluation discussed below. The observations document the presence of any uncharacteristic volumes, discolorations, stains, odors, floating material, etc., as well as the source of any discharge. Records of the observations, including date, location, description of observations, and response taken to eliminate unauthorized non-storm water discharges, to reduce or prevent pollutants from contacting non-storm water discharges, and BMP corrective actions needed, are maintained by the Authority EAD via its Web-based database, as described below.

Sampling Event Visual Observations: The Authority's EAD conducts visual observations of storm water discharges at all storm water monitoring locations at the same time that sampling occurs at those discharge locations. Two such observations take place between July 1 and December 31 and two observations take place between January 1 and June 30 of each year. Visual observations are not required during dangerous weather conditions, such as electrical storms or flooding. During observations, the Authority documents the presence of any floating and suspended material, oil and grease, discolorations, turbidity, odor, trash, or debris, and the source of any pollutant observed. If the presence of pollutants is observed, efforts will be made to identify the source of the pollutants. The investigation will begin at the sampling location and continue upstream through the drainage basin until the pollutant source is located, if possible. Once the source is located, the Authority will direct that corrective actions to reduce or prevent pollutants from contacting storm water discharge be taken by the responsible party. Visual observations of stored or contained storm water, such as at the FSF, are conducted at the time of release. Containment areas are checked monthly to detect leaks and to ensure the maintenance of adequate freeboard. The SWMP will be revised, if necessary, in response to any issues identified during the sampling event visual observations.

Annual Evaluations: One Annual Evaluation is conducted in each reporting year, as required by Industrial Permit Section XV. The procedures for Annual Evaluations are discussed in Section 7.10.1, below.

7.8.4.3 Formal Inspection Procedures for Industrial Sites and Sources

Formal inspections of industrial sites and sources by the Authority's EAD staff generally include a review of the following information, to the extent the information exists: (1) any SWPPPs or BMP implementation plans; (2) any relevant monitoring data; (3) any self-inspection records; and (4) any previous inspection reports. The inspection generally involves an assessment of: (1) compliance with the SWMP and the Authority's ordinances and permits related to urban runoff; (2) existing BMP requirements and the adequacy of BMP implementation, BMP maintenance and effectiveness, and the site supervisor/manager's efforts to make appropriate adjustments when ineffective BMPs have been identified; (3) confirmation of no exposure for all drainage areas previously identified as having no exposure to industrial activities; and (4) visual observations for authorized and unauthorized non-storm water discharges, potential illicit connections, and potential discharge of pollutants in storm water runoff. The inspection also presents an opportunity to provide education and training regarding storm water pollution prevention.

There are four basic steps in the Authority's facility/site inspection procedures: initiation, preparation, site visit, and post-inspection activities.

Step 1: Initiation: The inspection is typically initiated in response to a schedule, a public report or complaint, or an illicit discharge investigation, or as follow-up to a previous inspection, violation, or other enforcement action. The inspector typically conducts a complete inspection of the entire facility/site, regardless of the initiating circumstances. However, the inspectors may choose to focus on specific issues that were previously identified or that were the reason for the initiation of the inspection.

Step 2: Pre-Inspection Preparation: Prior to visiting a facility/site, the inspector reviews any of the available information noted above and reviews the Authority's Web-based database which tailors the inspection form (found in Appendix G) to each particular tenant or facility. Using maps and other sources, the inspector familiarizes themselves with general site location and vicinity, including proximity to storm drain inlets. The inspector also gathers needed equipment, i.e. an iPad, tablet, or smart phone to access the Web-based database and to record the inspection, a camera, and pertinent documents or information not available in the database or internet, maps, and any other required equipment.

Step 3: The Site Visit: The inspector begins assessing site conditions upon approach to the facility/site. Depending upon circumstances and availability, the inspector may begin by interviewing the facility/site operator or other responsible individual. The inspector then verifies/clarifies observations made upon approaching the facility/site, and identifies and evaluates the BMP requirements applicable to the site/activity, as well as the effectiveness of the BMPs being implemented. If responsible individuals are available, the inspector will ensure that the contact information and BMP requirements on record are accurate and will discuss how various BMP requirements are being met (especially if requisite BMPs have been incorporated into the operations and activities in a manner that may not be obvious). The inspector typically asks to see any existing pollution prevention plans, records, or environmental management system documentation not previously gathered or available. While conducting a walkthrough of the facility/site, the inspector notes those industrial/commercial areas and activities that are exposed to precipitation (potentially increasing the risk of pollutants entering the storm drain system). Areas of storm water run-on and runoff are also noted. The inspector uses the walkthrough to assess the accuracy of site maps, descriptions of the areas and activities, and lists of materials onsite; the effectiveness of the BMPs being implemented; and any evidence of potential or existing illegal discharges. The inspection is documented on the Web-based database, as outlined below. The inspection is acknowledged by both the inspector and the responsible individual (or designee) for the facility/site, in a back and forth communication on any issues requiring corrective actions.

Step 4: Post-Inspection Activities: After the inspection, the inspector ensures that actions are taken to address any immediate concerns; updates the Authority's records, as necessary; completes the inspection via the Authority's Web-based tracking application and ensures that a copy is issued to the responsible party; issues corrective action or enforcement orders to the responsible party via the Web-based database, as necessary; schedules follow-up inspections, as needed; and makes reports or referrals, as needed, to the appropriate departments or agencies.

7.8.4.4 Inspection Tracking and Records

The Authority's EAD conducts various inspections at SAN to maintain and ensure compliance with both the Industrial Permit and the Municipal Permit. The various inspection programs were outlined above. The inspections are documented within the Authority's Web-based database. Inspection reports and/or summaries, as appropriate, are included in the Annual Reports required by the Industrial Permit and Municipal Permit. The inspection forms used for each of the various inspection programs are presented in Appendix G.

The Authority generally conducts all inspections using the Web-based database in real time. However, the Authority may utilize the following inspection forms generated by the California Stormwater Quality Association (CASQA) if the database is not available:

- Form 1 – BMP Inspection Form
- Form 2 – Visual Observation Log—Monthly
- Form 3 – Visual Observation Log—Sampling Event

[Note – Appendix G also includes CASQA Form 4 – Sampling Log, which is used to present the results of wet weather sampling and analysis. The wet weather sampling and analysis performed by the Authority in compliance with the Industrial Permit is discussed in Appendix D-1 of this SWMP.]

Alternatively, the inspections may be recorded directly in the Web-based database, the application developed for the Authority EAD to track and manage the storm water management program data. The Web-based database can be used to document BMP deficiencies for each tenant during monthly, annual, or ad hoc inspections. It can also be used as a platform to correspond with tenants on inspection issues, view records on inspection history, and access storm water reference material.

Both the inspection forms and the Web-based database incorporate the minimum required inspection tracking information per Industrial Permit Section XI.A.3 and Municipal Permit Provision E.5.c(3). This includes the inspector's name, name and location of each inspected entity, inspection date and time, findings of the inspection, description of any deficiencies, violations or pollutants observed, a description of any applicable enforcement actions, and date of resolution for each deficiency or violation. Any SWPPP revisions required in response to the visual observations will be implemented by the EAD.

7.8.4.5 Owner Operator Notifications

One objective of the SAN SWMP is to notify all industrial sites/sources at SAN, whether operated by tenants or the Authority, of the BMP requirements deemed applicable to each site/source by the Authority. As noted above, all tenants and Authority departments (with storm water management responsibilities) are provided and maintain current, up-to-date copies of the SWMP in either hard-copy or electronic copy, or have immediate access to the SWMP via the internet. BMP descriptions are also provided to all tenants in.

Notification of BMP deficiencies will be conveyed via the Web-based database. When an inspection or audit of a tenant area is complete, an authority inspector will upload the results of the inspection, including text and photos, into the Web-based database. An email is then generated by the Web-based database and sent to the tenant. The tenant is then provided with the opportunity to enter a resolution for each deficiency identified. The inspector then reviews the resolution for completeness and either approves or denies the action. Enforcement measures for issues that cannot be resolved in a timely fashion are addressed in Section 7.8.4.6.

7.8.4.6 Enforcement Measures

This section describes the ERP as it applies to industrial areas and activities at SAN. In accordance with the Municipal Permit, the ERP has been updated concurrently with submittal of the final San Diego Bay WQIP, so that the ERP aligns with WQIP strategies.

All industrial tenants operating within the Authority's jurisdiction are required to maintain compliance with the Authority Rules and Regulations, Storm Water Code (Article 8), SWMP, the Industrial Permit, the Municipal Permit, and contracts and leases. Any findings or violations noted during a site inspection by the EAD inspector will be discussed onsite or via the Web-based database with the Authority employee or

tenants. A corrective action form may also be used to document the problem and its resolution. The EAD inspector will discuss the issues and the inspection report will detail the corrective actions required and the timeframe in which corrective actions must be completed. Findings and violations will be described and recorded in the Web-based database (and will include photographs and other information, as applicable).

The Authority requires that corrective actions be started immediately and be completed prior to the next predicted rain event or within a maximum of 30 days, whichever is sooner. Depending on the nature of the finding, some corrective actions may take longer to complete. In those cases, the Authority employee or tenants will provide an explanation to the EAD inspector and a suggested timeframe for completion, which the EAD inspector will either agree upon, or will reject and provide a preferred timeframe. (Note: corrective actions must be completed within 24 hours for Enforcement Level 2 violations, as described below.) The Authority or tenants must document the corrective action taken by responding to EAD through the Web-based database. The Authority or tenants who cannot complete corrective actions in the time required must explain in detail through the Web-based database the specific causes of delay and propose a schedule for compliance. EAD has the sole discretion to grant an extension or pursue escalated enforcement. All corrective actions, as well as the time periods allowed and dates of actual completion, are recorded in the Web-based database.

The enforcement mechanisms used by the Authority are listed below. The Authority generally obtains compliance using the first four mechanisms listed here. The remaining enforcement mechanisms can be used, as necessary, to increase the severity of penalties and to compel compliance as soon as possible.

- 1) Verbal and written warnings
- 2) Written notices of violation
- 3) Written notices to clean, test, or abate
- 4) Order to cease and desist (stop work orders)
- 5) Fines
- 6) Denial or revocation of permits and approvals
- 7) Administrative and criminal penalties
- 8) Bonding requirements
- 9) Liens

The Authority's ERP for industrial dischargers has two main levels of enforcement, with escalating enforcement measures utilized as necessary on a case by case basis, using the professional judgment of the Authority inspector. The Authority has the discretion to initiate or escalate enforcement using any enforcement mechanism available, depending on the nature of the violation or discharge, the effect on water quality, and the degree of cooperation or response time of responsible parties. Further information on enforcement activities used by the Authority is provided in Section 2.3. The general escalated enforcement process is outlined below:

- Enforcement Level 1 is initiated by the finding of BMP deficiencies. The responsible party is contacted and the inspector provides a verbal warning to fix the observed violation. The notification will also be documented in the Web-based database so that the responsible party and interested parties are aware of the violation. The responsible party can then notify the inspector via the Web-based database when the corrective action has been completed. If the inspector determines that the violation is severe enough that a verbal warning is not sufficient, a written notice will be issued to the responsible party. The written

notice documents the violation, the time frame for correction, and the date of follow-up inspection. The written notice will be provided to the responsible party and the facility/operation supervisor. If the violation is resolved within the time frame, the inspector will document compliance and save the inspection information in the inspection file.

- Enforcement Level 2 is initiated when the noncompliant activity or violation may impact water quality, human health, or the environment (i.e. prohibited discharge). A written notice to clean, test, or abate, and/or a CDO is used to initiate enforcement and compliance is expected within 24 hours. If a CDO is issued, the recipient must cease and desist all activities that cause or contribute to illegal discharges or remove illicit connections. A notice and order to clean, test, and abate is a written or verbal order to perform the activities listed in the Authority's Storm Water Code. Penalties and fines may be issued if administrative authority is ineffective and the violation continues.

If the noncompliance resulted in a spill or discharge, the party responsible for the discharge is responsible for conducting cleanup measures appropriate to the degree of the spill or discharge, or if needed, for contacting the appropriate emergency response or cleanup contractor.

Contractors and developers are required to abide by the Authority documents, permits, rules, and regulations while working within airport operational areas. The Authority may use provisions within the contract to correct any noncompliant activities. The Authority may also employ this mechanism for tenants that are under lease or use permits.

7.8.4.7 Reporting of Industrial Non-Filers and Incidents of Noncompliance

REPORTING OF INDUSTRIAL NON-FILERS

Per Municipal Permit Provision E.6.e(2), the Authority is required to report any persons required to obtain coverage under the Industrial Permit and failing to do so, within five calendar days of becoming aware of the non-filer. As noted in Section 1.0 of this SWMP, the industrial operations at SAN have been subject to the Industrial Permit since 1992. At that time, the Port of San Diego filed a NOI with the permit that included all the industrial entities at SAN. Since then, ownership and operation of SAN was transferred from the Port of San Diego to the Authority, and the Port of San Diego filed a Notice of Termination from permit compliance and listed the Authority as the new facility operator for SAN. In March 2003, the Authority filed a NOI to comply with the Industrial Permit and listed the primary SIC code for the site as 4500 Air Transportation. In response, the State Water Board issued WDID #9371018035 to SAN. In August 2003, the Authority prepared the SAN SWMP to comply, in part, with the Industrial Permit. As was true at the time that the Port of San Diego operated the airport, all airport tenants operate under lease or license agreement with the airport owner/operator, which is currently the Authority. As a result, industrial operations and tenants at SAN are also subject to the requirements of the Industrial Permit and must comply with the Authority direction regarding storm water management at SAN, as described in Section 7.2.

Incidents of Noncompliance

The Authority may issue a written enforcement notice for incidents of repeat or serious noncompliance. If an incident or practice of noncompliance occurs, EAD staff will then determine whether the incident endangers human health or the environment by considering the following criteria:

- Characteristics, quantity, and toxicity of substances/materials involved
- Proximity of site to a sensitive water body (San Diego Bay)
- Proximity of site to an impaired water body (San Diego Bay)
- Proximity of site to a sensitive habitat/endangered species

- Estimated volume of actual and/or potential discharge
- Whether the incident involves a discharge to the storm drain
- Condition of the storm drain system (clog, etc.)

If the Authority determines that the incident does endanger human health or the environment, then the Authority will provide verbal notification to the Regional Water Board within 24 hours from the time that the Authority becomes aware of the circumstances. Within five days from the time that the Authority becomes aware of the circumstances, the Authority will provide the Regional Water Board with a written submission containing a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and, if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The following will be reported within 24 hours:

- Any unanticipated bypass that exceeds any effluent limitation in the Municipal Permit
- Any upset which exceeds any effluent limitation in the Municipal Permit
- Violation of a maximum daily discharge limitation for any or the pollutants listed by the Regional Water Board in the Municipal Permit to be reported within 24 hours

In addition, under the Industrial Permit, incidents of noncompliance are grounds for enforcement actions and/or removal from Industrial Permit coverage. If any storm water or non-storm water discharges exceed the discharge prohibitions, effluent limitations, or receiving water limitations specified in the Industrial Permit, or exceed any applicable water quality standards in the State Water Board or Regional Water Board Basin Plans, the facility is not in compliance. Should such a situation arise, the Authority will submit a report to the Regional Water Board within 60 days describing BMPs currently being implemented and additional BMPs that will be implemented, with a schedule of implementation, to prevent or reduce any pollutants that are causing or contributing to the exceedance of water quality standards. Following approval of the report by the Regional Water Board, the Authority will revise and implement this SWMP and monitoring program, as necessary, within 90 days to incorporate any additional BMPs that may have been and/or will be implemented (including a schedule for implementation) and any additional monitoring requirements. Any anticipated noncompliance, such as a planned change at the airport facility that will change the nature or increase the amount of pollutants discharged, will be reported to the Regional Water Board. Any noncompliances will be reported in the monitoring report discussed below, and will include a description of the noncompliance and its cause, the date and time of the noncompliance and whether it has been corrected, and the steps taken or planned to reduce and prevent a recurrence of the noncompliance.

7.9 EXCEEDANCE RESPONSE ACTIONS

The Industrial Permit establishes NALs for certain pollutants (described in Appendix D-1). Under the Industrial Permit, all industrial dischargers are in baseline compliance status for the first year of implementation. If the pollutant levels are found to exceed either an annual NAL or an instantaneous NAL in a given year, this baseline status will change to Level 1 beginning July 1 of the subsequent year. The actions required under Level 1 status are described in Section 7.9.1. If pollutant levels are found to exceed an annual or instantaneous NAL while in Level 1 status, it will enter Level 2 status beginning July 1 of the subsequent year. The actions required under Level 2 status are described in Section 7.9.2. The exceedance response level is pollutant-specific, meaning that the Authority may fall under Baseline, Level 1, and Level 2 status for different pollutants within the same reporting year.

The Authority is required to implement water quality-based corrective actions if industrial discharges and/or NSWDs are found to be in violation of receiving water limitations in San Diego Bay. These required actions are summarized in Section 7.9.3.

7.9.1 LEVEL 1 EXCEEDANCE RESPONSE ACTIONS

The Authority is in baseline status for all pollutants for the 2015-2016 reporting year. If sampling results indicate an NAL exceedance for a parameter, the Authority will enter Level 1 status for that parameter beginning July 1 following the reporting year for which the exceedance occurs.

By October 1 following commencement of Level 1 status for any parameter, the Authority will complete an evaluation, with the assistance of a QISP, of the industrial pollutant sources at SAN that are or may be contributing to the exceedance. The evaluation will also identify the corresponding BMPs in this document (the SWPPP) and any additional BMPs that may be necessary to prevent future NAL exceedances and comply with the Industrial Permit. All drainage areas will be included in this evaluation.

No later than January 1 following commencement of Level 1 status, the Authority will revise this document as necessary and implement any additional BMPs identified by the QISP in the Level 1 evaluation. The QISP will prepare a Level 1 ERA Report. The LRP or his representative will submit this report via SMARTS and will include the QISP's identification number, name, phone number, and email address. The report will include:

- A summary of the Level 1 ERA evaluation
- A detailed description of any SWPPP revisions made and additional BMPs implemented for each parameter that exceeds an NAL

7.9.1.1 Returning to Baseline from Level 1 Status

The Authority will return to baseline status for a given parameter if the following conditions are met:

- A Level 1 ERA Report has been completed
- All identified additional BMPs have been implemented
- Results from four consecutive QSEs indicate no additional NAL exceedances for that parameter

Prior to the implementation of an additional BMP identified in the Level 1 ERA Evaluation or October 1 (whichever comes first), sampling results for any parameter(s) being addressed by that additional BMP will not be included in the calculations of annual average or instantaneous NAL exceedances in SMARTS.

7.9.2 LEVEL 2 EXCEEDANCE RESPONSE ACTIONS

If the Authority is in Level 1 status for a given parameter, the Level 1 ERA Report has been completed, and the sampling results indicate that an NAL exceedance for the same parameter has occurred, the Authority will enter Level 2 status for that parameter beginning on July 1 of the subsequent reporting year. Level 2 status requires submittal of a Level 2 ERA Action Plan and Level 2 ERA Technical Report.

7.9.2.1 Level 2 ERA Action Plan

The Level 2 ERA Action Plan will be prepared by a QISP. The LRP or his representative will certify and submit this report via SMARTS and will include the QISP's identification number, name, phone number, and email address. The plan will be submitted by January 1 following the reporting year in which the exceedance triggering a new Level 2 status occurred. A new Level 2 exceedance is any Level 2 NAL

exceedance for a new parameter in any drainage area or an exceedance of the same parameter that is being addressed in an existing Level 2 ERA Action Plan, but in a new drainage area. This plan will, at a minimum, address the drainage area in which the Level 2 exceedance has occurred.

For each new Level 2 exceedance, the plan will identify which of the following demonstrations the Authority has elected to perform:

- **Industrial Activity BMP Demonstration:** describing additional BMPs that will be implemented to eliminate future NAL exceedances, or any which are not feasible to be implemented and the reasons why
- **Non-Industrial Pollutant Source Demonstration:** finding that the exceedance of the NAL is due solely to the presence of non-industrial pollutant sources
- **Natural Background Pollutant Source Demonstration:** finding that the NAL exceedance is due solely to the presence of the pollutant in the natural background, undisturbed by industrial activities

The Level 2 ERA Action Plan will include a detailed schedule and description of tasks required to complete the selected demonstration. All elements of the Action Plan will be implemented as soon as practicable and will be completed no more than one year following submittal of the plan.

7.9.2.2 Level 2 ERA Technical Report

By January 1 of the reporting year following submittal of the Level 2 ERA Action Plan, the Authority will certify and submit via SMARTS a Level 2 ERA Technical Report. This report must include one of the three demonstrations listed above and described in Section XII.D.2 of the Industrial Permit. Upon submittal of the Level 2 ERA Technical Report, both the State Water Board and Regional Water Board may review the report; if the report is found to be deficient, the Authority may be directed to take further action to comply with the Industrial Permit. The Authority may be granted an automatic one-time extension to the January 1 submittal deadline if the following items are submitted to SMARTS:

- Reasons for the extension
- A revised Level 2 ERA Action Plan with a schedule and tasks necessary to complete the Level 2 ERA Technical Report
- A description of any additional temporary BMPs that will be implemented while permanent BMPs are being constructed

Any additional extensions must be approved in writing by the Regional Water Board. The Regional Water Board may require that additional tasks or temporary BMPs be implemented.

The Level 2 ERA Technical Report will be updated annually upon additional NAL exceedances of the same parameter within the same drainage area outlined in the report. The report will also be updated annually following any facility operational changes, pollutant source changes, or new and relevant inspection and monitoring results. This updated Level 2 ERA Technical Report will be submitted with each Industrial Annual Report. If there have been no changes necessitating an updated Level 2 ERA Technical Report, the Authority will certify in the Annual Report that no changes are needed.

If the Authority anticipates entering Level 2 status, the Level 2 ERA Action Plan or Level 2 ERA Technical Report may be submitted early, provided that there is adequate information available. Early submittal of these documents will result in the Authority automatically being placed in Level 2 according to the Level 2 ERA schedule.

7.9.2.3 Returning to Baseline Status From Level 2 Status

The Authority will be eligible to return to baseline status for a pollutant only if the Level 2 ERA Technical Report follows the Industrial Activity BMP Demonstration and all BMPs outlined in the Level 2 ERA Action Plan have been implemented. The results from four consecutive QSEs must also indicate no additional NAL exceedances for that parameter. If any future NAL exceedances occur for that parameter, the Authority will automatically enter Level 2 status on July 1 of the subsequent reporting year, bypassing Level 1.

The Authority will not be eligible to return to baseline status if any of the following are submitted in the Level 2 ERA Technical Report:

- An Industrial Activity BMP Demonstration stating that all of the implemented BMPs, including additional BMPs outlined in the Level 2 ERA Action Plan, achieve compliance with the Industrial Permit but are not expected to eliminate future exceedances. This demonstration must include an evaluation of any additional BMPs that could reduce or prevent NAL exceedances that are not being implemented, estimated costs of these additional BMPs, and an analysis of the basis for selecting the BMPs implemented rather than the additional BMPs evaluated.
- A Non-Industrial Pollutant Source Demonstration.
- A Natural Background Pollutant Source Demonstration.

7.9.3 VIOLATION OF RECEIVING WATER LIMITATIONS

Per Industrial Permit Section XX.B, the Authority will implement water quality-based corrective actions if it is determined that industrial storm water discharges or authorized NSWDS are in violation of any applicable receiving water limitations within the receiving water, or are causing or contributing to an exceedance of a water quality standard within the receiving water. Water quality-based corrective actions are different from Level 1 and Level 2 ERAs that result from effluent-based monitoring, and it is possible to be engaged in Level 1 or Level 2 ERAs while simultaneously being required to perform water quality-based corrective actions. The Authority will conduct a facility evaluation to identify any BMPs described in the SWPPP that are not being properly implemented. Following this evaluation, the SWPPP itself will be assessed to determine whether additional BMPs are needed to reduce pollutants to a level meeting receiving water limitations. If necessary, the SWPPP will be revised. These evaluations and revisions will be certified and submitted via SMARTS for review by the Regional Water Board, which may reject these corrective actions or request more documentation.

7.10 ANNUAL EVALUATION AND REPORTING

7.10.1 ANNUAL EVALUATION

The Authority conducts one Annual Evaluation during the Industrial Permit reporting period of July 1 through June 30 (which corresponds to the fiscal year of the Authority). Annual Evaluations are conducted within 8 to 16 months of each other. The Annual Evaluation process generally follows the procedure outlined in Section 7.8.4.3, and includes a review of all visual observations records, inspection records, and sampling and analysis results; inspections, review, and evaluation of all BMPs to determine whether the BMPs are adequate, properly implemented, and maintained, or whether additional BMPs are needed; a visual inspection of all potential pollutant sources for evidence of, or the potential for, pollutants entering the drainage system; an inspection of all drainage areas previously identified as having no exposure to industrial activities and materials; and a visual inspection of equipment needed to implement the SWMP, such as spill response equipment. Any incidents of noncompliance are noted and the responsible party is directed by the Authority to take corrective action. The Annual Evaluation process includes timely follow-up inspections

whenever BMP deficiencies are found at any particular site. The process also produces a report that identifies any necessary revisions to the SWMP or to the Authority's BMP requirements, or to the descriptions of the BMPs, and outlines a schedule for implementing any necessary revisions. Any revisions necessary must be implemented within 90 days of the Annual Evaluation.

7.10.2 ANNUAL REPORTING

Both the Municipal Permit and the Industrial Permit require the Authority to submit Annual Reports to the Regional Water Board. The Municipal Permit requires submission of an Annual Report by January 31 of each year, which includes the information listed in Provision F.3 of the Municipal Permit. The Industrial Permit requires submission of an Annual Report by July 15 of each year, which includes the information listed in Section XVI of the Industrial Permit for the preceding 12-month period of July 1 through June 30. Annual Reports are signed and certified by the LRP or his DAR.

The Industrial Annual Report will be submitted via SMARTS. The following components will be included in the report:

- A compliance checklist indicating compliance with the components of the Industrial Permit
- An explanation for any incidents of noncompliance, as indicated in the compliance checklist
- An identification, including page numbers, of all revisions made to the SWPPP within the reporting year
- The date(s) of the Annual Evaluation

The Municipal Annual Report consists of two components, an assessment of the Jurisdictional Runoff Management Program for July 1 through June 30 of the preceding year, and a WQIP monitoring and assessment evaluation for October 1 through September 30 of the preceding year. The requirements of the Municipal Annual Report are discussed in more detail in Section 12.1.

7.10.3 RECORDS MANAGEMENT

Records of all storm water monitoring information, copies of all reports (including Annual Reports) required by the Municipal Permit and the Industrial Permit, records of all data used to complete the NOI for the Industrial Permit, and all other data and information required by either permit will be retained by the Authority for a period of at least five years. These records will be provided to the Regional Water Board, State Water Board, or USEPA within 10 days of receipt of a written request for information, or during office hours for review by the Regional Water Board.

7.11 INDUSTRIAL COMPONENT EFFECTIVENESS ASSESSMENT REPORTING

The Authority has developed internal and external effectiveness assessment programs to evaluate the Authority staff, Authority boards, and tenant compliance with water quality issues. The Authority's Effectiveness Assessment component is described in Section 11.6.

7.12 INDUSTRIAL COMPONENT PROGRAM REVIEW AND MODIFICATION

The Authority has reserved this section to identify and document future changes to the Industrial Component of the SWMP. Section 13.0 of this SWMP details the program modifications made to the March 2008 version of the SWMP to bring this document into compliance with the renewed Municipal Permit and Industrial Permit.

Section 13.0 will also be used as an amendment log for any future revisions to the SWMP. The amendment log will note the date of each amendment. The Authority will continue to revise the SWMP as needed, including changes necessary because of the following:

- There is a change in the total industrial area exposed to storm water.
- Additional BMPs are added.
- There is a significant change in industrial operations that may affect the type or amount of a pollutant that may be discharged.
- There is a change in the parties responsible for implementation of the SWMP.
- A revision is otherwise deemed necessary.

The revised SWPPP will be submitted via SMARTS within 30 days when it contains significant revisions. The onsite SWPPP will be kept up to date at all times, although SWPPP revisions are not required to be certified and submitted via SMARTS more than once every three months.

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8.0 RESIDENTIAL COMPONENT

As noted in Section 1.0 of this SWMP, there are no residential land uses or activity areas within the Authority's jurisdiction. For this reason, the SWMP contains no discussion of activities conducted by the Authority relative to the residential requirements of the Municipal Permit.

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9.0 PUBLIC EDUCATION AND PARTICIPATION COMPONENT

The Municipal Permit and Industrial Permit require the Authority to promote public education about and participation in the implementation of the SWMP. This section describes the mechanisms put in place by the Authority to comply with this requirement.

The Provisions of the Municipal Permit require the Authority to:

B.5.a.(6) and B.5.b.(10)—Assess and adapt the water quality priority conditions and improvement strategies during the term of the Municipal Permit. The Copermittees must evaluate the components outlined in WQIP water quality improvement strategies and assess their progress toward meeting numeric goals. Because the Copermittees' strategies include education and public participation efforts and programs, the effectiveness of these programs must be assessed. Recommendations for modifications to the WQIP program are solicited through the public participation process. Section 9.2.2 has been prepared to address this requirement.

E.7—Implement a public education and participation program in accordance with the strategies described in the WQIP. Copermittees are required to include education and outreach to the public and to encourage public participation in the strategies to improve water quality. Sections 9.1 and 9.2 have been prepared to address this requirement.

The Sections in the Industrial Permit require the Authority to:

IX—Designate a properly trained and certified QISP to train employees responsible for, or whose duties apply to, implementing the programs and requirements of this SWMP (if the Authority enters Level 1 or 2 status). Section 7.6 has been prepared to address this requirement.

X.H.1.f—Ensure that all team members responsible for implementing the Industrial Permit requirements, such as BMP implementation, BMP effectiveness evaluations, visual observations, and monitoring activities, are trained to implement these activities. The Authority must identify the personnel that require training, their responsibilities, and the training they receive, and must provide a training schedule. Sections 7.0 and 9.1.2.2 have been prepared to address this requirement.

9.1 EDUCATION

As required by Provision E.7 of the Municipal Permit, Sections IX.A.3.b and X.H.1.f of the Industrial Permit, and strategies outlined in the San Diego Bay WQIP, the Authority conducts a comprehensive education and training program that measurably increases awareness of target populations with respect to the storm drain system, the impacts of urban runoff on receiving waters, and the BMPs (both structural and non-structural) that are implemented to reduce storm water quality impacts to the MEP. The Municipal Permit specifically requires the Authority to:

- 1) Implement educational activities to address pollutants associated with the application of pesticides, herbicides, and fertilizers, and other WQIP-identified pollutants of concern (e.g., copper and zinc in wet weather discharges).
- 2) Facilitate proper management and disposal of oils and toxic materials.
- 3) Reach out to specific target audiences on the basis of high-risk behaviors and pollutants of concern, as applicable to SAN.

The Authority's education efforts outlined in the SWMP are intended to increase understanding of storm water management issues and to help promote behavioral changes that will reduce storm water pollution to the storm drain system and ultimately San Diego Bay. Public education is also one of the regional strategies in the WQIP. Education efforts will support the goals of the Authority and other jurisdictional programs by gaining support from the public, staff, and tenants and unifying the effort across all operations within the San Diego Bay WMA. The Authority's training program objectives include:

- Providing useful guidance to develop outreach and training programs that support the successful implementation of the Authority's SWMP
- Encouraging participation by all personnel, tenants and contractors
- Maximizing consistency in information and helping adapt education and outreach to the appropriate personnel, raising their knowledge and awareness of the issues related to storm water and urban runoff

This section provides a general description of the content, form, and frequency of training developed for Authority staff and airport tenants, as applicable. The Authority has also implemented community-based social marketing strategies to reach and educate the general public and school children about storm water pollution and storm water pollution prevention issues.

9.1.1 TARGET AUDIENCES

The Authority's storm water education program targets the following audiences: Authority departments and personnel, SAN industrial and commercial tenants, the traveling public using the airport, the general public and school children, and construction site project managers, developers, and contractors. While there is no residential land use within the jurisdiction of SAN, as one of the Responsible Parties the Authority supports and participates, where reasonable, in the Copermittees' regional and WMA outreach efforts to residential communities. Additional training may be given or required of those Authority tenants or departments exhibiting high-risk behaviors, or that are subject to escalated enforcement because of noncompliance actions or issues.

9.1.2 STAFF TRAINING ELEMENT

Authority staff members involved in the implementation of the SWMP receive continual training related to their job duties. The Authority uses formal and informal training mechanisms to educate tenants and department personnel about storm water pollution prevention and BMPs. The most comprehensive training is provided annually to Authority management and staff. This training involves classroom training at a divisional level for the FDD, ADC, the PD, FMD, and EAD staffs. Much of the training is provided in house and on the job, and through attendance at meetings, seminars, and conventions. EAD staff members regularly attend external professional training and development workshops and training events. Most FDD staff that are involved in development planning and approval as well as construction project management and oversight receive more frequent training, refreshers, and reminders at staff meetings. These Authority staff members are responsible for (1) implementing BMPs; (2) conducting inspections, sampling, and visual observations; and (3) managing storm water runoff. They receive more intensive and more frequent training that is geared to their specific responsibilities. Education mechanisms initially used to train Authority staff members who are involved in SWMP implementation include classroom seminars and workshops, as well as specific printed and audio/visual guidance on BMPs and storm water management procedures.

9.1.2.1 Trainer Qualifications

As described in Section 7.6, if the Airport enters Level 1 status under the Industrial Permit, the Authority will designate a staff member or contractor with appropriate QISP certifications to lead training for the Authority employees who are responsible for SWMP implementation activities. However, if the Authority remains in the baseline status under the Industrial Permit, EAD, together with other appropriate departments such as FDD and ADC and/or other contractors, will conduct training for Authority personnel.

9.1.2.2 General Storm Water Topics

The training program provides Authority personnel responsible for implementation of various components or elements of the SWMP with an understanding of the following topics:

- Basic urban runoff concepts for all personnel, such as the distinction between the storm drain system and the sanitary sewer system, and the impacts of urban runoff on receiving waters
- California's Statewide NPDES Permit requirements, including the Industrial Permit, Municipal Permit, the CGP, and federal, other state, and local water quality regulations
- Water quality impacts associated with land development and construction site management and control measures to address and minimize them
- The Authority SWMP, including the IDDE Program
- The San Diego Bay WMA WQIP, including the Authority focused priority water quality conditions and pollutants of concern, water quality goals, and water quality improvement strategies
- Storm water and non-storm water inspections and self-audits
- Prohibited discharges to the MS4
- Hazardous materials disposal and containment
- Spill response, containment, and recovery
- Preventive maintenance
- Water quality awareness for emergency/first responders
- Integrated pest management
- Minimum required and advanced BMPs and their proper implementation
- The connections between daily airport operations and activities, construction activities, and water quality impacts
- Advancements in BMP technologies

Annual training is a joint effort among EAD, FDD, and ADC staff to emphasize the relationships between the requirements of the Municipal Permit, WQIP, Industrial Permit, CGP, SWMP, construction SWPPPs or WPCPs, and any relevant project and contract documents or leases. Continuous training may also include in-house presentations, emails, the Authority intranet, monthly ramp-walk inspections, new-hire reviews, and training programs led by outside agencies. Those Authority staff members not directly involved in SWMP implementation receive annual basic training to increase their general awareness of storm water issues at

work and at home. This training generally emphasizes pollution prevention methods. General storm water pollution prevention information is also a part of safety training, incoming new employee orientation, and other training opportunities, as appropriate. Training opportunities also include workshops, audio/visual guidance on BMPs, announcements, posters, displays, and company events. A training schedule is used to track employees or departments that have received or require training, and reminders are provided for employees to receive refresher training.

9.1.3 EDUCATION OUTREACH ELEMENT

Specific training for airport tenants involved in industrial and commercial activities at SAN is generally accomplished through:

- Onsite monthly and annual inspections, training meetings, ad-hoc site visits, site audits, and ramp walks
- Seasonal training sessions emphasizing the expectations for an upcoming dry or rainy season
- Refresher training sessions conducted by the EAD facilities for high-risk activities, as needed
- Pre-bid, pre-construction, and ongoing project progress meetings for construction sites

Training for construction site contractors is described in Section 5.7. Both the Tenant Safety Committee and the Lindbergh Airline Managers Council meet monthly to discuss a variety of operational issues, and the Authority EAD makes use of these meetings to provide training and information about storm water management. The annual site inspection, site audits, and monthly ramp walks and inspections also provide opportunities for EAD staff to provide training and educational materials to tenants. Topics of education include storm water laws, regulations, permits, the SWMP, BMPs, general urban runoff concepts, Authority rules and regulations, materials and waste storage and proper disposal, and storm water pollution prevention. Tenant training also focuses on proper BMP implementation for high-risk activities, such as fueling and hazardous waste storage. Authorized non-storm water discharges and methods to control them (as described in Section 3.0) are also covered in training.

The Authority uses SAN itself as a venue to highlight and/or emphasize the education and outreach efforts developed by others that are directed at school children and the general public. The Authority Public Art Program reserves 2 percent of the total costs of project construction in the Capital Program and Master Plan budgets to fund public art at the airport. Billboards, banners, display cases, and the Terminal 2 Youth Art Wall are used to highlight the existing efforts such as the Caltrans “Don’t Trash California” campaign. The Green Build provided the opportunity for art to be incorporated into the design and build process, which now displays art projects relating to the San Diego environment. The Authority also provides support to Copermittees’ Regional Residential Education Plan.

The Authority uses several mechanisms on a daily basis year-round to educate both tenants and the general public. These mechanisms include (1) the Authority webpage, (2) storm drain stenciling, (3) posters, banners, and signage in the terminals and parking lots, (4) brochures, (5) public service announcements (PSAs) in the terminals, (6) collaborative efforts, (7) special presentations to the public, (8) airport tours, (9) presentations to tenants and staff, and (10) monthly ramp walks. Each of these mechanisms is briefly described as follows:

- 1) **The Authority Webpage:** The EAD has a webpage (<http://www.san.org/Airport-Projects/Environmental-Affairs>) that features several environmental issues at SAN, including storm water management. The webpage, which is accessible by the general public, Authority staff, and tenants, presents important SAN documents related to storm water such as the SWMP, the WQIP, Sustainability Policy, Sustainability Reports, Municipal and Industrial Annual Reports, Illicit Discharge Detection and Elimination Annual Reports, and new development Environment Impact Reports. Details

are also provided on the Green Build, North Side Improvements, and LEED certifications. Once approved by the Regional Water Board, the WQIP and new BMP Design Manual will be made available on the Authority webpage. The webpage provides contact information for the EAD, affording the general public another opportunity to review and comment on the SWMP and the BMPs described in it.

- 2) **Storm Drain Stenciling:** Warning stencils are placed in and around storm drain inlets throughout the Airport (e.g., “No Dumping” warning signs). These warnings notify staff, tenants, and the general public of the need to protect storm drain inlets.
- 3) **Posters/Banners/Signage/Displays in Terminals and Parking Lots: The Authority participates in billboard programs and displays that promote anti-litter campaigns** and encourage habitat restoration. These billboards are placed strategically to reach a broad audience.
- 4) **Brochures:** Outreach materials, such as the Airport Recycling Brochure, are also made available to the general public. These materials provide information that individuals can use to help prevent storm water pollution at SAN.
- 5) **Public Service Announcements:** “Think Blue” PSAs have aired in the Terminal 2 baggage claim area. The PSAs raise public awareness about the impacts of storm water pollution and how it can be prevented.
- 6) **Collaborative Efforts:** The Authority collaborates with community groups, local organizations, and other agencies and jurisdictions to provide outreach to the general public regarding storm water pollution prevention. The Authority is applying the concepts of community-based social marketing to public education efforts, and is seeking to collaborate with other organizations to leverage public outreach methods. To date, the Authority has collaborated with local environmental groups (non-governmental organizations [NGOs]) that share the goals of effective storm water management at SAN and protection of San Diego Bay. The Authority has collaborated with NGOs on (1) environmental campaigns that target local school children, (2) bilingual natural resource conservation campaigns aimed at the general public and schoolchildren, and (3) efforts to educate the public and children about the harmful effects of litter, cigarette butts, plastics, and other storm water pollutants in the region’s waters. Authority staff are also members of community organizations and serve as board directors and committee members for local nonprofit groups.
- 7) **Special Presentations/Events:** The Authority presents storm water management information to grade school and high school students about environmental issues at SAN. Presentations are given at forums open to the public. Information booths at community events, such as local Earth Day celebrations, allow Authority staff to conduct public outreach. Authority staff also present at various public seminars about their storm water programs.
- 8) **Airport Tours:** Tours are offered to educate and engage the public on airport operations and activities. Special tours are geared toward school children in grades two through eight, and are offered twice per month. Additional tours for the general public are offered twice weekly, and discuss topics such as the art program, endangered species areas, and general activities at SAN.
- 9) **Tenant Presentations:** The Authority uses internal presentations during tenant and staff meetings to inform tenants of updates to the SWMP. For example, EAD gave presentations at 12 Tenant Safety and Security Committee meetings during the 2013–2014 reporting period. Airline station managers also receive information on SWMP updates during monthly Lindbergh Airport Managers Council (LAMC) meetings.
- 10) **Monthly Ramp Walks:** EAD participates in monthly ramp walks with tenants to observe activities and operational areas. These ramp walks provide an opportunity for EAD to educate tenants about storm water BMPs.

The Authority intends to use community-based social marketing as the backbone for designing and implementing effective public outreach and education programs. The Authority continues to look for opportunities to partner with other Copermittees, other governmental agencies (federal, state, and local), and non-profit organizations and NGOs. Each year, the Authority's Municipal Permit Annual Report describes the actual outreach and education mechanisms put to use, and provides a general indication of the target audience.

9.2 PUBLIC PARTICIPATION

The goals of the SWMP Public Participation Component are to facilitate public participation in SWMP implementation and to engage the public in sustaining and improving the Authority's storm water management efforts. An educated public generally is a more effective partner in preventing storm water pollution. As such, there is some overlap between the Authority's public education efforts described in Section 9.1 and the public outreach efforts described in this section. Public participation is enlisted in two primary ways: (1) participation in implementation of SWMP programs, and (2) public feedback on SWMP programs. Feedback is used to improve the SWMP itself and to improve implementation of the SWMP.

The Authority's public participation program is directed primarily at Authority staff and the airport tenants, and tries to address the general public to the extent possible.

9.2.1 PUBLIC PARTICIPATION OPPORTUNITIES

In addition to daily interactions between the tenants, Authority staff, and the public, several mechanisms are used to allow airport tenants, staff, and the public to participate in the implementation and ongoing development of the Authority's SWMP. The Municipal Permit requires the Authority to provide a minimum of three opportunities for public participation:

- 1) A process for members of the public to participate in updating the highest priority water quality conditions, numeric goals, and water quality improvement strategies in the WQIP
- 2) Opportunities for members of the public to participate in providing the Authority recommendations for improving the effectiveness of the water quality improvement strategies implemented within the Authority's jurisdiction
- 3) Opportunities for members of the public to participate in programs and/or activities that can help prevent or eliminate non-storm water discharges to the MS4, reduce pollutants in storm water discharges from the MS4, and/or protect the quality of receiving waters

These mechanisms can be separated into two categories: those available to all (including the general public), and those additional mechanisms that are available to Authority staff and airport tenants. Public participation mechanisms available to all include (1) regular meetings of the Authority Board and subcommittees; (2) regular meetings of the various Copermittee committees and workgroups; (3) WQIP public workshops; (4) stakeholder engagement; (5) WQIP updates; (6) the Authority webpage, (6) the San Diego County Project Clean Water webpage; (7) the Copermittees' Public Hotlines; (8) outreach events; and (9) collaborative efforts with the community. Additional public participation mechanisms available to Authority staff and airport tenants include (1) the Authority's 24-hour telephone line/public hotline; (2) the Airport Advisory Committee; (3) the Tenant Safety Committee; and (4) the Lindbergh Airline Managers Council. The two categories of participation mechanisms and their components are described in Sections 9.2.2 and 9.2.3.

9.2.2 PUBLIC PARTICIPATION OPPORTUNITIES AVAILABLE TO ALL

San Diego Regional Airport Authority Board Meetings

The Authority Board is committed to ensuring that all SAN staff and tenants comply with all environmental laws. The tenants, Authority staff, and the public are encouraged to review and comment on the San Diego Airport SWMP, thereby helping to improve both the plan and its implementation. SAN tenants and staff are encouraged to speak directly to the Board during public meetings. All Board, Board Committee, and Airport Authority Advisory Committee meetings are open to the public and provide public comment periods.

Copermittee Meetings

The Copermittees meet regularly to discuss various aspects of the Storm Water Management Programs being implemented throughout San Diego County. In addition to the regular meetings of the Copermittee Management Committee, the Copermittees have established a number of subcommittees and workgroups. All meetings of the Committees, the subcommittees, and workgroups are open to the general public. These meetings provide numerous opportunities for public participation in storm water management activities, both throughout the region and at SAN. Attendees include a wide variety of experts, including representatives of federal, state, and local agencies, industry representatives, environmental groups, consulting firms, product vendors, and academic and research institutions, as well as the general public.

WQIP Public Workshops

Collaboration in the WQIP public participation process to date has included two Responsible Party public workshops aimed at educating and engaging the public in the WQIP process and identifying water quality issues in the WMA. In an effort to better facilitate communication between WQIP stakeholders and the general public, the Copermittees created the WQIP Consultation Panel (Consultation Panel). The Authority works with the Consultation Panel, which includes representatives from the Regional Water Board, environmental interest groups, development groups, and “at-large” interest groups, in the continuous development of water quality goals and strategies.

Stakeholder Engagement

SAN’s stakeholders include the general public, business leaders, local governments, environmental and community-based groups, and transportation agencies. Authority Board Members engage with stakeholders on a regular basis to support collaboration and transparency within their business and environmental practices. These stakeholders are encouraged to participate in public Board meetings, become involved in SAN activities via social media and public tours, and connect with Authority Board members via the contact information provided on www.san.org. To further support stakeholder participation, the Authority has formed a citizen’s advisory committee to assist with planning and development of SAN facilities. The Authority Advisory Committee serves as a communication mechanism for stakeholders to provide recommendations to the Board on issues under the Authority’s responsibility.

Water Quality Improvement Plan Updates

The WQIP will be assessed during annual reporting and preparation of the Report of Waste Discharge, a required element of the Municipal Permit. During these assessments, the Consultation Panel will be consulted on proposed updates to the WQIP. At this time, the public will have the opportunity to comment on all aspects of the airport SWMP, as well as highest and focused priority water quality conditions, sources, numeric goals, and water quality improvement strategies outlined in the WQIP. The Report of Waste Discharge will be submitted no later than December 29, 2017; therefore, the period of public participation is anticipated to be during the spring and summer of 2017, but then annually after that during WQIP reporting.

Authority Webpage

The Authority webpage features several sections regarding the environmental issues at SAN (<http://san.org/Airport-Projects/Environmental-Affairs>), including storm water management, as previously described. Schedules for upcoming Authority Board meetings are posted on the webpage and the public can view the results of the sustainability efforts at SAN established in the 2008 Sustainability Policy (<http://sustain.san.org>). Results of these efforts include ways that the Authority is integrating community involvement, public outreach, and stakeholder engagement into the airport's operations and business practices.

Project Clean Water Webpage

Partly in response to its duties as the Principal Copermittee to the 2007 Municipal Permit, the County of San Diego established the Project Clean Water webpage (www.projectcleanwater.org) that features both general and specific information on regional water issues and the local Storm Water Management Programs. The webpage features contact information and direct web-links to the Authority. The webpage is intended to represent a major portal for public participation in storm water management regionally and at the individual jurisdictional level, and is intended to continue to serve as the Regional Clearinghouse for uploading reports, monitoring results, and other WMA and regional information, as required by the 2013 Municipal Permit

Copermittees' Public Hotlines

The Copermittees have established regional hotlines: the Regional Storm Water Hotline and the Think Blue Hotline. Both are toll-free 800-numbers that allow the general public to obtain contact information for any of the individual Jurisdictional Runoff Management Programs, including the Authority's. The hotlines provide a mechanism for the general public to report unauthorized non-storm water discharges and/or other storm water concerns, which are then referred to the appropriate jurisdiction. The hotlines provide services in English and Spanish and are available 24 hours a day.

The Regional Storm Water Hotline is: (888) 846-0800.

The Think Blue Hotline is: (619) 235-1000 or (888) 844-6525.

Outreach Events

Outreach events for the Authority staff, tenants, and the general public allow EAD and these entities the opportunity to exchange information, ideas, and opinions about storm water management issues and those issues specific to SAN. Outreach events have both an education and a public participation component. Such events promote public participation and further environmental stewardship by tenants, staff, and the general public. Events include meetings, employee open houses, cleanup, recycling, and community events, and presentations to various groups, clubs, and organizations.

Collaboration with the Community

To date, the Authority has collaborated with local environmental NGOs that share the goals of effective storm water management at SAN and protection of San Diego Bay. The Authority has collaborated with NGOs on environmental campaigns that target local school children and on bilingual natural resource conservation campaigns aimed at the general public and school children. Several of these collaborative efforts have resulted in displays at the Children's Art Wall in Terminal 2. The Authority has also collaborated with NGOs to educate the public and children about the harmful effects of litter, cigarette butts, plastics, and other storm water pollutants. The Authority continues to seek and support such collaborations to promote environmental stewardship among the public and school children. These collaborative efforts provide another opportunity for the public to share ideas and concerns regarding storm water pollution prevention with the Authority. The Authority also supports three local watershed cleanup events: (1) Annual California Coastal Cleanup Day, (2) Annual Creek to Bay Cleanup, and (3) EarthFair in Balboa Park.

9.2.3 ADDITIONAL PUBLIC PARTICIPATION OPPORTUNITIES AVAILABLE TO AUTHORITY STAFF AND AIRPORT TENANTS

Authority's 24-Hour Telephone Line/Public Hotline

Authority staff, tenants, and the general public can always voice immediate storm water concerns directly to the Authority using the Airside Operations Department 24-hour telephone line/public hotline. In addition to providing Authority staff, tenants, and the general public with another link to EAD, the telephone line enables callers to report unauthorized non-storm water discharges and other storm water concerns. Tenants and staff can also direct questions via the Hotline to EAD regarding appropriate implementation of BMPs and the SWMP as a whole.

The Authority's 24-Hour Hotline is: 619-400-2710.

Airport Advisory Committee

The Airport Advisory Committee serves as a communication liaison between airport tenants, City representatives, and the Authority. During these meetings, Committee members discuss issues related to SAN development and planning and receive recommendations from the public and tenants. All recommendations are submitted to the Authority Board for review.

Tenant Safety Committee

The Tenant Safety Committee is another opportunity to encourage tenants and Authority staff to take ownership of the SWMP and to help ensure effective implementation of the plan. During monthly committee meetings, storm water management concerns are presented by EAD and discussed with tenants and staff. At the same time, tenants and staff are encouraged to submit comments on the SWMP and its implementation during the meetings.

Lindbergh Airline Managers Council

Tenants and Authority staff meet monthly to discuss and improve the operational aspects at SAN. During these meetings, EAD presents storm water program updates to airline station managers and tenants and staff are encouraged to become involved in the SWMP, take ownership of the SWMP, and help ensure SWMP implementation. The meetings allow for frank exchange of information and opinions regarding storm water management concerns at SAN.

FMD Status Meetings

EAD staff members attend FMD's monthly status meetings to encourage communication and cooperation among departments. FMD and EAD work together to achieve many of the strategies in the storm water programs, and this provides an opportunity to openly discuss plans and developments relating to Airport storm water management.

9.3 PUBLIC PARTICIPATION AND EDUCATION OUTREACH COMPONENT EFFECTIVENESS ASSESSMENT

To support the iterative and adaptive management process of the WQIP required under Provision B.5 of the Municipal Permit, the Authority will assess the effectiveness of its education, training, and public participation programs as part of the re-evaluation of WQIP water quality improvement strategies. The Authority's assessment of WQIP goals and strategies is described in Section 11.0.

9.4 PUBLIC PARTICIPATION AND EDUCATION OUTREACH COMPONENT PROGRAM REVIEW AND MODIFICATION

The Authority has reserved this section to identify and document future changes to the Public Participation and Education Outreach Component of the SWMP. Section 13.0 discusses the program modifications made to the March 2008 version of the SWMP to bring this document into compliance with the renewed Municipal Permit.

10.0 FISCAL ANALYSIS COMPONENT

10.1 INTRODUCTION

The San Diego County Regional Airport Authority Act, the Authority's enabling legislation, frames the financial parameters of the Authority. As a financially self-sufficient agency, the Authority does not rely on taxpayer dollars or any city or county funds for its operations. As of June 2014, the Authority held total assets of over \$2.2 billion. The Municipal Permit requires that the Authority secure the resources necessary to meet the requirements of Order No. R9-2013-0001. The Authority will annually conduct and report the results of a fiscal analysis of its jurisdictional runoff management program in its entirety (including jurisdictional, watershed, and regional activities).

10.2 FISCAL ANALYSIS METHODS

The fiscal analysis identifies the various categories of expenditures attributable to the jurisdictional runoff management program and outlines the program budget for the current year, including a description of the sources of the funds that are proposed for use.

10.2.1 AUTHORITY BUDGET PROCESS

The Authority operates on a fiscal year from July 1 through June 30. The budget process begins in November, with senior management updating, reviewing, and formulating the Authority's long-term goals and strategies. At the same time, division managers and staff develop programs, plans, and objectives for the following fiscal year. In January, the Finance and Asset Management staff review the first six months of the then-current fiscal year and departments submit budget requests that reflect operating needs and programs to achieve the Authority's goals and objectives. Personnel, contractual services, utilities, maintenance, supplies and materials, business development, employee support, fixed assets (property, plant, and equipment), and capital projects are proposed and reviewed. The Finance and Asset Management department, Talent, Culture & Capability department, Purchasing department, and Facilities Development Department analyze the requests and determine the cost impact, where appropriate. Meetings are held with each division to review the budget requests. To ensure that the budget is adequately funded and to maintain the Authority's strong financial condition, the Finance and Asset Management department prepares a revenue budget that incorporates budget expenditure requests into the rate-setting formula to determine projected rates, fees, and charges to the airlines and other tenants. Budget workshops are held with the Board to review the budget and receive further direction. The Board adopts the budget as a whole. It may be amended as required, pending Board approval, at any time during the year.

The Authority has four sources of revenue: (1) airline revenue; (2) non-airline revenue; (3) non-operating revenue; and (4) investment earnings. Airline revenue is primarily from landing fees, terminal rents, and security related fees. Non-airline revenue is composed of public parking fees, terminal and other concessions, rental car fees, and ground rents. Non-operating revenue is primarily passenger facility charges (PFCs), Federal Aviation Administration (FAA) Airport Improvement Program (AIP) grants, airport revenue bonds, and short-term borrowing using commercial paper.

The divisional and departmental budgets, addressing the Authority's overall goals, objectives, and mandated obligations, contribute to an expense budget. The expense budget is composed of costs for salaries, wages, benefits, operating equipment and systems, safety and security, maintenance, utilities, contractual services, business development (including advertising and promotional activities), various property lease payments, debt service, and capital improvements. The Capital Improvement Program is a rolling three- to five-year program that provides for critical improvements and asset preservation. The program includes projects that address federal security requirements, airfield safety and capacity, terminal building improvements, electrical upgrades, and environmental pollution prevention/remediation needs. Funding sources for the

projects include FAA AIP grants, PFCs, airport operating revenues, airport revenue bonds, and short-term borrowing using commercial paper.

There are “revenue diversion” restrictions imposed by federal laws and regulations on the use of Authority funds. The expenditure of Authority funds off airport property may violate federal law. Penalties for violation of the federal “revenue diversion” restrictions are severe and include withholding of current and future grant funds, withholding of other FAA approvals, and other civil penalties.

10.2.2 BUDGET FOR STORM WATER MANAGEMENT PROGRAMS

Currently, the Authority’s fiscal analysis of the storm water management program examines previously adopted budgets and expenditures against program needs to develop adequate budgets for future years. The methodology incorporates costs for program administration, planning, monitoring, necessary infrastructure, and other capital improvements. The fiscal analysis includes an assessment of personnel time and expenditures related to implementation of the SWMP and a description of funding sources and any legal restrictions on the use of the funds.

The EAD summarizes the expenditures required each year to execute the programs outlined in the SMWP. Most of the expenditures related to implementation of the SWMP pass through the EAD and the FMD. The EAD is responsible for administrative functions within the Storm Water Management Program, including fiscal analysis, budget management, and planning. The EAD carries out the administrative activities for the program, including (1) general program budget analysis and planning; (2) inspections and enforcement; (3) monitoring and reporting; (4) coordination and involvement with the Copermittees and agencies; (5) assistance to other groups outside the department; (6) internal and external training, workshops, and public events; and (7) assistance in securing the materials and equipment necessary to perform required tasks. The FMD is generally responsible for the operations and maintenance (O&M) aspects of the program, including (1) inspection and maintenance of storm drain systems; (2) maintenance of facilities and grounds; (3) securing of materials, equipment, and vehicles necessary to perform required tasks; and (4) support for management of the Authority’s wastes.

The various expenditures attributable to the jurisdictional runoff management programs include:

- Personnel Expenses
 - EAD
 - FMD
- Non-Personnel Expenses
 - NPDES Permit Fees
 - Professional Services
 - Legal
 - Consulting
 - Routine Maintenance
 - Ramp Cleaning/Runway Rubber Removal
 - Landscape Maintenance
 - MS4/BMP Cleaning/Maintenance
 - Parking Lot and Street Sweeping

- Hazardous Waste Disposal
- Equipment Purchases
- Education, Training, and Public Outreach
- Capital Improvement Program Expenses (to the extent that they exist)

10.3 UPDATE TO FISCAL ANALYSIS METHODS

Each year, the Authority will conduct an annual fiscal analysis of the storm water management program, as outlined above, as an attachment to the Jurisdictional Runoff Management Program Annual Report. The fiscal analysis will report four general categories of expenditures: jurisdictional expenditures, watershed shared expenditures, regional shared expenditures, and total program expenditures, including a description of the specific capital, operation and maintenance, and other expenditure items in each category of expenses. The analysis will include any personnel expenses and staff resource expenditures needed and allocated to meet the requirements of the Municipal Permit in the current reporting year. The analysis will also identify sources of funds that are proposed to meet necessary jurisdictional runoff management program expenditures in the following fiscal year, including legal restrictions on the use of such funds.

10.4 FISCAL ANALYSIS COMPONENT PROGRAM REVIEW AND MODIFICATION

The Authority has reserved this section to identify and document future changes to the Fiscal Analysis Component of the SWMP. Section 13.0 of this SWMP details the program modifications made to the March 2008 version of the SWMP to bring this document into compliance with the renewed Municipal Permit and Industrial Permit.

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11.0 EFFECTIVENESS ASSESSMENT COMPONENT

In accordance with Municipal Permit Provisions D.4 and F.3, the Authority annually assesses the effectiveness of SWMP implementation, and specifically the effectiveness of each major component of the Authority's urban runoff management program, as described in this SWMP; the effectiveness of each significant type of jurisdictional activity/BMP implemented; and the effectiveness of the Authority's urban runoff management program as a whole. The Authority will also assess progress toward achieving interim jurisdictional goals outlined in the WQIP and assess the effectiveness of selected strategies. Additionally, Industrial Permit Section XV mandates an annual comprehensive industrial facility compliance evaluation, involving inspection of all industrial areas and BMPs as well as review of sampling and inspection records from the previous year. Additional assessments are required if SAN enters Level 1 or Level 2 discharger status. The Authority's approach to the annual and long term effectiveness assessment is described below.

11.1 INTRODUCTION

Since 2004, the Authority has been evaluating the effectiveness of the SAN SWMP to varying degrees under both the Industrial Permit and the Municipal Permit. Beginning with the 2013 Municipal Permit, the focus of assessment changed to encompass required evaluations of the WQIP. The Copermittees have developed, and will continue to refine criteria that allow for an assessment of the effectiveness of storm water management efforts implemented in accordance with the Municipal Permit. The Authority will continue to collaborate with the Responsible Parties to outline standardized methods and procedures for assessing the effectiveness of local urban runoff management programs, which incorporate WQIP strategies. The WQIP assessment program is described in Sections 11.2, 11.5.1 and 12.0.

11.2 MUNICIPAL PERMIT ASSESSMENT COMPONENTS

Municipal Permit Provision D.4 mandates two types of general assessments: (1) receiving water assessment; and (2) MS4 outfall assessment. Additionally, the Authority will periodically assess progress toward achieving goals related to the focused priority condition outlined in the San Diego Bay WQIP, as well as contributing to watershed-wide special studies assessments. Finally, the Authority will perform assessments integrating the annual assessment components, JRMP and WQIP implementation evaluations, and monitor data to evaluate the overall effectiveness of the WQIP and this SWMP. This iterative process of program assessments and revisions is required to comply with the provisions of the Municipal Permit.

11.3 RECEIVING WATER ASSESSMENT

Receiving water data, collected per the methods discussed in Appendix K of the WQIP, will be assessed in the San Diego Report of Waste Discharge (ROWD). Receiving water data will be collected and analyzed as a watershed and/or regional effort. However, prior to completing the receiving water assessment, the Authority will review their jurisdictional program to compile any available and relevant data that may be used to assess the MS4 contribution to receiving water quality conditions. Jurisdictional Runoff Management Program data that will be compiled may include, but are not limited to, hotline reports, IDDE investigations, industrial and commercial tenant inventories or land use data, inspection results, new BMPs, or new Authority regulations or policies.

Once relevant data have been compiled in regional formats, the Responsible Parties will conduct a watershed assessment as required by Municipal Permit Provision D.4.a.(2).

11.4 MS4 OUTFALL ASSESSMENT

The Authority will assess its MS4 outfall monitoring program annually as part of the San Diego Bay WQIP Annual Report process, described in Section 12.0. Assessments will include evaluations of dry and wet weather outfall monitoring, including field screening and observations, and data collected under the IDDE program (Section 3.0 and Appendix D-2).

Assessments will include the following:

- Non-storm water assessments per Municipal Permit Provision D.4.b.(1):
 - Progress toward effectively prohibiting non-storm water and illicit discharges into the MS4
 - Ranking and prioritization of MS4 outfalls according to threat to water quality
 - Identification of known and suspected sources contributing to non-storm water action level exceedances at highest ranking MS4 outfalls
 - Estimation of volumes and loads of non-storm water discharges
 - Identification of data gaps
- Wet weather MS4 outfall assessments per Municipal Permit Provision D.4.b.(2):
 - Estimation of volumes and loads of storm water discharges
 - Identification of modifications to MS4 outfall monitoring locations and frequencies
 - Identification of known and suspected sources contributing to storm water action level exceedances at highest-ranked MS4 outfalls
 - Identification of data gaps

It is important to note that the assessments conducted under Municipal Permit Provision D.4.b focus primarily on data gathered from the single permit-required MS4 outfall monitoring location (see Appendix D-2 for outfall location and description) and the IDDE program. As described in Section 11.4, additional sampling data gathered under the Industrial Permit will be utilized to measure progress toward meeting the interim and final numeric goals stated in the WQIP.

11.5 SPECIAL STUDIES ASSESSMENT

The Authority is participating in a number of regional and watershed special studies, including the San Diego Regional Reference Streams and Beaches Studies and the San Diego Bay Debris Study. The Authority will collaborate with the other Responsible Parties to evaluate the results and finding from these special studies, as described in Appendix K of the San Diego Bay WQIP. These assessments will be incorporated into the WQIP Annual Reports as well as the ROWD.

11.5.1 FOCUSED PRIORITY CONDITION ASSESSMENT AND INTEGRATED ASSESSMENT

As part of the WQIP process mandated under the 2013 Municipal Permit, the Responsible Parties selected highest and focused priority conditions within their jurisdictions. The process for selecting these conditions is documented in Section 2.0 of the San Diego Bay WQIP. The Authority selected metals (copper and zinc) as the focused priority condition for the Authority jurisdiction, and, based on this selection, the Authority set a number of interim and final goals to evaluate progress. The first of these interim goals coincides with the end of the current Municipal Permit cycle and preparation of the ROWD. At that time, the Authority will

evaluate progress toward achieving these interim goals on the basis of monitoring data and records of program implementation.

Table 11-1 lists the interim goals that have been set to evaluate the focused priority condition, as well as the data that will be assessed and the assessment method. Data gathered from Industrial Permit-required monitoring (described in Appendix D-1) and records of BMP implementation will be used to assess these goals.

**Table 11-1. Assessment of Goals for Focused Priority Condition (Copper and Zinc)
Within Airport Authority Jurisdiction, Current Permit Term**

Numeric Goal	Unit of Measure	Assessment Period and Fiscal Year	Data Assessed	Assessment Method
		Current Permit Term Fiscal Year (FY)17 or FY16 as Noted		
MS4 Discharges Jurisdiction-wide	% of Samples	Dissolved Copper = 71% (FY17)	Wet weather compliance sampling data gathered under the Industrial Permit monitoring program (Appendix D-1)	Comparison of sample results to the Industrial Permit NALs and calculation of percent exceedance
% of Samples With Concentrations Exceeding Industrial Permit NALs		Dissolved Zinc = 62% (FY17)		
OR				
MS4 Discharges Sub-basins 1, 3, and 5 (total or assess individually)	% Load Reduction	Dissolved Copper = 20% (FY17)	Wet weather compliance sampling data for sub-basins 1, 3, and 5 gathered under the Industrial Permit monitoring program (Appendix D-1)	Review of dissolved copper and zinc loads from Sub-basins 1, 3, and 5 and a calculation of load reduction based on a baseline value set during the first WQIP Annual Report
% Load Reduction		Dissolved Zinc = 20% (FY17)		
OR				
MS4 Discharges Sub-basins 1, 3, and 5 (in total)	Acres/ Week	34 Acres/Week (Current Frequency) (FY16)	SWMP implementation records	Confirmation of implementation of street sweeping frequency
Area Treated with Street Sweeping				
MS4 Discharges Sub-basins 1, 3, and 5 (in total)	Square Feet/ Week	Average of 10,000 Square Feet per Week (Current Frequency) (FY16)	SWMP implementation records	Confirmation of implementation of area treated
Area Treated with Rubber Removal and/or Power Washing				

11.6 INDUSTRIAL PERMIT ASSESSMENT COMPONENTS

The Authority will conduct an annual facility evaluation, including an assessment of industrial source areas and BMPs. Additional BMP and facility assessments will be conducted if the Authority enters Level 1 or Level 2 discharger status as a result of NAL exceedances.

11.6.1 ANNUAL EVALUATION

As described in Section 7.0, the Authority will conduct an Annual Evaluation. This evaluation will include an assessment of all BMPs in each industrial drainage area and associated potential pollutant sources to determine whether the BMPs are properly designed, implemented, and effective in reducing and preventing pollutants from industrial storm water and authorized non-storm water discharge. The evaluation also includes review of sampling results and inspection records. Based on the Annual Evaluation, the SWPPP may be revised to ensure (1) the site map is up to date; (2) control of all potential pollutant sources is included in the SWPPP; and (3) proper BMPs are being implemented based on sampling data and visual records.

11.6.2 LEVEL 1 STATUS ASSESSMENTS

As part of the Level 1 ERA evaluation (described in Section 7.0), the Authority will assess industrial pollutant sources that are or may be related to any Level 1 NAL exceedances. Based on this evaluation, the Authority will identify and assess the corresponding BMPs in the SWMP and any additional BMPs revisions necessary to prevent future exceedances.

11.6.3 LEVEL 2 STATUS ASSESSMENTS

If the Authority enters Level 2 status, one of three demonstrations will be completed by a QISP as part of the Level 2 Action Plan and Technical Report, described in Section 7.0. Each evaluation includes additional assessments, listed below.

- Industrial Activity BMP Demonstration
 - An assessment of current BMPs and additional BMPs recommended under the Level 2 ERA Action Plan will be conducted to determine whether these BMPs (1) achieve compliance with effluent limitations in the Industrial Permit; and (2) are expected to eliminate future NAL exceedances.
 - If current and additional BMPs are not expected to eliminate future NAL exceedances, an assessment of the BMP selection methodology will be conducted to describe why any further BMPs are not implemented. This assessment will include an economic analysis of BMP alternatives.
- Non-Industrial Pollutant Source Demonstration
 - An assessment of the relative contributions of the pollutant exceeding NALs from (1) storm water run-on from adjacent properties or non-industrial areas of SAN or aerial deposition, and (2) storm water associated with the Authority's industrial activities will be conducted.
 - An assessment of the monitoring data used to evaluate the relative contributions of non-industrial and industrial sources will be conducted.
- Natural Background Pollutant Source Demonstration
 - An assessment of monitoring data, research, and published literature used to demonstrate that a natural background source is responsible for the NAL exceedance will be conducted.

11.7 PROGRAM REVIEW AND MODIFICATION

The Municipal Permit and Industrial Permit both require an Annual Report that includes an assessment of SWMP effectiveness. The Annual Reports will provide documentation of the SWMP elements and data needed to make decisions regarding refinement of the SWMP. The assessment will document specific strategies implemented each year, comparison to the action levels and numeric goals, effectiveness of the strategies toward meeting goals, need for further action or modification, and recommendations. This process will be used to track the effectiveness of the Authority's jurisdictional runoff management program on an annual basis.

Additionally, the Municipal Permit requires an ROWD at the end of the Municipal Permit cycle. This will include an assessment of the SWMP effectiveness in improving the Authority's focused priority condition. The assessment will document monitoring results and actions implemented in comparison with goals set during preparation of the WQIP. Lessons learned from this assessment will guide an adaptive management process that may lead to modifications to the SWMP as the Authority reevaluates its focused priority condition, water quality goals and schedules, water quality improvement strategies and BMPs, and monitoring and assessment programs. As progress toward achieving goals is made, the Authority's focused priority condition will be re-evaluated, and new priorities will be identified if appropriate.

The Authority has reserved this section to identify and document future changes to the Effectiveness Assessment Component of the SWMP. Section 13.0 of this SWMP details the program modifications made to the March 2008 version of the SWMP to bring this document into compliance with the renewed Municipal Permit and Industrial Permit.

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12.0 REPORTING

12.1 MUNICIPAL PERMIT REPORTS

The Municipal Permit requires Copermittees to submit deliverables in the form of annual reports and updates to ensure compliance. The Authority's JRMP implementation and results will be documented and communicated to the Regional Water Board and the public through the reports described in Sections 12.1.1 through 12.1.4. When requested, the Authority, along with the other Responsible Parties, will appear before the Regional Water Board to present progress reports on implementation of the San Diego Bay WQIP program and individual JRMPs.

12.1.1 TRANSITIONAL REPORTS

Until the first WQIP Annual Report is submitted, the Authority will continue to submit a JRMP Annual Report by October 31 of each year for the previous reporting period of July 1 to June 30. The JRMP Annual Report will include a completed JRMP Annual Report Form (Attachment D of the Municipal Permit) and any required additional information to explain or clarify the responses in the form.

The Copermittees will jointly submit a Transitional Monitoring and Assessment Annual Report by January 31 of each year following each transitional monitoring and assessment reporting period of October 1 through September 30 until the first WQIP Annual Report is submitted. The Transitional Monitoring and Assessment Program Annual Report will include receiving water and MS4 outfall discharge monitoring data, as well as the assessments of those data, and any required reporting from the previous Municipal Permit (R9-2007-0001).

12.1.2 WATER QUALITY IMPROVEMENT PLAN ANNUAL REPORT

The San Diego Bay WQIP Annual Report will provide updates to, and results from, the WQIP program. The Authority and other Responsible Parties will submit the WQIP Annual Report for each reporting period of July 1 to June 30 before January 31 of the following year. In accordance with Provision II.F.3.b.(3) of the Municipal Permit, the WQIP Annual Report will include the following information:

- Receiving water and MS4 outfall discharge monitoring data
- Updates on the Authority's (and other Responsible Parties') contribution and progress toward completing special studies, including the results, interpretations, and conclusions following completion of each phase
- Assessments, conclusions, and recommendations for receiving water quality, MS4 outfall discharge reduction, special studies, and WQIP program monitoring
- Progress toward achieving interim and final numeric goals for highest and focused priority water quality conditions for the WMA
- Description of the implemented WQIP strategies and those planned for implementation during future reporting periods
- Description of WQIP strategies that were removed or anticipated but not implemented during the current and previous reporting periods
- Proposed modifications to the WQIP strategies and supporting rationale
- Comments received during the WQIP update public comment period

- Previous modifications or updates incorporated into the WQIP and/or JRMP document
- Proposed modifications to the WQIP and/or JRMP document and supporting rationale
- Completed JRMP Annual Report Form (Attachment D of the Municipal Permit) for each Responsible Party, certified by a Principal Executive Officer, Ranking Elected Official, or Duly Authorized Representative
- Data or documentation used in the WQIP Annual Report, if requested by the Regional Water Board
- Monitoring and assessment data used in the WQIP Annual Report, which will be uploaded to the California Environmental Data Exchange Network (CEDEN) and made available on the Regional Clearinghouse described in Section 12.1.4.

12.1.2.1 Water Quality Improvement Plan Update

As part of the adaptive management process, the WQIP will be updated in response to the results of the assessment presented in the WQIP Annual Report. As required under Provision F.2.c.(1)(a) of the Municipal Permit, the Authority and the other Responsible Parties will implement a public participation process to incorporate information, recommendations, and comments from the general public into the WQIP update. The WQIP Consultation Panel will hold a meeting in early 2017 to provide an opportunity for representatives of the Regional Water Board, environmental community, development community, and the public to comment on all aspects of the WQIP update, including the highest and focused priority water quality conditions, sources, and water quality improvement strategies, and to recommend additional updates. The Authority will work with the other Responsible Parties to incorporate the proposed updates to the WQIP, and the supporting rationale, either as part of the WQIP Annual Report or the Report of Waste Discharge.

Final updates will be implemented 90 days after submission of the WQIP updates, unless otherwise directed by the Regional Water Board. Updates to the WQIP will be made available on the Regional Clearinghouse within 30 days following acceptance by the Regional Water Board.

12.1.2.2 Jurisdictional Runoff Management Program Document Update

This SWMP represents the Authority's updated JRMP, in accordance with the requirements in Municipal Permit Provisions F.2.a.(1) and F.2.a.(2). The Authority will also update its SWMP as necessary during submittal of WQIP Annual Reports or as part of the Report of Waste Discharge. The updated JRMP will be made available on the Regional Clearinghouse within 30 days following the WQIP Annual Report submittal.

12.1.2.3 BMP Design Manual Update

The BMP Design Manual is being developed regionally by the Copermittee Land Development Workgroup and will replace the current SUSMP. The updated BMP Design Manual will include the elements described in Section 4.7 of this SWMP. The Authority will continue to implement the current BMP Design Manual (or SUSMP) until the new BMP Design Manual is adopted, which must be within 180 days following submittal to the Regional Water Board

Subsequent updates to the BMP Design Manual will be submitted with the WQIP Annual Reports or the Report of Waste Discharge. The updated BMP Design Manual will be made available on the Regional Clearinghouse within 30 days following completion of the update.

12.1.3 REPORT OF WASTE DISCHARGE

The Authority and the other Municipal Permit Copermittees must reapply for coverage prior to expiration of the Municipal Permit on June 27, 2018, in accordance with the Code of Federal Regulations Duty to Reapply [40 CFR 122.41]. The Report of Waste Discharge will be submitted no later than December 24, 2017, as part of the application for reissuance of Order number R9-2013-0001 (NPDES Permit number CAS0109266).

The Report of Waste Discharge will include the following information:

- Names and addresses of Copermittees
- Names and titles of Authority and Copermittee primary contacts
- Proposed updates and supporting rationale for changes to the WQIP
- Proposed updates and supporting rationale for changes to the JRMP
- Additional updates to the JRMP, WQIP, or BMP Design Manual that were not included in the WQIP Annual Reports
- Applicable information required under federal regulations for reissuance of the NPDES Permit

12.1.3.1 Regional Monitoring and Assessment Report

The Regional Monitoring and Assessment Report will be submitted no later than December 24, 2017, as part of the Report of Waste Discharge. In compliance with Provision II.F.3.c of the Municipal Permit, the Regional Monitoring and Assessment Report will consider receiving water and MS4 outfall discharge monitoring and assessment data, results, and conclusions from previous reporting years. Based on these considerations, the report will assess, within the San Diego region, the following:

- Are beneficial uses of receiving waters being supported or adversely impacted by MS4 discharges?
- What is the progress toward protecting the beneficial uses of receiving waters?
- What are the pollutants or conditions of emerging concern that may impact the beneficial uses of receiving waters?

Recommendations for improving strategies, implementation, and assessment of the WQIP and JRMP will be included in the Regional Monitoring and Assessment Report. Any Authority data used in preparation of the report will be made available on the Regional Clearinghouse described in Section 12.1.4.

12.1.4 REGIONAL CLEARINGHOUSE

The Authority and the Responsible Parties will continue to maintain and update the internet-based Regional Clearinghouse (www.projectcleanwater.org) in accordance with Provision II.F.4 of the Municipal Permit. This Regional Clearinghouse will be organized according to WMA and will continue to be used to make Responsible Party documents available to the public. These documents include, but are not limited to, the following (per WMA):

- WQIPs and all updates
- Annual Reports
- Jurisdictional Runoff Management Program documents and all updates

- BMP Design Manual and all updates
- Special Study reports
- Monitoring data links to CEDEN (where data will be uploaded)
- Geographic information system (GIS) data, layers, and/or shapefiles used to develop applicable maps

In addition, the Authority will provide contact information, the public storm water hotline telephone number and email address, a link to the Authority webpage, information on Authority-sponsored public participation activities available, reports from regional monitoring programs where the Authority is a participant, the Regional Monitoring and Assessment Program, and additional data or information that the Authority deems appropriate for public access.

12.1.5 STANDARD PERMIT PROVISIONS AND GENERAL PROVISIONS

Federal regulation 40 CFR 122.41(l) requires the Authority to notify the Regional Water Board as soon as possible of any changes to the airport property or activities that may result in any of the following:

- Planned physical alterations or additions to airport facilities that may result in a new source of pollutants, or a significant change in the nature or quantity of pollutants discharged
- Anticipated noncompliance with the requirements of the Municipal Permit

Any occurrence of noncompliance that may threaten health or the environment, such as an unanticipated bypass or upset that exceeds effluent limitations, or any violation of maximum daily discharge limitations, will be verbally reported to the Regional Water Board within 24 hours from the time the Authority becomes aware of the incident, followed by a written notification within 5 days (unless the Regional Water Board waives this requirement). The written report must include:

- A description of the incident and its cause
- The period of noncompliance (dates/times)
- If not corrected, anticipated time until correction
- Steps taken or planned to prevent reoccurrence of the noncompliance

All other instances of noncompliance will be included annually in the monitoring reports.

General Provisions of the Municipal Permit require any reports submitted to comply with any Municipal Permit requirements to include an executive summary, introduction, conclusion, recommendations, and signed certified statement covering the Authority's responsibilities, in a hard copy and an electronic copy to the Regional Water Board, unless requested otherwise, and one electronic copy to the USEPA.

12.2 INDUSTRIAL PERMIT REPORTS

An Annual Report will be submitted each year in accordance with Section XVI of the Industrial Permit. If the Authority enters Level 1 or Level 2 status for a NAL exceedance during the reporting period, the Authority will also submit an ERA Report, ERA Action Plan, or ERA Technical Report, as applicable for the exceedance level. These reports are described in Sections 12.2.2.

12.2.1 INDUSTRIAL PERMIT ANNUAL REPORT

The Industrial Permit Annual Report, in a standardized format generated under the Industrial Permit, will be submitted in SMARTS by July 15 following each reporting year (July 1 through June 30). The Annual Report will include the following:

- A Compliance Checklist indicating compliance with all applicable Industrial Permit requirements
- An explanation of any non-compliant activities or events within the reporting year
- A description of any revisions applied to the SWPPP during the reporting year and their location within the SWPPP
- The date of the Annual Evaluation, as described in Section 7.10

The Authority will submit any sampling and analytical results via the State Water Board's SMARTS website within 30 days of obtaining all results for each sampling event.

12.2.2 EXCEEDANCE RESPONSE ACTION REPORTING

An ERA Report will be submitted by January 1, only if the Authority enters Level 1 or Level 2 status at any point during the previous reporting period. ERAs are conducted in response to an annual or instantaneous maximum NAL exceedance, as defined in Section XII of the Industrial Permit. ERA analyses, plans, and reports will be completed by a certified QISP and submitted in SMARTS. The ERA documents required for each level will include the following:

Level 1

- ERA Report
 - A description of any revisions to the SWPPP necessary to address the potential pollutant source(s) related to the NAL exceedance
 - BMP additions or modifications necessary to prevent future NAL exceedances
 - A summary of the required SWPPP revisions
 - The name, identification number, and contact information for the QISP assigned to perform the ERA evaluation and prepare the report

Level 2

- ERA Action Plan
 - A separate ERA Action Plan will be submitted for each new parameter that exceeded the NAL or for equivalent parameters that exceeded NALs in different drainage areas. The Action Plan will identify the BMP demonstration(s) to be performed in each corresponding drainage area to prevent future NAL exceedances.
 - The ERA Action Plan will include a schedule and description of tasks required to complete the BMP demonstration(s).

REPORTING

- ERA Technical Report:
 - The Authority will select a BMP demonstration from the list provided in Sections XII.D.2.a through XII.D.2.c of the Industrial Permit to address the source(s) of each pollutant with a NAL exceedance. The ERA Technical Report will include a detailed description of the BMP demonstration chosen to address each NAL exceedance.
 - The ERA Technical Report will be updated annually to include additional NAL exceedances of the same parameter and drainage area, activity or operational changes, pollutant source(s) changes, and/or additional information acquired through visual observations, evaluations, and sampling as applicable. If no changes are necessary, the Authority will explain in the Annual Report why resubmittal of the ERA Technical Report is not necessary.

Further information about the ERA levels, evaluations, planning, and reporting is provided in Section 7.9.

13.0 MODIFICATIONS TO THE SWMP

This SWMP was updated from the March 2008 version of the SWMP to comply with the new requirements of the Municipal Permit, the Industrial Permit, and to incorporate new developments and BMPs installed during the Green Build North Side Development and other redevelopments at SAN. As part of the iterative process for the WQIP and any required updates to the SWPPP, modifications may continue to be made to this SWMP to reflect programmatic changes and/or strategy improvements as a result of WQIP and NAL assessments required under the respective permits. Proposed changes to the SWMP or applicable program modifications will be included in the Annual Reports for the Municipal Permit and the Industrial Permit.

The organization of this SWMP is based on the Municipal Permit's general structure for JRMP programs. Because the SWMP is also the Authority's SWPPP, requirements for the Industrial Permit were incorporated into the SWMP, including parts of Sections 1.0 and 3.0, Section 7.0, and Appendices A, B, D-1, E, and G. Copies of the permits can be found in Appendices H and I.

Modifications made to the overall structure of the SWMP and incorporated into the SWMP June 2015 Revision to bring this document into conformance with the renewed Municipal Permit and the Industrial Permit include the following:

- Combining previous Sections 3.0 and 9.0 into the new Section 3.0 "Non-Storm Water and Illicit Discharge Detection and Elimination Component."
- Combining previous Sections 10.0 and 11.0 into the new Section 9.0 "Public Participation and Education Component."
- Separating sections regarding compliance with the Industrial Permit from the rest of the SWMP. Section 7.0 was modified so that it could be extracted from the remainder of the SWMP for uploading to SMARTS per Industrial Permit requirements. An attachment to Section 7.0 will include material from other sections of the SWMP that are referenced in Section 7.0, and will be uploaded with Section 7.0 into SMARTS. This attachment is for SMARTS upload purposes only, and will not be included in this SWMP.
- Transferring Tables 1 through 9 from the end of the document into their corresponding sections.
- Rearranging Appendices D-1 and D-2 for wet and dry weather monitoring into Appendices D-1 and D-2 for Industrial Permit Monitoring Implementation Plan and Municipal and BMP Effectiveness Monitoring Plan, respectively.
- Updating the JRMP in accordance with the strategies identified in the WQIP.

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14.0 CONCLUSIONS AND RECOMMENDATIONS

The San Diego International Airport SWMP describes procedures and activities intended to manage and reduce urban runoff pollution to the storm drain system, and ultimately San Diego Bay, from the operations and activities at SAN. This document was prepared by the Authority to be consistent with the Municipal Permit and the Industrial Permit to provide a written account of the various programs and strategies developed to comply with the requirements of these two permits and ultimately to improve water quality of receiving waters in San Diego Bay. The SWMP is a combination of the Authority's JRMP document required by the Municipal Permit and the industrial SWPPP required by the Industrial Permit. This SWMP contains information required by the Municipal Permit for each component of the Authority's storm water management program, including land use planning for new development and redevelopment, construction activities, existing development, illicit discharge detection and elimination activities, and education and public participation activities. It also serves to document the Authority's plans to meet the goals and strategies developed for the San Diego Bay WQIP. The WQIP serves as the tool to assess the effectiveness of Copermittees' individual JRMPs and to track progress toward meeting water quality improvement goals. The iterative process of the WQIP allows jurisdictional programs and strategies to be adapted and modified as the understanding of their impacts on water quality improves.

The requirements of the Industrial Permit are included in this SWMP to provide one document to serve as a reference for all Authority staff and tenants. However, the Industrial section and corresponding appendices and attachments will be extracted and uploaded via SMARTS per Industrial Permit requirements.

Any recommendations for future actions and/or program additions or revisions will be presented in the Annual Reports required by both the Industrial Permit and the Municipal Permit.

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**SAN Storm Water
Management Plan
June 2015**



REGIONAL LOCATION MAP

San Diego International Airport

FIGURE

1

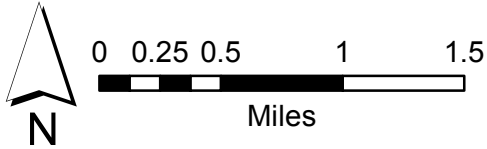
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Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

**SAN Storm Water
Management Plan
June 2015**



**GENERAL VICINITY MAP
San Diego International Airport**

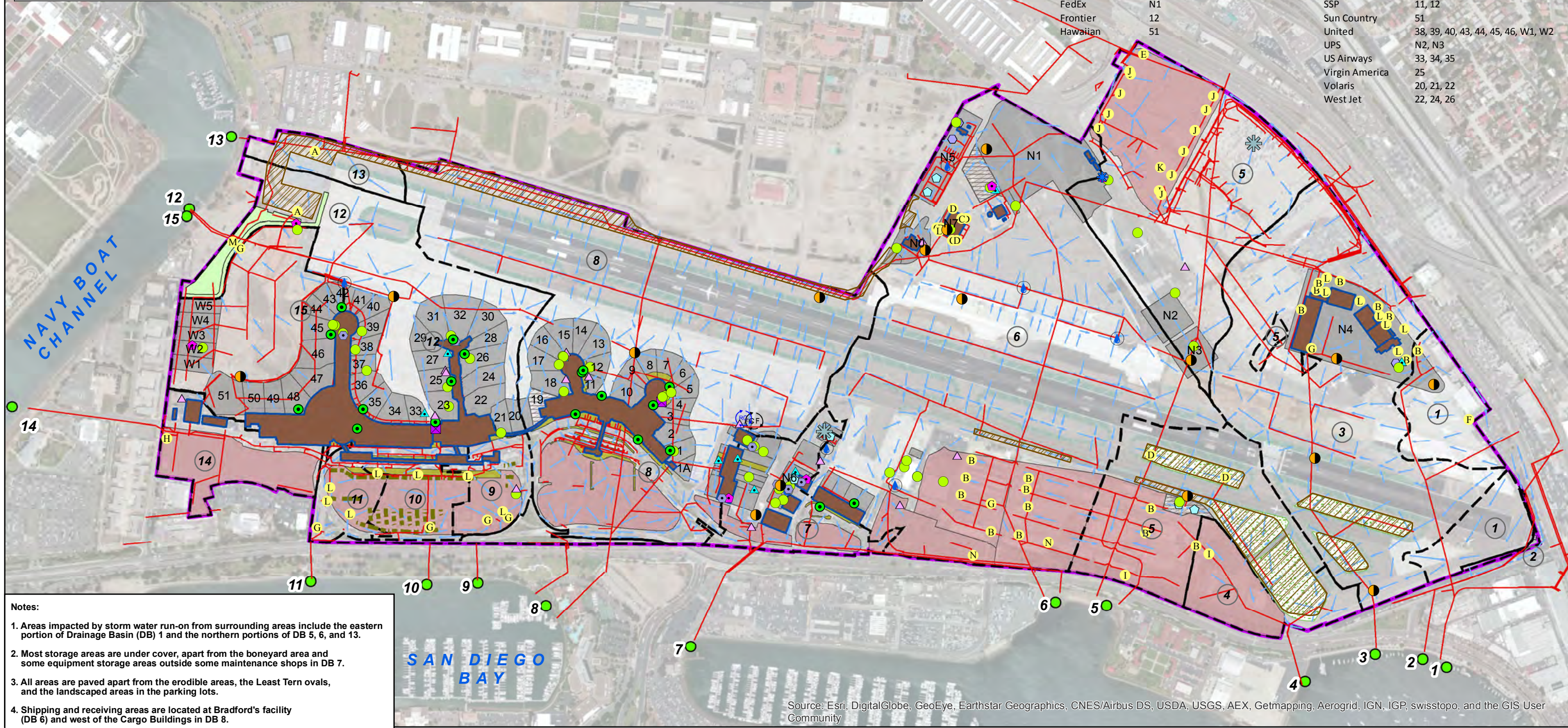
**FIGURE
2**

FIGURES

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Outfall	Drainage Basin and Number	A Inlet Filter	G Contech Storm Filter	Significant Material Storage	Grease Trap
Sampling Location	Airport Operations	B Asphalt Strip-Permeable	H Contech CDS	Dumpster	Industrial Waste
Storm Drain	Commercial	C Bio-Clean Trench Drain Filter	I Clearwater Solutions BMP Unit	Recycling	Loading
Flow Direction	Ground Transportation	D Bio-Clean Grate Inlet Skimmer	J Modular Wetland System	Composting	Material Storage
Least Tern Nesting Area	Industrial Tenant	E Bio-Clean Curb Inlet Skimmer	K Detention Basin	Underground Storage Tank	Metal Storage
Erodible Area	Artificial Turf	F Infiltration Trench	L Bioswale	Fueling	Oil Storage
Building	Airport Boundary	P Pervious Pavers	M Artificial Turf Infiltration	Fuel Storage	Wash Area
			N Aquafiliter CDS		
			Oil/Water Separator		

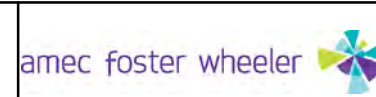
Tenant	Gate/Area	Tenant	Gate/Area
Air Canada	22	HFF	7, 8
Alaska	11, 13, 14, 15, 16, 17, 18	IAS	N2, N3
Allegiant	23	JAL	20, 22
Allied Aviation	N5	Jet Blue	36, 37
American/Envoy	27, 28, 29, 31, 32	Landmark Aviation	N4
ARFF	N0	Mission Yogurt	4
ASIG	N6	SDCRAA	19
Bradford	N7	SeaPort	11C
British Airways	20	Siemens	7, 8
Delta	41, 42, 47, 48, 49, 50, 51, W3, W4, W5	SkyWest	34, 35, 36, 37, 38
DHL	N3	Southwest	1, 1A, 2, 3, 4, 5, 6, 7, 8, 9, 10
ELS	26, 27	Spirit	20, 21, 22, 24, 26, 30
FedEx	N1	SSP	11, 12
Frontier	12	Sun Country	51
Hawaiian	51	United	38, 39, 40, 43, 44, 45, 46, W1, W2
		UPS	N2, N3
		US Airways	33, 34, 35
		Virgin America	25
		Volaris	20, 21, 22
		West Jet	22, 24, 26



- Notes:**
1. Areas impacted by storm water run-on from surrounding areas include the eastern portion of Drainage Basin (DB) 1 and the northern portions of DB 5, 6, and 13.
 2. Most storage areas are under cover, apart from the boneyard area and some equipment storage areas outside some maintenance shops in DB 7.
 3. All areas are paved apart from the erodible areas, the Least Tern ovals, and the landscaped areas in the parking lots.
 4. Shipping and receiving areas are located at Bradford's facility (DB 6) and west of the Cargo Buildings in DB 8.
 5. Equipment maintenance/storage areas are mainly inside, and east of Cargo Buildings in DB 7. Minor maintenance is also performed in ramp areas.
 6. No significant spills or leaks have occurred at SAN in the last five years.
 7. Storm drain inlets are shown on map attached to SC01 in Appendix B.

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

PROJECT: 5025-13-0031		
DATE: JUNE 2015		
DRAWN BY: RMH		
CHECKED BY: AJA		



SAN DIEGO INTERNATIONAL AIRPORT
San Diego, California

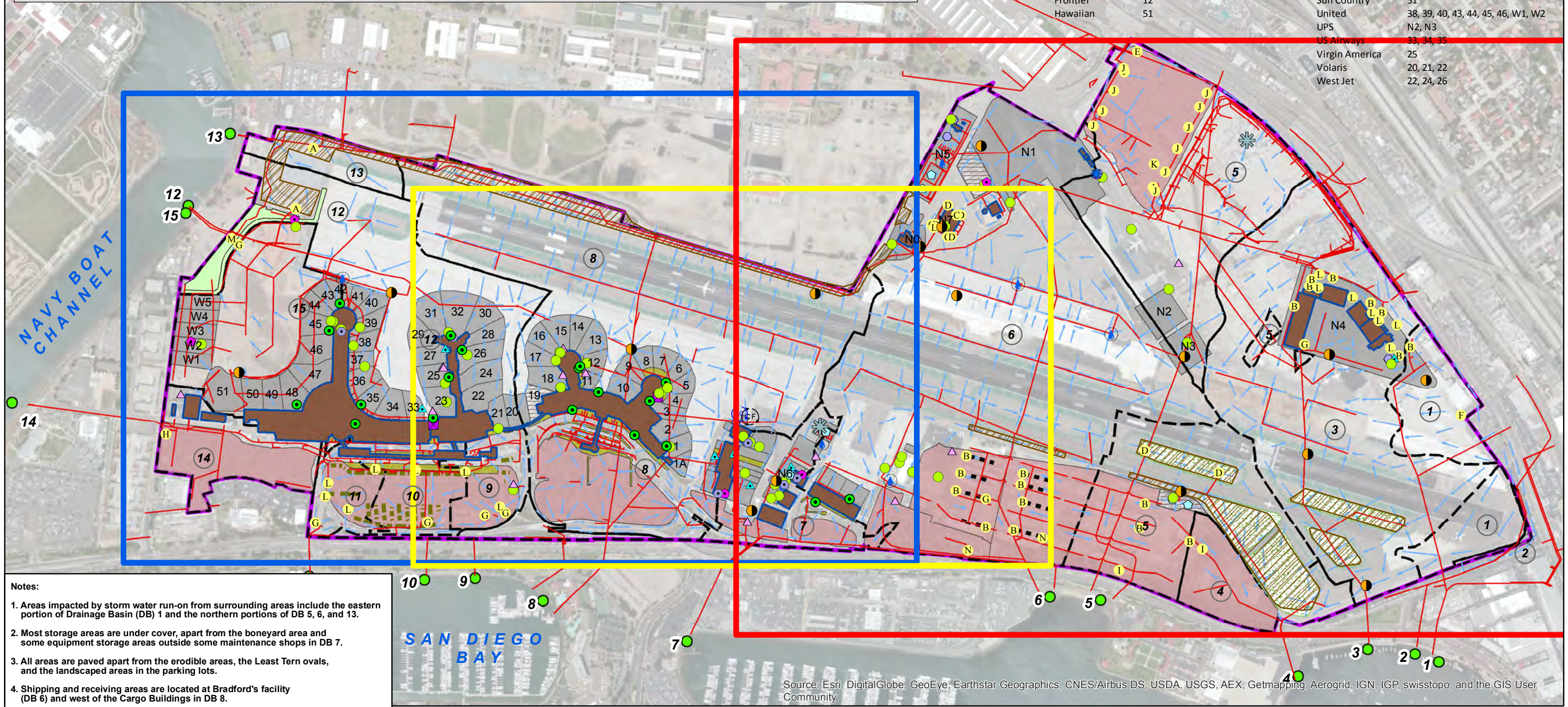
FIGURE 3
STORM WATER MANAGEMENT PLAN
AT SAN DIEGO INTERNATIONAL AIRPORT

FIGURES

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Outfall	Airport Boundary	A Inlet Filter	G Contech Storm Filter	Significant Material Storage	Grease Trap
Sampling Location	Least Tern Nesting Area	B Asphalt Strip-Permeable	H Contech CDS	Dumpster	Industrial Waste
Storm Drain	Building	C Bio-Clean Trench Drain Filter	I Clearwater Solutions BMP Unit	Recycling	Loading
Flow Direction	Artificial Turf	D Bio-Clean Grate Inlet Skimmer	J Modular Wetland System	Composting	Material Storage
Drainage Basin and Number	Erodeable Area	E Bio-Clean Curb Inlet Skimmer	K Detention Basin	Underground Storage Tank	Metal Storage
Airport Operations		F Infiltration Trench	L Bioswale	Fueling	Oil Storage
Commercial		Pervious Pavers	M Artificial Turf Infiltration	Fuel Storage	Wash Area
Ground Transportation			N Aquafiliter CDS		
Industrial Tenant			Oil/Water Separator		

Tenant	Gate/Area	Tenant	Gate/Area
Air Canada	22	HFF	7, 8
Alaska	11, 13, 14, 15, 16, 17, 18	IAS	N2, N3
Allegiant	23	JAL	20, 22
Allied Aviation	N5	Jet Blue	36, 37
American/Envoy	27, 28, 29, 31, 32	Landmark Aviation	N4
ARFF	N0	Mission Yogurt	4
ASIG	N6	SDCRAA	19
Bradford	N7	SeaPort	11C
British Airways	20	Siemens	7, 8
Delta	41, 42, 47, 48, 49, 50, 51, W3, W4, W5	SkyWest	34, 35, 36, 37, 38
DHL	N3	Southwest	1, 1A, 2, 3, 4, 5, 6, 7, 8, 9, 10
ELS	26, 27	Spirit	20, 21, 22, 24, 26, 30
FedEx	N1	SSP	11, 12
Frontier	12	Sun Country	51
Hawaiian	51	United	38, 39, 40, 43, 44, 45, 46, W1, W2
		UPS	N2, N3
		US Airways	33, 34, 35
		Virgin America	25
		Volaris	20, 21, 22
		West Jet	22, 24, 26



- Notes:**
1. Areas impacted by storm water run-on from surrounding areas include the eastern portion of Drainage Basin (DB) 1 and the northern portions of DB 5, 6, and 13.
 2. Most storage areas are under cover, apart from the boneyard area and some equipment storage areas outside some maintenance shops in DB 7.
 3. All areas are paved apart from the erodible areas, the Least Tern ovals, and the landscaped areas in the parking lots.
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 5. Equipment maintenance/storage areas are mainly inside, and east of Cargo Buildings in DB 7. Minor maintenance is also performed in ramp areas.
 6. No significant spills or leaks have occurred at SAN in the last five years.
 7. Storm drain inlets are shown on map attached to SC01 in Appendix B.

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

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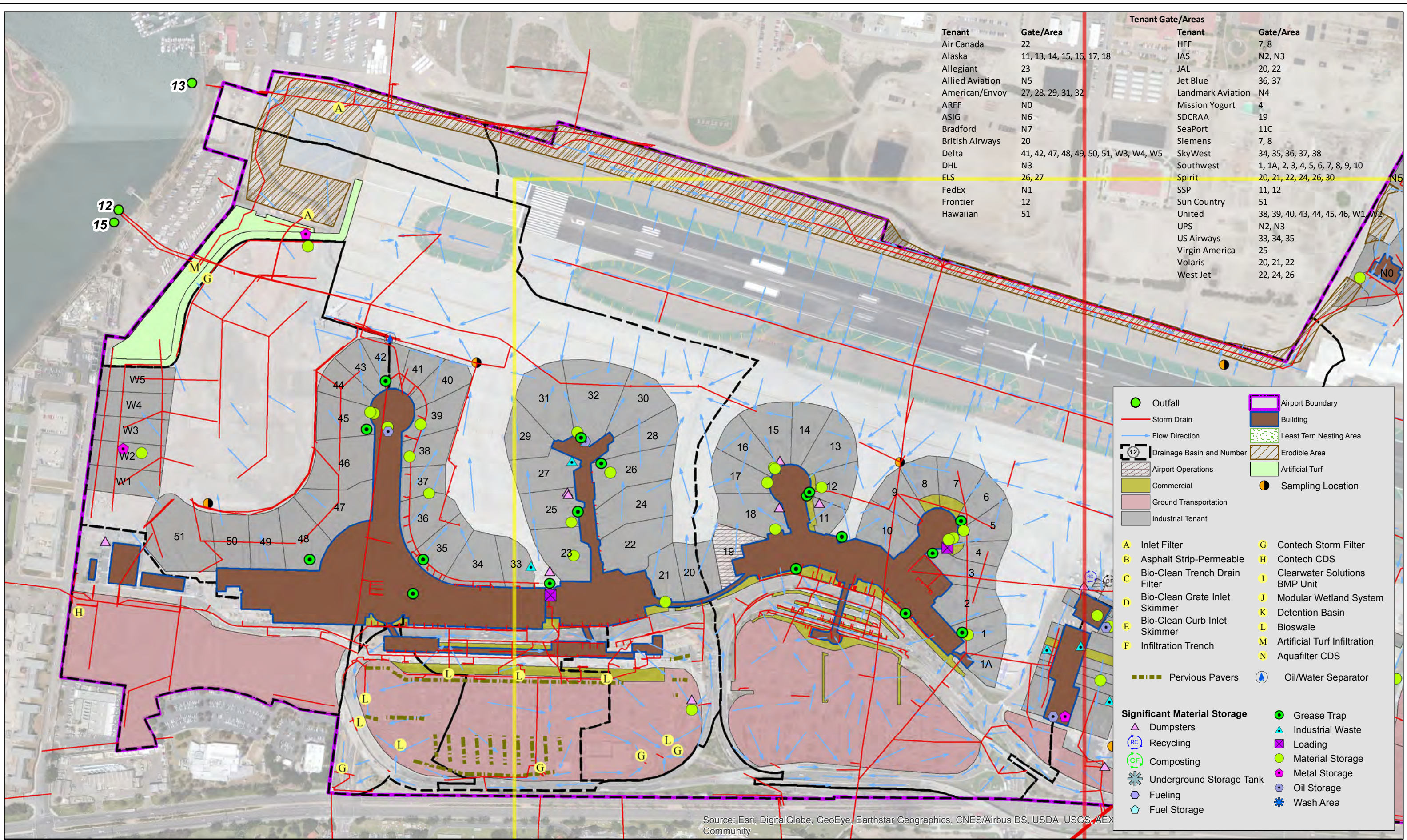


SAN DIEGO INTERNATIONAL AIRPORT
 San Diego, California

FIGURE 4
STORM WATER MANAGEMENT PLAN
AT SAN DIEGO INTERNATIONAL AIRPORT

FIGURES

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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX Community

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SAN DIEGO INTERNATIONAL AIRPORT
 San Diego, California

FIGURE 5
STORM WATER MANAGEMENT PLAN
AT SAN DIEGO INTERNATIONAL AIRPORT

FIGURES

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Outfall	Airport Boundary	A Inlet Filter	G Contech Storm Filter	Significant Material Storage	Grease Trap
Storm Drain	Least Tern Nesting Area	B Asphalt Strip-Permeable	H Contech CDS	Dumpsters	Industrial Waste
Flow Direction	Building	C Bio-Clean Trench Drain Filter	I Clearwater Solutions BMP Unit	Recycling	Loading
Drainage Basin and Number	Artificial Turf	D Bio-Clean Grate Inlet Skimmer	J Modular Wetland System	Composting	Material Storage
Airport Operations	Erodible Area	E Bio-Clean Curb Inlet Skimmer	K Detention Basin	Underground Storage Tank	Metal Storage
Commercial	Sampling Location	F Infiltration Trench	L Bioswale	Fueling	Oil Storage
Ground Transportation			M Artificial Turf Infiltration	Fuel Storage	Wash Area
Industrial Tenant			N Aquafiliter CDS		
		Pervious Pavers	Oil/Water Separator		

Tenant	Gate/Area	Tenant	Gate/Area
Air Canada	22	HFF	7, 8
Alaska	11, 13, 14, 15, 16, 17, 18	IAS	N2, N3
Alliant	23	JAL	20, 22
Allied Aviation	N5	Jet Blue	36, 37
American/Envoy	27, 28, 29, 31, 32	Landmark Aviation	N4
ARFF	N0	Mission Yogurt	4
ASIG	N6	SDCRAA	19
Bradford	N7	SeaPort	11C
British Airways	20	Siemens	7, 8
Delta	41, 42, 47, 48, 49, 50, 51, W3, W4, W5	SkyWest	34, 35, 36, 37, 38
DHL	N3	Southwest	1, 1A, 2, 3, 4, 5, 6, 7, 8, 9, 10
ELS	26, 27	Spirit	20, 21, 22, 24, 26, 30
FedEx	N1	SSP	11, 12
Frontier	12	Sun Country	51
Hawaiian	51	United	38, 39, 40, 43, 44, 45, 46, W1, W2
		UPS	N2, N3
		US Airways	33, 34, 35
		Virgin America	25
		Volaris	20, 21, 22
		West Jet	22, 24, 26

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

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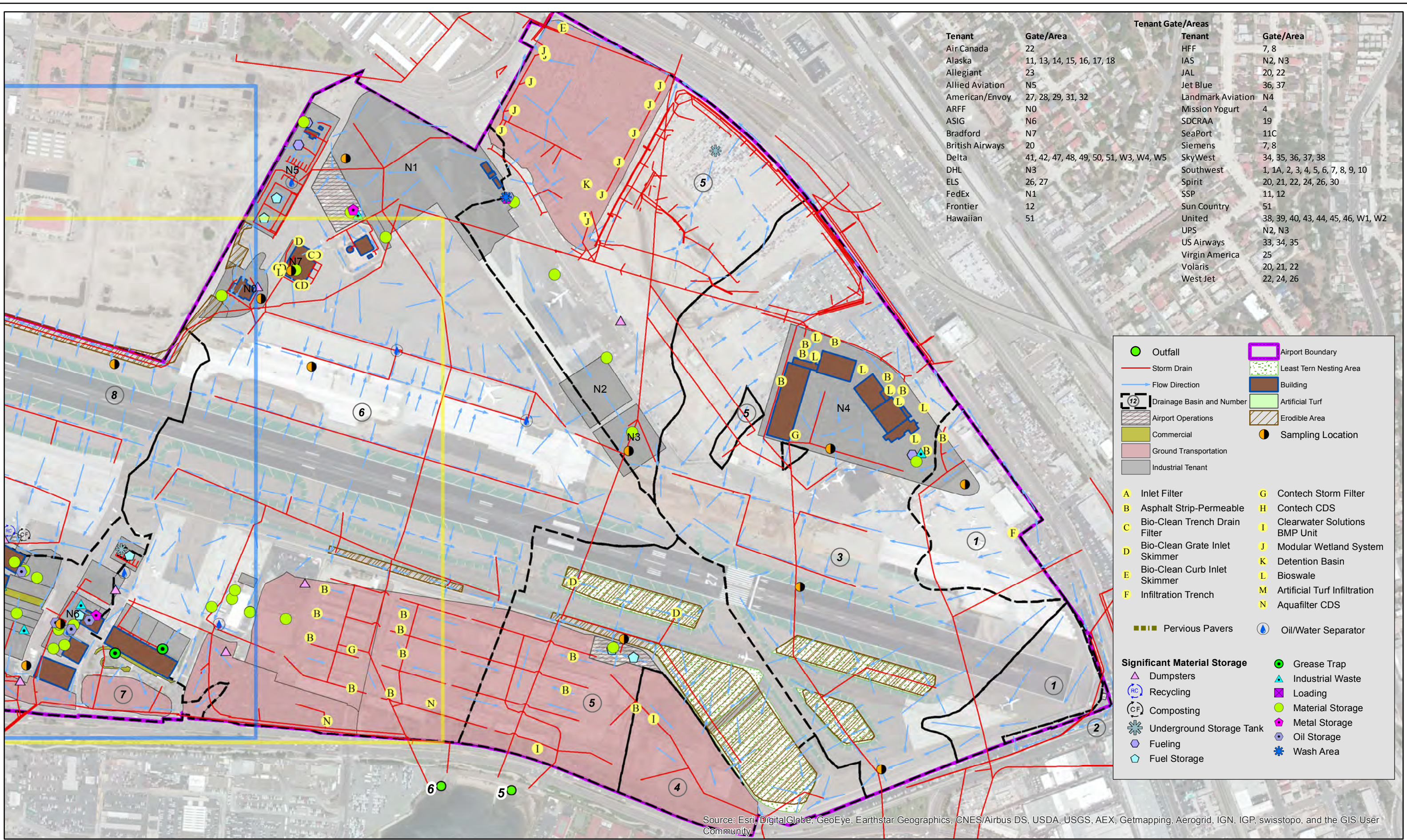


SAN DIEGO INTERNATIONAL AIRPORT
 San Diego, California

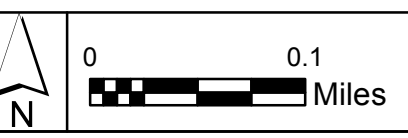
FIGURE 6
STORM WATER MANAGEMENT PLAN
AT SAN DIEGO INTERNATIONAL AIRPORT

FIGURES

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SAN DIEGO INTERNATIONAL AIRPORT
 San Diego, California

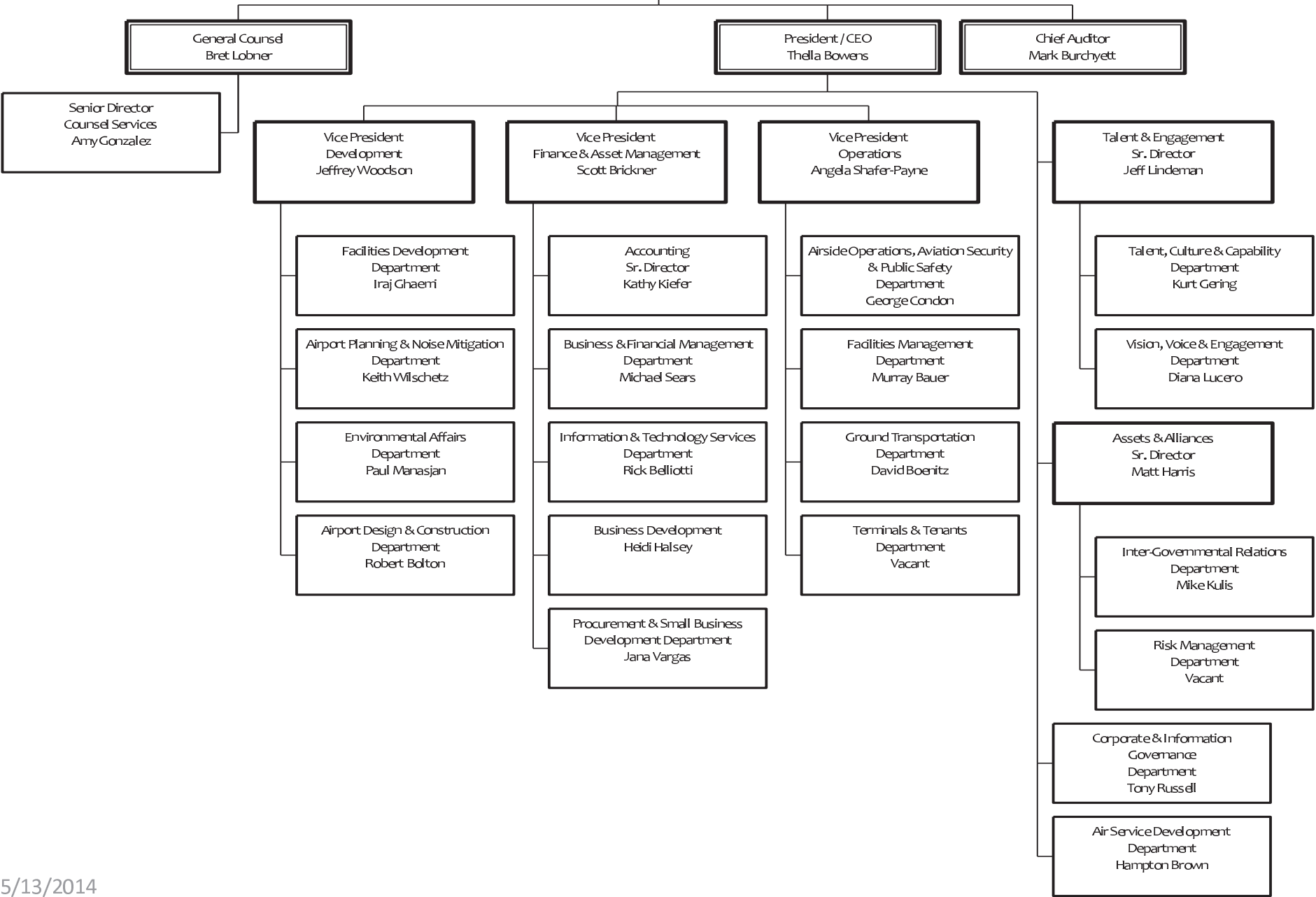
FIGURE 7
STORM WATER MANAGEMENT PLAN
AT SAN DIEGO INTERNATIONAL AIRPORT

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

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**SAN DIEGO COUNTY REGIONAL
AIRPORT AUTHORITY BOARD**



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APPENDIX A
GENERAL INDUSTRIAL PERMIT CHECKLIST AND NOTICES

Appendix A - General Industrial Permit Checklist and Notices



APPENDIX 1

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) CHECKLIST

NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR STORM WATER DISCHARGES
ASSOCIATED WITH INDUSTRIAL ACTIVITIES
(GENERAL PERMIT)

FACILITY NAME: San Diego International Airport

Waste Discharge Identification (WDID) #: 9 371018035

	FACILITY CONTACT	Consultant/Qualified Industrial Storm Water Practitioner (QISP)
Name	Richard Gilb	Amanda Archenhold
Title	Manager, Environmental Affairs	Project Manager
Company	San Diego Regional Airport Authority	Amec Foster Wheeler
Street Address	P.O. Box 82776	9177 Sky Park Court
City, State	San Diego, CA	San Diego, CA
Zip	92138	92123

SWPPP (General Permit Section)	Not Applicable	SWPPP Page # or Reference Location	Date Implemented or Last Revised
Signed Certification (Section II.A)		Appendix A	6/17/2015
Pollution Prevention Team (Section X.D.1)		Table 2-1, Section 7.4, Table 7-1	6/26/2015
Existing Facility Plans (Section X.D.2)		Section 7.1	6/26/2015
Site Map(s) (Section X.E)			
Facility boundaries (Section X.E.3.a)		Figure 3	6/26/2015
Drainage areas (Section X.E.3.a)		Figure 3	6/26/2015
Direction of flow (Section X.E.3.a)		Figure 3, Figure SC-01	6/26/2015
On-facility water bodies (Section X.E.3.a)	X		6/26/2015

**STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
CHECKLIST**

SWPPP (General Permit Section)	Not Applicable	SWPPP Page # or Reference Location	Date Implemented or Last Revised
Areas of soil erosion (Section X.E.3.a)		Figure 3, Figure SC-20	6/26/2015
Nearby water bodies (Section X.E.3.a)		Figure 3	6/26/2015
Municipal storm drain inlets (Section X.E.3.a)		Figure SC-01, Figure SC-17	6/26/2015
Points of discharge (Section X.E.3.b)		Figure 3	6/26/2015
Sampling Locations (Section X.E.3.b)		Figure 3	6/26/2015
Structural control measures (Section X.E.3.c)		Figure 3, Figure TC-01	6/26/2015
Impervious areas (Section X.E.3.d)		Figure 3, Figure SC-09	6/26/2015
Location of Directly Exposed Materials (Section X.E.3.e)		Figure 3	6/26/2015
Locations of significant spills and leaks (Section X.E.3.e)	X; no significant spills or leaks in previous five years		6/26/2015
Areas of Industrial Activity (Section X.E.3.f)		Figure 3	6/26/2015
Areas of industrial activity (Section X.E.3.f)		Figure 3	6/26/2015
Storage areas/storage tanks (Section X.E.3.f)		Figure 3, Figure SC-07, Figure SC-08	6/26/2015
Shipping and receiving areas (Section X.E.3.f)		Figure 3, Figure SC-06	6/26/2015
Fueling areas (Section X.E.3.f)		Figure 3, Figure SC-03	6/26/2015
Vehicle and equipment storage/maintenance (Section X.E.3.f)		Figure 3, Figure SC-02A, Figure SC-02B, Figure SC-02C, Figure SC-16	6/26/2015
Material handling/processing (Section X.E.3.f)		Figure 3, Figure SC-07, Figure SC-08	6/26/2015
Waste treatment/disposal (Section X.E.3.f)		Figure 3, Figure SC-08, Figure SC-11	6/26/2015
Dust or particulate generation (Section X.E.3.f)		Figure 3, Figure SC-20	6/26/2015
Cleaning and material reuse (Section X.E.3.f)		Figure 3, Figure SC-04, Figure SC-12, Figure SC-18	6/26/2015

**STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
CHECKLIST**

SWPPP (General Permit Section)	Not Applicable	SWPPP Page # or Reference Location	Date Implemented or Last Revised
Other areas of industrial activities (Section X.E.3.f)		Figure SC-05, Figure SC-13, Figure SC-15	6/26/2015
List of Industrial Materials (Section X.F)			
Storage location			
Quantity		Section 7.7, Appendix E	6/26/2015
Frequency		Section 7.7, Appendix E	6/26/2015
Receiving and shipping location			
Quantity		Section 7.7, Appendix E	6/26/2015
Frequency		Section 7.7, Appendix E	6/26/2015
Handling location			
Quantity		Section 7.7, Appendix E	6/26/2015
Frequency		Section 7.7, Appendix E	6/26/2015
Potential Pollution Sources (Section X.G)			
Description of Potential Pollution Sources (Section X.G.1)			
Industrial processes (Section X.G.1.a)		Section 7.7.3.1	6/26/2015
Material handling and storage areas (Section X.G.1.b)		Section 7.7.3.1	6/26/2015
Dust & particulate generating activities (Section X.G.1.c)		Section 7.7.3.1	6/26/2015
Significant spills and leaks (Section X.G.1.d)		Section 7.7.3.1	6/26/2015
Non-storm water discharges (Section X.G.1.e)		Section 7.7.3.1	6/26/2015
Erodible surfaces (Section X.G.1.f)		Section 7.7.3.1	6/26/2015
Assessment of Potential Pollutant Sources (Section X.G.2)			
Narrative assessment of likely sources of pollutants (Section X.G.2.a)		Section 7.7.3.1, Table 7-5	6/26/2015
Narrative assessment of likely pollutants present in storm water discharges (Section X.G.2.a)		Section 7.7.3.1, Table 7-5	6/26/2015
Identification of additional BMPs Section X.G.2.b)		Section 7.7.4.1	6/26/2015

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) CHECKLIST

SWPPP (General Permit Section)	Not Applicable	SWPPP Page # or Reference Location	Date Implemented or Last Revised
Identification of drainage areas with no exposure (Section X.G.2.c)	X; all industrial drainage areas identified as having exposure		6/26/2015
Identification of additional parameters (Section X.G.2.d)		Appendix D.1	6/26/2015
Storm Water Best Management Practices (Section X.H)			
Minimum BMPs (Section X.H.1)			
Good housekeeping (Section X.H.1.a)		Section 7.7.4.1, Appendix B	6/26/2015
Preventative maintenance (Section X.H.1.b)		Section 7.7.4.1, Appendix B	6/26/2015
Spill response (Section X.H.1.c)		Section 7.7.4.1, Appendix B	6/26/2015
Material handling and waste management (Section X.H.1.d)		Section 7.7.4.1, Appendix B	6/26/2015
Erosion and sediment controls (Section X.H.1.e)		Section 7.7.4.1, Appendix B	6/26/2015
Employee training program (Section X.H.1.f)		Section 7.7.4.1, Appendix B	6/26/2015
Quality assurance and record keeping (Section X.H.1.g)		Section 7.7.4.1, Appendix B	6/26/2015
Advanced BMPs (Section X.H.2)			
Implement advanced BMPs at the facility (Section X.H.2.a)		Section 7.7.4.1	6/26/2015
Exposure Minimization BMPs (Section X.H.2.b.i)		Section 7.7.4.1	6/26/2015
Storm Water containment and discharge reduction BMPS (Section X.H.2.b.ii)			6/26/2015
Treatment Control BMPs (Section X.H.2.b.iii)		Section 7.7.4.1, Section 6, Appendix B TC-01	6/26/2015
Other advance BMPs (Section X.H.2.b.iv)		Section 7.7.4.1	6/26/2015
Temporary Suspension of Activities (Section X.H.3)			
BMPs necessary for stabilization of the facility (Section X.H.3)	X; facility activities not anticipated to be suspended		6/26/2015

**STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
CHECKLIST**

SWPPP (General Permit Section)	Not Applicable	SWPPP Page # or Reference Location	Date Implemented or Last Revised
BMP Descriptions (Section X.H.4)			
Pollutant that a BMP reduces or prevents (Section X.H.4.a.i)		Appendix B	6/26/2015
Frequency of BMP implementation (Section X.H.4.a.ii)		Appendix B, Section 7.7.4.1	6/26/2015
Location of BMP (Section X.H.4.a.iii)		Appendix B	6/26/2015
Person implementing BMP (Section X.H.4.a.iv)		Appendix B	6/26/2015
Procedures/maintenance/ instructions for BMP implementation (Section X.H.4.a.v)		Appendix B	6/26/2015
Equipment and tools for BMP implementation (Section X.H.4.a.vi)		Appendix B Section 7.7.4.1	6/26/2015
BMPs needing more frequent inspections (Section X.H.4.a.vii)		Appendix B, TC-01	6/26/2015
Minimum BMP/applicable advanced BMPs not implemented at the facility (Section X.H.4.b)	X; all minimum BMPs implemented		6/26/2015
BMPs implemented in lieu of minimum or applicable advanced BMPs (Section X.H.4.c)	X; all minimum BMPs implemented		6/26/2015
BMP Summary Table (Section X.H.5)			
Monitoring Implementation Plan (Section X.I)			
Team members assisting in developing the MIP (Section X.I.1)		Appendix D-1	6/26/2015
Summary of visual observation procedures, locations, and details (Section X.I.2)		Appendix D-1	6/26/2015
Justifications if applicable for: Alternative discharge locations, Representative Sampling Reduction or, Qualified Combined Samples (Section X.I.3)		Appendix D-1	6/26/2015
Procedures for field instrument calibration (Section X.I.4)		Appendix D-1	6/26/2015

**STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
CHECKLIST**

SWPPP (General Permit Section)	Not Applicable	SWPPP Page # or Reference Location	Date Implemented or Last Revised
Example of Chain of Custody (Section X.I.5)		Appendix G	6/26/2015
Annual Comprehensive Facility Compliance Evaluation (Section XV)			
Review of all visual inspection and monitoring records and sampling and analysis results conducted during the previous reporting year (Section XV.A)		Section 7	6/26/2015
Visual inspection of all areas of industrial activity and associated potential pollutant sources (Section XV.B)		Section 7	6/26/2015
Visual inspection of all drainage areas previously identified as having no-exposure to industrial activities and materials in accordance with the definitions in Section XVII (Section XV.C)	X; no areas previously identified as having no-exposure		6/26/2015
Visual inspection of equipment needed to implement the BMPs (Section XV.D)		Section 7	6/26/2015
Visual inspection of any structural and/or treatment control BMPs (Section XV.E)		Section 7	6/26/2015
Review and assessment of all BMPs for each area of industrial activity and associated potential pollutant sources (Section XV.F)		Section 7	6/26/2015
Assessment of other factors needed to complete the information described in Section XVI.B (Section XV.G)		Section 7	6/26/2015



State Water Resources Control Board
NOTICE OF INTENT

GENERAL PERMIT TO DISCHARGE STORM WATER
ASSOCIATED WITH INDUSTRIAL ACTIVITIES (WQ ORDER No. 2014-0057-DWQ)
(Excluding Construction Activities)



EDMUND G. BROWN JR.
GOVERNOR



MATTHEW RODRIGUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

WDID: 9 371018035

Status: Active

Operator Information

Type: Other

Name: San Diego County Regional Airport Authority

Contact Name: Richard Gilb

Address: PO Box 82776

Title:

Address 2:

Phone #: 619-400-2790

City/State/Zip: San Diego CA 92138

Email: rgilb@san.org

Federal Tax ID:

Facility Information

Level:

Site Name: San Diego Int Airpor

Contact Name: Richard Gilb

Address: 3225 N Harbor Dr

Title:

City/State/Zip: San Diego CA 92101

Site Phone #: 619-400-2790

County: San Diego

Email: rgilb@san.org

Latitude: 32.72921

Longitude: -117.1896

Emergency: 619-400-2790

Total Site Size: 663 Acres

Percent of Site Impervious (including rooftops): %

Industrial Area exposed to Storm Water: 521 Acres

SIC Code(s)

Primary SIC: 4581

Airports, Flying Fields, and Airport Terminal Services

Secondary SIC: 4512

Air Transportation, Scheduled

Tertiary SIC: 4513

Air Courier Services

Additional Information

Receiving Water: San Diego Bay

Water Flow: Directly

Storm drain system: Port of San Diego

Compliance Group:

RWQCB Jurisdiction: Region 9 - San Diego

Phone: 619-516-1990

Email: r9_stormwater@waterboards.ca.gov

Certification

Name Jeffrey Woodson

Date: June 17, 2015

Title: VP Development

Attachments Meta Data Information:

Attachment ID	File Name	File Description	File Hash	File Size	Date Attached	Attachment Type
222312	218897.pdf	SWARM Reg. - Paul Manisjan	5e50a765f73bfff7 cf2a18c21516c92a 47c241b98c180fc3 19121c3d2c6f8e0	118622	2007-07-24 08:29:05.0	Binary Large Object
1286611				239227	2014-07-10 14:42:42.0	Submitted Report PDF
1286612	COR zip		e6a8783127755db 897faef88abd32c9 1c493d5c3c4e4f33 d427a2f826954fc8	205656	2014-07-10 14:42:43.0	Report COR

NOTICE OF TERMINATION

Submission of this Notice of Termination constitutes notification that the facility operator identified below is no longer required to comply with the **Industrial Activities Storm Water General Permit No. 97-03-DWQ**.

I. WDID NO. 9 37S006107

II. FACILITY OPERATOR

NAME San Diego Unified Port District CONTACT PERSON David Merk
ADDRESS 3165 Pacific Highway TITLE Director, Recreation & Env'l Services
CITY San Diego STATE CA ZIP 92101 PHONE 619-686-6254

III. FACILITY SITE INFORMATION

FACILITY NAME San Diego International Airport CONTACT PERSON David Merk
LOCATION 3225 North Harbor Drive TITLE Director, Recreation & Env'l Services
CITY San Diego STATE CA ZIP 92101 PHONE 619-725-6024
SIC CODE(S) 4 / 5 / 1 / 2 4 / 5 / 1 / 3 TYPE OF BUSINESS International Airport
3 7 2 1

IV. BASIS OF TERMINATION

- _____ 1. **Closed Facility.** The facility is closed and all closure, moving, and clean-up activities are complete.
Date of closure / / Are you moving to a new location in CA? Yes No
If Yes, start date at new location? / / Will you file new NOI? Yes No

NEW FACILITY INFORMATION

NAME _____ CONTACT PERSON _____
MAILING ADDRESS _____ TITLE _____
CITY _____ STATE _____ ZIP _____ PHONE _____

- _____ 2. **Light Industry Exemption.** Exposure of industrial activities, materials, and equipment to storm water has been eliminated (Applies only to certain facilities - see instructions). Complete and submit Attachment A.
Date of evaluation: / / Date exposure eliminated (if applicable): / /
Planned date of next evaluation: / /
- _____ 3. **No Storm Water Discharge.** Storm water associated with industrial activity does not discharge to waters of the United States because:
 a. the storm water is retained on site (such as in evaporation or percolation ponds).
 b. the storm water is discharged to a municipal sanitary sewer systems or municipal combined sewer system.
 c. the storm water is retained offsite (such as in evaporation or percolation ponds).
- _____ 4. **Not Required to be Permitted.** The facility is not required by federal regulations to be regulated by an industrial activities storm water NPDES permit.

5. **Regulated by Another Permit.** Discharge of storm water associated with industrial activity is specifically regulated by another general or individual NPDES permit.

NPDES Permit No. _____ Date coverage began ____/____/____

X 6. **New Facility Operator.** There is a new facility operator of the identified facility.

Date facility was transferred to new facility operator 01 / 01 / 03.

Have you notified the new facility operator of the storm water NPDES Permit requirements? Yes X No ____

NEW FACILITY OPERATOR INFORMATION

NAME San Diego County Regional Airport Authority CONTACT PERSON Rick Adcock
MAILING ADDRESS P.O. BOX 82776 TITLE Senior Environmental Specialist
CITY San Diego STATE CA ZIP 92138- PHONE 619-725-6024
2976

V. ADDITIONAL TERMINATION INFORMATION

Are you attaching any additional termination information? Yes ____ No X

VI. FACILITY PHOTOGRAPHS

Have you attached facility photographs? Yes ____ No X (See Instructions)

VII. ANNUAL REPORT

Have you attached an Annual Report? Yes ____ No X (See Instructions)

VIII. CERTIFICATION

I certify under penalty of law that 1) I am not required to be permitted under the Industrial Activities Storm Water General Permit No. 97-03-DWQ, and 2) this document and all attachments were prepared under my direction and supervisions in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. I am aware that it is unlawful under the Clean Water Act to discharge storm water associated with industrial activity to waters of the United States if the discharge is not authorized by a NPDES permit, and there are significant penalties for submitting false information. I understand that the facility operator is still required to submit an annual report to the Regional Water Board by July 1. I also understand that the submittal of this Notice of Termination does not release a facility operator from liability for any violations of the General Permit or the Clean Water Act.

PRINTED NAME David Merk TITLE Director, Recreation & Env'l Services

SIGNATURE [Signature] DATE 09/17 / 02

REGIONAL WATER BOARD USE ONLY

Approved and sent to State Board for termination

Denied and returned to applicant

Printed Name

Signature

Date



NOTICE OF INTENT FOR GENERAL PERMIT TO DISCHARGE STORM WATER ASSOCIATED WITH INDUSTRIAL ACTIVITY (WQ Order No. 91-13-DWQ) (Excluding Construction Activities)

MARK ONLY ONE ITEM

1. Existing Facility
2. New Facility

3. Change of Information
WQ Order No. _____

I. OWNER/OPERATOR

Name: San Diego Unified Port District

Mailing Address: P.O. Box 488

City: San Diego

Contact Person: Ralph T. Hicks, Env'l. Mgmt.

A. Owner/Operator Type: (Check one)

1. City 2. County 3. State 4. Federal
5. Special District 6. Government Combo 7. Private

State: CA Zip: 92112 Phone: ext. 254 (619) 291-3900

B. 1. Owner 2. Operator 3. Owner/Operator

II. FACILITY/SITE INFORMATION

Facility Name: San Diego International Airport

Street Address: 3707 & 3665 No. Harbor Drive

City: San Diego

County: San Diego

Contact Person: Bud McDonald, Airport Operations

State: CA Zip: 92101 Phone: (619) 291-3900

Parcel Number(s) (If more than 4 apply to facility, enter additional numbers in SECTION IX. A):
A. _____ B. _____ C. _____ D. _____

III. BILLING ADDRESS

Send Billing Statements To: A. Owner/Operator B. Facility C. Other (Specify in SECTION IX. B)

IV. RECEIVING WATER INFORMATION

A. Does your facility's storm water discharge directly to: (Check one)

1. Storm drain system

Owner of storm drain system: (Name) City of San Diego

2. Directly to waters of U.S. (e.g., river, lake, creek, ocean)

3. Indirectly to waters of U.S.

B. Name of closest receiving water:
San Diego Bay

V. INDUSTRIAL INFORMATION

A. SIC Code(s):
1. 4512 2. 4513 3. 3721 4. 4581

B. Type of Business:
Aviation transportation & cargo handling

C. Industrial activities at facility: (Check all that apply)

1. Manufacturing 2. Vehicle Maintenance 3. Hazardous Waste Treatment, Storage, or Disposal Facility (RCRA Subtitle C)

4. Material Storage 5. Vehicle Storage 6. Material Handling 7. Wastewater Treatment

8. Power Generation 9. Recycling 10. Landfill 11. Other: Aviation transport

NO-1 (12/91)

A. Types of materials handled and/or stored on site: (Check all that apply)

1. <input type="checkbox"/> Solvents	2. <input type="checkbox"/> Scrap Metal	3. <input checked="" type="checkbox"/> Petroleum Products	4. <input type="checkbox"/> Plating Products
5. <input type="checkbox"/> Pesticides	6. <input type="checkbox"/> Hazardous Wastes	7. <input checked="" type="checkbox"/> Paints	8. <input type="checkbox"/> Wood Treating Products
99. <input type="checkbox"/> Other (Please list)			

B. Identify existing management practices employed to reduce pollutants in industrial storm water discharges: (Check all that apply)

1. <input checked="" type="checkbox"/> Oil/Water Separator	2. <input checked="" type="checkbox"/> Containment	3. <input type="checkbox"/> Berms	4. <input type="checkbox"/> Leachate Collection
5. <input checked="" type="checkbox"/> Overhead Coverage	6. <input type="checkbox"/> Recycling	7. <input checked="" type="checkbox"/> Retention Facilities	8. <input type="checkbox"/> Chemical Treatment
99. <input checked="" type="checkbox"/> Other (Please list) SPCCP compliance; monitoring			

VII. FACILITY INFORMATION

A. Total size of site: (Check one) 480 <input checked="" type="checkbox"/> Acres <input type="checkbox"/> Sq. Ft.	B. Percent of site impervious: (Including rooftops) 93 %
---	--

VIII. REGULATORY STATUS (Check all that apply)

A. <input type="checkbox"/> Regulated by Storm water Effluent Guidelines (40 CFR Subchapter N)	B. <input type="checkbox"/> Waste Discharge Requirements (Order Number) _____	C. <input type="checkbox"/> NPDES Permit CA _____
D. <input type="checkbox"/> RCRA Permit Number _____	E. <input type="checkbox"/> Regulated by California Code of Regulations Article 6, Chapter 15 (Feedlot)	

IX. COMMENTS (Enter additional information for SECTIONS II AND III)

A. Additional Parcel Numbers:

B. Billing Information: (Enter Name and Address)

X. CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment." In addition, I certify that the provisions of the permit, including the development and implementation of a Storm Water Pollution Prevention Plan and a Monitoring Program Plan, will be complied with.

Printed Name: Manuel I. Aceves

Signature: *Manuel I. Aceves* Date: 3-27-92

Title: Deputy Port Director, Engineering and Development

STATE USE ONLY

WDID: _____	Regional Board Office: _____	Date Permit Issued: _____
NPDES Permit Number: _____	Order Number: _____	Date MOE Received: _____
CA: _____	Fee Amount Received: _____	

NOTICE OF INTENT SITE MAP

ATTACHED

MAP INFORMATION

TYPE N/A

NUMBER N/A

SCALE 1" = 1200'

**STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD**

FACILITY San Diego International Airport

COUNTY San Diego

DATE 3/26/92

DRAWN

CHECKED

 Planning

SAN DIEGO INTERNATIONAL AIRPORT TENANTS, CO-PERMITTEES

<u>Company</u>	<u>Operation</u>
AERO CALIFORNIA S.A. DE C.V.	- airline
AIR SUPPORT FACILITIES, INC.	- air cargo facility operator
AIRBORNE EXPRESS, INC.	- air cargo carrier
AIRCRAFT SERVICE INTERNATIONAL, INC.	- air cargo/hangar facility operator
ALASKA AIRLINES, INC.	- airline
AMERICA WEST AIRLINES, INC.	- airline
AMERICAN AIRLINES, INC.	- airline
ATLANTIC-RICHFIELD	- fueling operator
BURLINGTON AIR EXPRESS, INC.	- air cargo carrier
CATERAIR AIRPORT PROPERTIES, INC.	- inflight food services
CHEVRON USA, INC.	- fueling operation
CONTINENTAL AIRLINES, INC.	- airline
DELTA AIR LINES, INC.	- airline
EMERY AIR FREIGHT CORPORATION dba EMERY WORLD WIDE	- air cargo carrier
FEDERAL EXPRESS CORPORATION	- air cargo carrier
GRAND RENT A CAR CORP. dba AVIS RENT A CAR	- car rental
HERTZ CORPORATION	- car rental
HOST INTERNATIONAL	- food, beverage, gift, news concessions
JIMSAIR AVIATION SERVICES, INC.	- FBO, maintenance, fueling, airplane parking, car rental, etc.
JOHN DOUGLAS CORPORATION, THE dba DOLLAR RENT A CAR	- car rental
LEE-AL, INC.	- car rental

dba BUDGET RENT A CAR OF
SAN DIEGO

LINDBERGH PARKING, INC.	- parking lot operator
MIDWEST EXPRESS AIRLINES, INC.	- airline
NATIONAL CAR RENTAL SYSTEM, INC.	- car rental
NORTHWEST AIRLINES, INC.	- airline
P.S. TRADING, INC.	- fuel distributor
ROSENBALM AVIATION, INC.	- air cargo carrier
SKY CHEFS, INC.	- inflight food services
SKYWEST AVIATION, INC. dba SKYWEST AIRLINES	- airline
SOUTHWEST AIRLINES, INC. dba USAIR EXPRESS	- airline
TRANS WORLD AIRLINES, INC.	- airline
UNITED AIRLINES, INC.	- airline
UNITED PARCEL SERVICE CO.	- air cargo carrier
USAIR, INC.	- airline
WESTAIR COMMUTER AIRLINES, INC. dba UNITED EXPRESS	- airline
WINGS WEST AIRLINES, INC.	- airline

APPENDIX B
BEST MANAGEMENT PRACTICES

Appendix B – Best Management Practices



BMP SC01	NON-STORM WATER MANAGEMENT	
<p>PURPOSE: Eliminate non-storm water discharges to the storm water collection system.</p>	<p>TARGETED ACTIVITIES:</p> <ul style="list-style-type: none"> ➔ Aircraft Deicing/Anti-Icing ➔ Aircraft Lavatory Service ➔ All Cleaning ➔ All Fueling ➔ All Maintenance ➔ All Storage ➔ All Washing ➔ Cargo Handling ➔ Fire Fighting Equipment Testing ➔ Floor Washdowns ➔ Garbage Collection ➔ Landscape Irrigation ➔ Painting/Stripping ➔ Potable Water System Flush ➔ Runway Rubber Removal 	
<p>POLLUTION PREVENTION:</p>	<p>Implement the following pollution prevention practices and BMPs to prevent non-storm water discharges to the storm water collection system (also see Section 3 for authorized and unauthorized non-storm water discharges, and BMPs to control them):</p> <ul style="list-style-type: none"> <input type="checkbox"/> Perform visual inspections of discharge points to the storm drain system – observe uncharacteristic volumes, any staining, colors, turbidity, odors, deposition, floatables, and foaming characteristics of any flow. <input type="checkbox"/> Locate illicit connections to the storm drain system by visual inspections, CCTV survey, smoke testing, dye testing, and electromagnetic radio frequency testing. <input type="checkbox"/> Isolate problem areas and plug illicit discharge points. <input type="checkbox"/> Post “No Dumping” signs with a phone number for reporting dumping and disposal. <input type="checkbox"/> Use “dry” cleaning and surface preparation techniques where feasible. <input type="checkbox"/> Inspect waste and material containers frequently for leaks and proper closure seal. <input type="checkbox"/> Maintain adequate supplies of spill response equipment and materials in accessible locations near areas where spills may occur. <input type="checkbox"/> Investigate the use of automatic rain shutoff devices or smart controllers, micro irrigation systems, or low water use landscaping to minimize irrigation runoff. Experiment in new technologies and practices to conserve water. Implement mandatory water conservation measures. 	<p>POLLUTANTS of CONCERN:</p> <ul style="list-style-type: none"> ➔ Aircraft Fire Fighting Foam ➔ Battery Acid ➔ Deicing/Anti-Icing Fluid ➔ Dumpster Wastes ➔ Floatables ➔ Oil and Grease ➔ Fuel ➔ Landscape Waste ➔ Lavatory Chemical Wastes ➔ Metals ➔ Paint ➔ Pesticides/Herbicides/Fertilizers ➔ Potable Water System Chemicals ➔ Rubber Particles ➔ Sediment ➔ Solvents/Cleaning Solutions ➔ Vehicle Fluids





<input type="checkbox"/>	<p>Use recycled or non-potable water for construction purposes when available.</p> <p><input type="checkbox"/> Authorized non-stormwater discharges include the following (provided that BMPs are in place to control them): fire-hydrant and fire prevention or response system flushing; potable water sources and system flushing; drinking water fountains; air conditioning, refrigerator or compressor condensation; landscape irrigation watering provided that Integrated Pest Management practices have been used, seawater infiltration, incidental windblown cooling tower mist, and uncontaminated natural springs, groundwater, foundation drainage, and footing drainage. All other non-stormwater discharges are prohibited.</p> <p>NEVER HOSE DOWN OR BURY MATERIAL SPILLS</p>	
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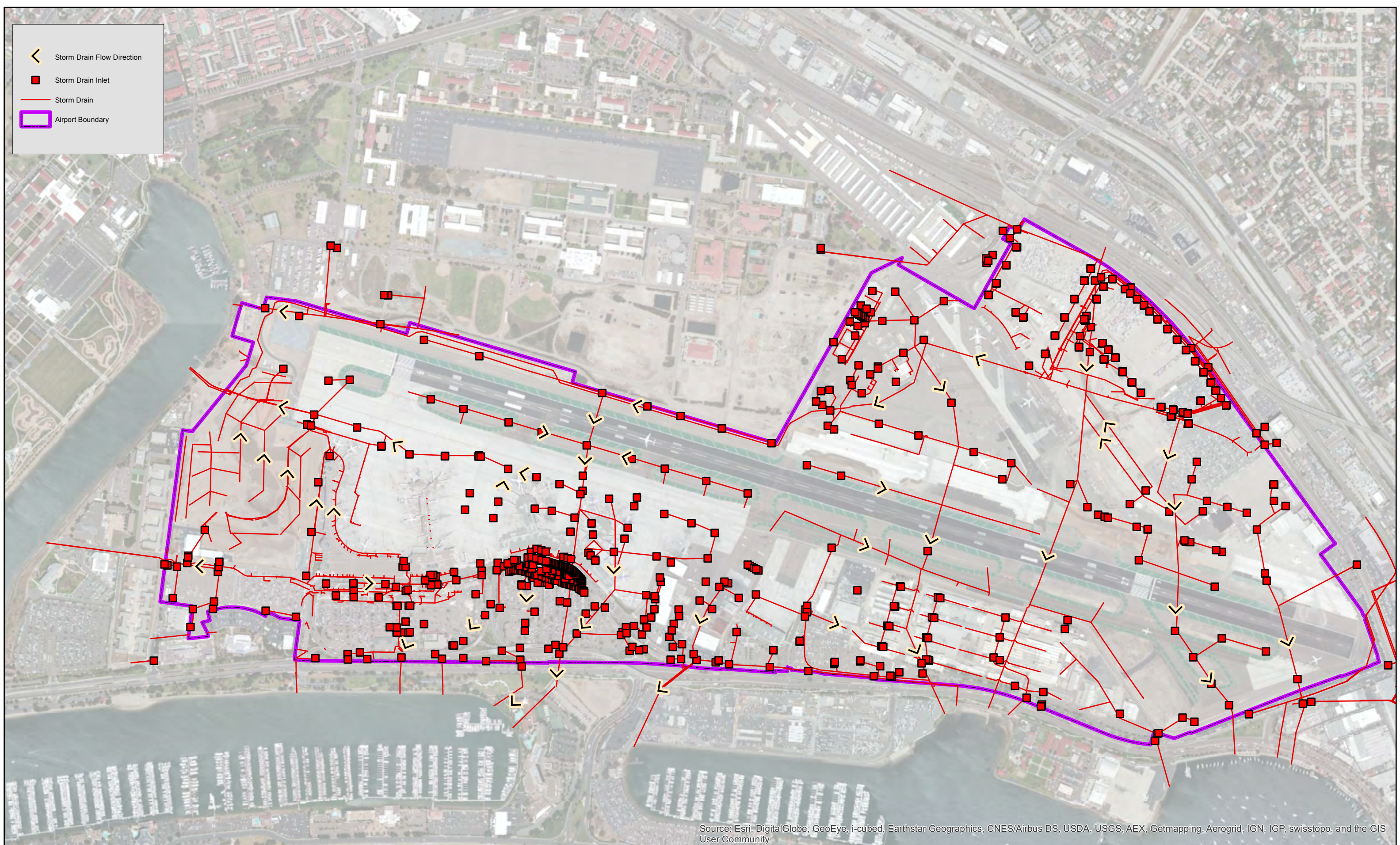
OPERATIONS:

<p>Sub-BMPs</p> <p>- 01 <input type="checkbox"/> Notify Airport Operations (619-400-2710) and the Airport Authority Environmental Affairs Department (619-400-2784) if there is any evidence of illicit connections or illegal discharges.</p> <p>- 02 <input type="checkbox"/> Provide the appropriate level of employee, tenant and public training or education in non-storm water discharge management, i.e., spill response and prevention, non-storm water pollution prevention, and hazardous materials management.</p> <p>- 03 <input type="checkbox"/> Limit the availability of outdoor water supplies (e.g. hose bibs, faucets) and post with appropriate use signs to discourage uses that may pollute the storm drain system/receiving water.</p> <p>- 04 <input type="checkbox"/> Ensure the site is free of illicit connections and illegal discharges.</p> <p>- 05 <input type="checkbox"/> Do not irrigate during forecasted rain events and 48 hours following a rain event.</p> <p>- 06 <input type="checkbox"/> Periodically inspect and maintain irrigation systems and landscaped areas to minimize excess watering and to repair any leaks.</p> <p>- 07 <input type="checkbox"/> Direct air conditioning or refrigerator condensation to landscaping, porous surface, into the sanitary sewer, or for reuse.</p> <p>- 08 <input type="checkbox"/> Irrigate using the satellite water-tracking system to reach proper levels of soil moisture applicable for landscaping, and follow City water restriction guidelines.</p> <p>- 09 <input type="checkbox"/> Use a hand-held hose equipped with positive shut-off nozzle, handheld water container, or timed sprinkler system to irrigate landscaped areas.</p>		<p>APPLICABLE TENANTS/ DEPARTMENTS:</p> <ul style="list-style-type: none"> → ACE → Air Canada → Alaska → Allegiant → Allied → American Airlines → ARFF → ASIG → Bradford → British Airways → Delta → DHL → Elite Line Services → Envoy → FedEx → Flagship → Frontier → Hawaiian → HFF → HMS Host → IAS → JAL → Jet Blue → Landmark → Mission Yogurt → SDCRAA → Seaport → Siemens → Sky West → Southwest → Spirit → SSP → Sun Country → United → UPS → US Airways → Virgin America → Volaris
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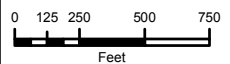
		→ WestJet
STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.		
BMP FREQUENCIES/EQUIPMENT/TOOLS: Observations of illicit discharges and connections are on a continual, ad hoc basis, during normal operations, and reported when observed. Formal inspections are conducted as described in Section 3.0 and Appendix D-2. Training frequencies and tools are described in Sections 7.0 and 9.0. Irrigation frequencies and tools are described in Section 3.0.		
AUTHORIZED LOCATIONS TO IMPLEMENT BMPs TO PREVENT NON-STORM WATER DISCHARGES:		
<input type="checkbox"/>	Implement BMPs for the prevention of non-storm water discharges within the entire airport boundary. In particular, do not discharge non-storm water to the designated areas (storm drains) as shown on the attached map.	
Date:		Version: 2.0

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 Storm Drain Flow Direction
 Storm Drain Inlet
 Storm Drain
 Airport Boundary



Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

PROJECT: 5013-11-0003	 
DATE: 6/11/2015	
DRAWN BY: KMB	
CHECKED BY: AJA	



SAN DIEGO INTERNATIONAL AIRPORT
San Diego, California

STORM WATER MANAGEMENT PLAN AT SAN DIEGO INTERNATIONAL AIRPORT

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BMP SC02A	OUTDOOR EQUIPMENT OPERATIONS AND MAINTENANCE AREAS	
<p>PURPOSE: To prevent the discharge of pollutants to storm water from outdoor equipment operations and general maintenance facilities.</p>	<p>TARGETED ACTIVITIES:</p> <ul style="list-style-type: none"> ➔ All Outdoor Equipment Operations ➔ All Maintenance 	
<p>POLLUTION PREVENTION:</p>		<p>POLLUTANTS of CONCERN:</p>
	<p>Implement the following pollution prevention practices and BMPs to prevent discharges of pollutants from outdoor equipment operations and maintenance activities to the storm water collection system:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Provide covered maintenance areas when designing new facilities or upgrading existing facilities. If possible utilize indoor areas, lean-tos, or portable covers. <input type="checkbox"/> Perform the activity during dry periods. <input type="checkbox"/> Use non-toxic, biodegradable chemicals or products for maintenance, minimize or eliminate the use of solvents and substitute materials with less hazardous properties where feasible. <input type="checkbox"/> Use absorbent materials at potential problem areas. Adequately collect/remove absorbent materials from area after use and dispose of them in an appropriate manner. <input type="checkbox"/> DO NOT HOSE DOWN WORK AREAS TO THE STORM DRAIN SYSTEM. Notify Airport Operations (619-400-2710) and the Airport Authority Environmental Affairs Department (619-400-2784) if any evidence of the disposal of solvents or cleaning solutions to the storm drain has occurred. 	<ul style="list-style-type: none"> ➔ Bacteria ➔ Battery Acid ➔ Fuel ➔ Metals ➔ Nutrients ➔ Oil and Grease ➔ Organics ➔ Paint ➔ Sediments ➔ Solvents/Cleaning Solutions ➔ Trash ➔ Vehicle Fluids
<p>OPERATIONS:</p>		<p>APPLICABLE TENANTS/ DEPARTMENTS:</p>
<p>Sub-BMPs</p> <ul style="list-style-type: none"> - 01 <input type="checkbox"/> - 02 <input type="checkbox"/> 	<p>Equipment operations and maintenance areas should not be located directly in the path of storm drains.</p> <p>Perform equipment operations and maintenance in designated areas with overhead cover for pollutant sources and/or activity areas.</p> <p>SEE ALSO BMP SC02B</p>	<ul style="list-style-type: none"> ➔ ACE ➔ Air Canada ➔ Alaska ➔ Allegiant ➔ Allied ➔ American Airlines ➔ ARFF ➔ ASIG ➔ Bradford ➔ British Airways ➔ Delta ➔ DHL ➔ Elite Line Service ➔ Envoy ➔ FedEx ➔ Flagship ➔ Frontier ➔ Hawaiian ➔ HMS Host ➔ IAS

		<ul style="list-style-type: none"> → JAL → Jet Blue → Landmark → SDCRAA → Siemens → Southwest → Spirit → SSP → Sun Country → United → UPS → US Airways → Virgin America → Volaris → WestJet
<p>STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.</p>		
<p>BMP FREQUENCIES/EQUIPMENT/TOOLS: Maintenance is conducted as needed using either indoor shops, or under temporary or permanent cover when available and feasible.</p>		
<p>AUTHORIZED OUTDOOR OPERATIONS AND MAINTENANCE LOCATIONS:</p>		
<input type="checkbox"/>	<p>Use only the designated areas for outdoor operations and maintenance activities as shown in the attached map.</p>	
<p>Date:</p>		<p>Version: 2.0</p>

Airport Boundary		Tenant Gate Areas			
ACE	Flagship	Tenant	Gate	Tenant	Gate
ASIG	HMS Host	Air Canada	22	Landmark Aviation	N4
Alaska	Jet Blue	Alaska	11, 13, 14, 15, 16, 17, 18	SDCRAA	19
Allied Aviation	Port Parking	Allegiant	23	Siemens	7, 8
American	Southwest	American/Envoy	27, 28, 29, 31, 32	Southwest	1, 1A, 2, 3, 4, 5, 6, 7, 8, 9, 10
Bradford	US Airways	ARFF	N0	Spirit	20, 21, 22, 24, 26, 30
Delta	United	British Airways	20	SSP	11, 12
ELS		Delta	41, 42, 47, 48, 49, 50, 51, W3, W4, W5	Sun Country	51
		DHL	N3	United	38, 39, 40, 43, 44, 45, 46, W1, W2
		FedEx	N1	UPS	N2, N3
		Frontier	12	US Airways	33, 34, 35
		Hawaiian	51	Virgin America	25
		IAS	N2, N3	Volaris	20, 21, 22
		JAL	20, 22	West Jet	22, 24, 26
		Jet Blue	36, 37		



Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

PROJECT: 5013-11-0003		
DATE: 6/16/2015		
DRAWN BY: KMB		
CHECKED BY: AJA		





SAN DIEGO INTERNATIONAL AIRPORT
San Diego, California















STORM WATER MANAGEMENT PLAN
AT SAN DIEGO INTERNATIONAL AIRPORT

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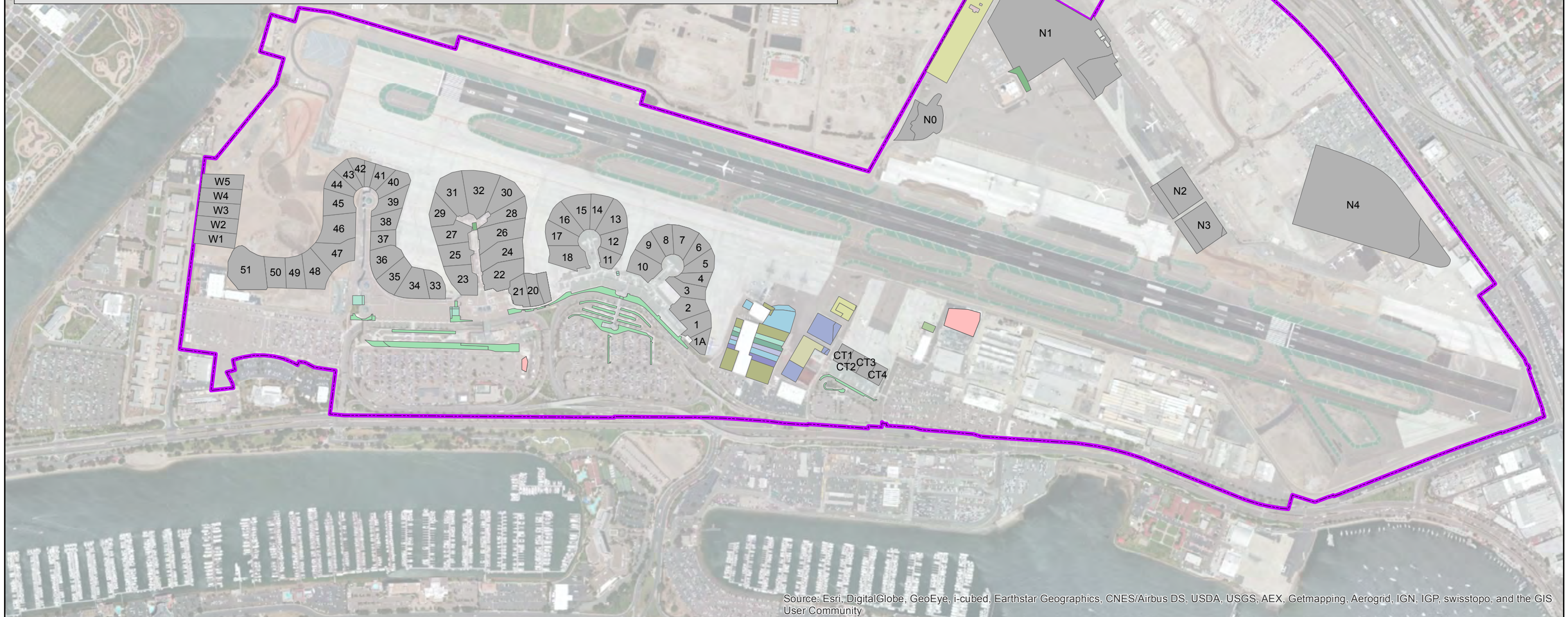
BMP SC02B	AIRCRAFT, GROUND VEHICLE, AND EQUIPMENT MAINTENANCE	
<p>PURPOSE: To prevent or reduce the discharge of pollutants to storm water from any type of aircraft, vehicle, or equipment maintenance and repair, including ground vehicle and equipment painting/stripping and floor washdowns.</p>	<p>TARGETED ACTIVITIES:</p> <ul style="list-style-type: none"> ➔ Aircraft Maintenance ➔ Vehicle Maintenance ➔ Equipment Maintenance 	
<p>POLLUTION PREVENTION:</p>	<p>Implement the following pollution prevention practices and BMPs to prevent discharges of pollutants to the storm water collection system:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Provide covered maintenance areas when designing new facilities or upgrading existing facilities. Utilize indoor areas, lean-tos, or portable covers. <input type="checkbox"/> Perform the activity during dry periods. <input type="checkbox"/> Use non-toxic, biodegradable chemicals or products for maintenance, minimize or eliminate the use of solvents and substitute materials with less hazardous properties where feasible (e.g. non-chlorinated solvents or water-based solvents instead of chlorinated solvents, non-caustic detergents instead of caustic cleaners, or cleaning without liquid cleaners like a wire brush). <input type="checkbox"/> Recycle or properly dispose of the following: greases, oils, antifreeze, brake fluid, cleaning solutions, hydraulic fluid, batteries and transmission fluid. Drain and crush oil filters and oil containers before recycling or disposal. Store crushed oil filters, empty lubricant containers, and cracked batteries in a covered, acid-proof container (for batteries), and leak-proof covered secondary containment (for all waste). <input type="checkbox"/> DO NOT HOSE DOWN WORK AREAS TO THE STORM DRAIN SYSTEM. Notify Airport Operations (619-400-2710) and the Airport Authority Environmental Affairs Department (619-400-2784) if there is any evidence of the disposal of solvents, cleaning solutions or other materials to the storm drain, or hosing down of work areas. 	<p>POLLUTANTS of CONCERN:</p> <ul style="list-style-type: none"> ➔ Battery Acid ➔ Fuel ➔ Metals ➔ Nutrients ➔ Oil and Grease ➔ Organics ➔ Paint ➔ Sediments ➔ Solvents/Cleaning Solutions ➔ Vehicle Fluids
<p>OPERATIONS:</p> <p>Sub-BMPs</p>	<ul style="list-style-type: none"> - 01 <input type="checkbox"/> Employees are trained in safe vehicle and equipment operations and maintenance. - 02 <input type="checkbox"/> Aircraft, vehicle and equipment maintenance areas should not be located directly in the path of storm drains. - 03 <input type="checkbox"/> Perform maintenance of aircraft, ground vehicles and equipment in designated areas that are either indoors or are covered, bermed, enclosed, or sloped/positioned away from the MS4. - 04 <input type="checkbox"/> Perform regular equipment inspection and testing. - 05 <input type="checkbox"/> Inspect aircraft, vehicles and equipment on a regular basis for fluid leaks. Place drip pans under leaks as needed. 	<p>APPLICABLE TENANTS/ DEPARTMENTS:</p> <ul style="list-style-type: none"> ➔ ACE ➔ Air Canada ➔ Alaska ➔ Allegiant ➔ Allied ➔ American Airlines ➔ ARFF ➔ ASIG ➔ British Airways ➔ Delta ➔ DHL ➔ Elite Line Service ➔ Envoy ➔ FedEx

<p>- 06 <input type="checkbox"/></p> <p>- 07 <input type="checkbox"/></p> <p>- 08 <input type="checkbox"/></p> <p>- 09 <input type="checkbox"/></p> <p>- 10 <input type="checkbox"/></p> <p>- 11 <input type="checkbox"/></p> <p>- 12 <input type="checkbox"/></p> <p>- 13 <input type="checkbox"/></p>	<p>Maintain aircraft, vehicles and equipment in good condition to prevent or correct any leakage of oil or other fluids.</p> <p>Use drip pans during maintenance.</p> <p>Do not leave drip pans containing fluids or other open containers lying around. Regularly transfer fluids for recycling or proper disposal.</p> <p>Minimize the use of solvents or use less toxic solvents whenever possible. If solvents cannot be avoided, clean or drain parts in self-contained sinks or drum units, and check those units regularly for leaks.</p> <p>Store mechanical parts, equipment and vehicles awaiting repair under cover and away from storm drains.</p> <p>Store spill response materials in maintenance areas and on maintenance vehicles. Adequately collect/remove absorbent materials from area after use and dispose of them in an appropriate manner.</p> <p>Remove fluids and batteries from salvage vehicles and equipment and dispose of properly.</p> <p>Properly dispose of obsolete and inoperable vehicles and equipment.</p>	<ul style="list-style-type: none"> ➔ Flagship ➔ Frontier ➔ Hawaiian ➔ HMS Host ➔ IAS ➔ JAL ➔ Jet Blue ➔ Landmark ➔ SDCRAA ➔ Seaport ➔ Siemens ➔ Sky West ➔ Southwest ➔ Spirit ➔ Sun Country ➔ SSP ➔ United ➔ UPS ➔ US Airways ➔ Virgin America ➔ Volaris ➔ WestJet
<p>STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.</p>		
<p>BMP FREQUENCIES/EQUIPMENT/TOOLS: Maintenance is conducted as needed using either indoor shops, or under temporary or permanent cover when available and feasible. Equipment/tools to implement BMPs include drip pans, outdoor sheds, storage containers, tarps, secondary containment devices, spill kits and drums.</p>		
<p>AUTHORIZED AIRCRAFT, GROUND VEHICLE AND EQUIPMENT MAINTENANCE LOCATIONS:</p>		
<p><input type="checkbox"/></p>	<p>Use only the designated areas for aircraft, ground vehicle and equipment maintenance as shown in the attached map.</p>	
<p>Date:</p>		<p>Version: 2.0</p>


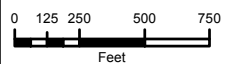
 Airport Boundary

- | | |
|--|--|
|  ACE |  Flagship |
|  ASIG |  HMS Host |
|  Alaska |  Jet Blue |
|  Allied Aviation |  Port Parking |
|  American |  Southwest |
|  Delta |  US Airways |
|  ELS |  United |

Tenant Gate Areas		Tenant	Gate	Tenant	Gate
		Air Canada	22	Landmark Aviation	N4
		Alaska	11, 13, 14, 15, 16, 17, 18	SDCRAA	19
		Allegiant	23	SeaPort	11C
		American/Envoy	27, 28, 29, 31, 32	Siemens	7, 8
		ARFF	N0	SkyWest	34, 35, 36, 37, 38
		British Airways	20	Southwest	1, 1A, 2, 3, 4, 5, 6, 7, 8, 9, 10
		Delta	41, 42, 47, 48, 49, 50, 51, W3, W4, W5	Spirit	20, 21, 22, 24, 26, 30
		DHL	N3	SSP	11, 12
		FedEx	N1	Sun Country	51
		Frontier	12	United	38, 39, 40, 43, 44, 45, 46, W1, W2
		Hawaiian	51	UPS	N2, N3
		IAS	N2, N3	US Airways	33, 34, 35
		JAL	20, 22	Virgin America	25
		Jet Blue	36, 37	Volaris	20, 21, 22
				West Jet	22, 24, 26



Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

PROJECT: 5013-11-0003	 
DATE: 6/16/2015	
DRAWN BY: KMB	
CHECKED BY: AJA	

















SAN DIEGO INTERNATIONAL AIRPORT
San Diego, California

STORM WATER MANAGEMENT PLAN
AT SAN DIEGO INTERNATIONAL AIRPORT

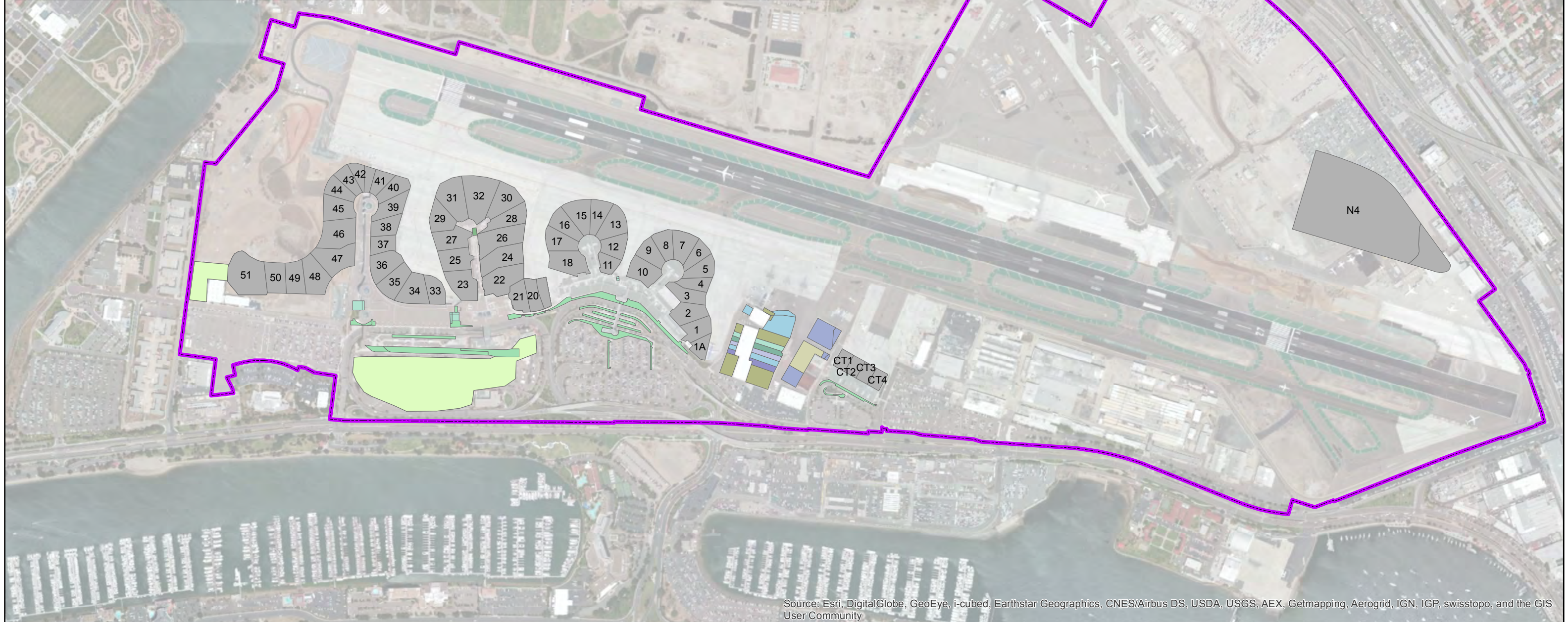
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BMP SC02C	ELECTRIC VEHICLE MAINTENANCE	
PURPOSE: To prevent or reduce the discharge of pollutants to storm water from electric ground vehicle charging, maintenance and repair.	TARGETED ACTIVITIES: → Vehicle Maintenance → Battery Charging	
POLLUTION PREVENTION:		POLLUTANTS of CONCERN: → Battery Acid → Battery Acid Neutralizing Agents → Metals → Vehicle Fluids
	Implement the following pollution prevention practices and BMPs to prevent discharges of pollutants to the storm water collection system: <input type="checkbox"/> Develop a battery maintenance plan to provide procedures for cleaning and maintenance, develop a schedule for service, and to correct any issues that can potentially arise. <input type="checkbox"/> Investigate use of smart chargers with multi-stage charging capability.	
OPERATIONS:		APPLICABLE TENANTS/ DEPARTMENTS: → Alaska → American Airlines → Delta → Elite Line Service → FedEx → Flagship → Landmark → SDCRAA → SeaPort → Siemens → Southwest → United → US Airways
Sub-BMPs - 01 <input type="checkbox"/> Do not overcharge batteries in electric vehicles. - 02 <input type="checkbox"/> Park electric vehicles in cool and dry areas (e.g. shade under building) when not in use. - 03 <input type="checkbox"/> Use acid resistant drip pans sprinkled with battery acid neutralizing agent (e.g. lime or baking soda) when filling or cleaning electric vehicle batteries and dispose of waste properly. - 04 <input type="checkbox"/> Maintain battery acid neutralizing kits adjacent to charging stations. Adequately recover spill response material from area after use and dispose of them in an appropriate manner. -05 <input type="checkbox"/> Avoid overfilling electric vehicle batteries. -06 <input type="checkbox"/> Do not fill batteries or perform electric vehicle maintenance during rain events. -07 <input type="checkbox"/> Store batteries inside in a cool and dry place if possible. If batteries are stored outside, store in a non-reactive container with a cover. -08 <input type="checkbox"/> Clean battery case and terminals regularly or when there is a buildup of corrosion with a rag dampened with a solution of water and battery acid neutralizing agent. Capture any wastewater to be treated as hazardous waste. -09 <input type="checkbox"/> Apply petroleum jelly or grease on battery terminals to slow down corrosion process.	SEE ALSO BMP SC02B	
STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.		
BMP FREQUENCIES/EQUIPMENT/TOOLS: Equipment/tools to implement BMPs include drip pans, neutralizing kits, outdoor sheds, storage containers, appropriate secondary containment devices, spill kits and drums.		
AUTHORIZED ELECTRIC VEHICLE MAINTENANCE LOCATIONS:		


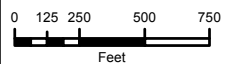
<input type="checkbox"/>	Use only the designated areas for electrical vehicle maintenance as shown in the attached map.	
Date:	Version: 1.0	

-  Airport Boundary
-  ACE
-  SDCRAA
-  ASIG
-  Alaska
-  American
-  Delta
-  ELS
-  Flagship
-  HMS Host
-  Jet Blue
-  Southwest
-  US Airways
-  United

Tenant Gate Areas	
Tenant	Gate
Air Canada	22
Alaska	11, 13, 14, 15, 16, 17, 18
Allegiant	23
American/Envoy	27, 28, 29, 31, 32
British Airways	20
Delta	41, 42, 47, 48, 49, 50, 51
Frontier	12
Hawaiian	51
JAL	20, 22
Jet Blue	36, 37
Landmark Aviation	N4
SDCRAA	19
SeaPort	11C
Siemens	7, 8
SkyWest	34, 35, 36, 37, 38
Southwest	1, 1A, 2, 3, 4, 5, 6, 7, 8, 9, 10
Spirit	20, 21, 22, 24, 26, 30
SSP	11, 12
Sun Country	51
United	38, 39, 40, 43, 44, 45, 46
US Airways	33, 34, 35
Virgin America	25
Volaris	20, 21, 22
West Jet	22, 24, 26



Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

PROJECT: 5013-11-0003	 
DATE: 6/16/2015	
DRAWN BY: KMB	
CHECKED BY: AJA	



SAN DIEGO INTERNATIONAL AIRPORT
San Diego, California

STORM WATER MANAGEMENT PLAN
AT SAN DIEGO INTERNATIONAL AIRPORT

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BMP SC03	AIRCRAFT, GROUND VEHICLE, AND EQUIPMENT FUELING	
<p>PURPOSE: To prevent fuel spills and leaks, and reduce their impacts to storm water.</p>	<p>TARGETED ACTIVITIES:</p> <ul style="list-style-type: none"> ➔ Aircraft Fueling ➔ Vehicle Fueling ➔ Equipment Fueling 	
<p>POLLUTION PREVENTION:</p>		
	<p>Implement the following pollution prevention practices and BMPs to prevent fuel discharges to the storm water collection system:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Use pigs/mats over storm drains during fueling activities. <input type="checkbox"/> Fuel pumps should be posted with signs stating “No Topping Off” to prevent overflow. <input type="checkbox"/> Use absorbent materials and spot cleaning for small spills, and properly dispose of the spill response materials. <input type="checkbox"/> Properly dispose of any fuel spills and leaks. If feasible, collect any fuel spills through vacuum equipment / trucks. <input type="checkbox"/> Report leaking vehicles to fleet maintenance. <input type="checkbox"/> Develop and implement a Spill Prevention, Control and Countermeasure (SPCC) Plan if required under guidelines set forth in 40 CFR, Section 112. <input type="checkbox"/> DO NOT DISCHARGE FUEL TO A CATCH BASIN OR STORM DRAIN. Notify Airport Operations (619-400-2710) and the Airport Authority Environmental Affairs Department (619-400-2784) if any fuel spill or leak is observed. 	<p>POLLUTANTS of CONCERN:</p> <ul style="list-style-type: none"> ➔ Fuel ➔ Metals ➔ Oil and Grease ➔ Organics
<p>OPERATIONS:</p>		
<p>Sub-BMPs</p>	<ul style="list-style-type: none"> - 01 <input type="checkbox"/> Perform aircraft, ground vehicle and equipment fueling in the designated areas that are covered, bermed, enclosed, or sloped/positioned away from the MS4. - 02 <input type="checkbox"/> Fueling areas should not be located directly in the path of storm drains. - 03 <input type="checkbox"/> Label, regularly inspect and keep in good condition all tanks, piping and valves. - 04 <input type="checkbox"/> Store absorbent booms, spill kits, or vacuum equipment in fueling areas or on fueling vehicles. - 05 <input type="checkbox"/> Regularly inspect fueling areas. - 06 <input type="checkbox"/> Monitor major fueling operations. - 07 <input type="checkbox"/> Use secondary containment or cover when transferring fuel from a tanker truck to a fuel tank. 	<p>APPLICABLE TENANTS/ DEPARTMENTS:</p> <ul style="list-style-type: none"> ➔ ACE ➔ Air Canada ➔ Alaska ➔ Allegiant ➔ Allied ➔ American Airlines ➔ ARFF ➔ ASIG ➔ British Airways ➔ Delta ➔ DHL ➔ Envoy ➔ FedEx ➔ Flagship ➔ Frontier ➔ Hawaiian ➔ HMS Host ➔ IAS

<p>- 08 <input type="checkbox"/></p> <p>- 09 <input type="checkbox"/></p> <p>- 10 <input type="checkbox"/></p> <p>- 11 <input type="checkbox"/></p>	<p>Use leak detection, overfill protection and spill prevention devices for tanks and piping.</p> <p>Use automatic shut-off mechanisms for fuel tankers and hose connections.</p> <p>Do not top off fuel tanks.</p> <p>Restrict access to fuel tanks and fueling vehicles.</p>	<p>→ JAL</p> <p>→ Jet Blue</p> <p>→ Landmark</p> <p>→ SDCRAA</p> <p>→ SeaPort</p> <p>→ Sky West</p> <p>→ Southwest</p> <p>→ Spirit</p> <p>→ Sun Country</p> <p>→ United</p> <p>→ UPS</p> <p>→ US Airways</p> <p>→ Virgin America</p> <p>→ Volaris</p> <p>→ WestJet</p>
<p>STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.</p>		
<p>BMP FREQUENCIES/EQUIPMENT/TOOLS: Fueling is conducted as needed using bermed, sloped areas or under cover if and where possible. Equipment/tools to implement BMPs include drip pans, pigs/mats, secondary containment devices, spill kits, shut-off mechanisms and drums.</p>		
<p>AUTHORIZED AIRCRAFT, GROUND VEHICLE AND EQUIPMENT FUELING LOCATIONS:</p>		
<p><input type="checkbox"/></p>	<p>Use only the designated areas for aircraft, ground vehicle and equipment fueling as shown in the attached map.</p>	
<p>Date:</p>		<p>Version: 2.0</p>

Airport Boundary

Fueling

Fuel Storage

ACE	HMS Host
ASIG	Jet Blue
Alaska	Port Parking
Allied Aviation	Southwest
American	US Airways
Delta	United
Flagship	

Tenant Gate Areas

Tenant	Gate	Tenant	Gate
Air Canada	22	Landmark Aviation	N4
Alaska	11, 13, 14, 15, 16, 17, 18	SDCRAA	19
Allegiant	23	SeaPort	11C
American/Envoy	27, 28, 29, 31, 32	SkyWest	34, 35, 36, 37, 38
ARFF	N0	Southwest	1, 1A, 2, 3, 4, 5, 6, 7, 8, 9, 10
British Airways	20	Spirit	20, 21, 22, 24, 26, 30
Delta	41, 42, 47, 48, 49, 50, 51, W3, W4, W5	Sun Country	51
DHL	N3	United	38, 39, 40, 43, 44, 45, 46, W1, W2
FedEx	N1	UPS	N2, N3
Frontier	12	US Airways	33, 34, 35
Hawaiian	51	Virgin America	25
IAS	N2, N3	Volaris	20, 21, 22
JAL	20, 22	West Jet	22, 24, 26
Jet Blue	36, 37		



Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

PROJECT: 5013-11-0003				SAN DIEGO INTERNATIONAL AIRPORT San Diego, California	STORM WATER MANAGEMENT PLAN AT SAN DIEGO INTERNATIONAL AIRPORT
DATE: 6/16/2015					
DRAWN BY: KMB CHECKED BY: AJA					

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BMP SC04	AIRCRAFT, GROUND VEHICLE, AND EQUIPMENT CLEANING	
<p>PURPOSE:</p> <p>Prevent or reduce the discharge of pollutants to storm drains from aircraft, vehicle, and equipment washing, and equipment degreasing.</p>		<p>TARGETED ACTIVITIES:</p> <ul style="list-style-type: none"> ➔ Aircraft Washing ➔ Vehicle Washing ➔ Equipment Washing ➔ Equipment Degreasing
<p>POLLUTION PREVENTION:</p> <p>Implement the following pollution prevention practices and BMPs to prevent discharges from the cleaning of aircraft, ground vehicles and equipment to the storm water collection system:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Store significant cleaning materials in leak-free containers and within areas of secondary containment. <input type="checkbox"/> Use biodegradable, phosphate-free, non-toxic cleaning solutions. <input type="checkbox"/> Follow water conservation practices when performing cleaning. <input type="checkbox"/> Wash vehicles at a commercial car wash when possible. <input type="checkbox"/> DO NOT DISCHARGE WASTE WASH WATER OR CLEANING AGENTS TO A CATCH BASIN OR STORM DRAIN. Notify Airport Operations (619-400-2710) and the Airport Authority Environmental Affairs Department (619-400-2784) if any non-storm water discharges from cleaning activities to the storm drain system are observed. 		<p>POLLUTANTS of CONCERN:</p> <ul style="list-style-type: none"> ➔ Cleaning Solutions ➔ Oil and Grease ➔ Solvents ➔ Vehicle Fluids ➔ Metals
<p>OPERATIONS:</p>		<p>APPLICABLE TENANTS/ DEPARTMENTS:</p> <ul style="list-style-type: none"> ➔ ACE ➔ Air Canada ➔ Alaska ➔ Allegiant ➔ American Airlines ➔ ARFF ➔ ASIG ➔ Bradford ➔ Delta ➔ DHL ➔ Elite Line Services ➔ Envoy ➔ FedEx ➔ Flagship ➔ Hawaiian ➔ HMS Host ➔ IAS ➔ JAL ➔ Jet Blue ➔ Landmark ➔ SDCRAA ➔ SSP ➔ United ➔ UPS
<p>Sub-BMPs</p>	<ul style="list-style-type: none"> - 01 <input type="checkbox"/> Keep vehicles, equipment, and washing areas clean and free of waste. - 02 <input type="checkbox"/> Use dry washing and surface preparation techniques where feasible. - 03 <input type="checkbox"/> Wash areas should not be located directly in the path of storm drains. - 04 <input type="checkbox"/> Use pigs and cover mats to cover all catch basins in the surrounding area to contain the wash water during washing activities. - 05 <input type="checkbox"/> Perform all washing activities in designated areas that capture, filter and recycle water (e.g. at new Wash Bay Facility), or use reclaimed water and divert wash water to a structural treatment control BMP, sanitary sewer or dead end sump with pump. - 06 <input type="checkbox"/> Perform routine visual observations of washing activities and inspect nearby storm drains to detect and prevent discharges from cleaning activities. - 07 <input type="checkbox"/> Remove all excess materials such as drippings and residue by using vacuum methods. Properly dispose of all waste materials. 	

<p>- 08 <input type="checkbox"/></p> <p>- 09 <input type="checkbox"/></p>	<p>Use a hand-held hose equipped with positive shut-off nozzle to wash vehicles.</p> <p>Wash vehicles, aircraft, and equipment between 4pm to 10am from November 1 to May 31 and between 6pm to 10am from June 1 to October 31.</p>	<p>→ US Airways → Virgin America → Volaris → WestJet</p>
<p>STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.</p>		
<p>BMP FREQUENCIES/EQUIPMENT/TOOLS: Cleaning is conducted as needed. Equipment/tools to implement BMPs include rags, the closed loop system wash rack or the aircraft wash rack, pigs and cover mats, and shop vacuums.</p>		
<p>AUTHORIZED AIRCRAFT, GROUND VEHICLE AND EQUIPMENT CLEANING:</p>		
<p><input type="checkbox"/></p>	<p>Use only the designated areas for aircraft, ground vehicle and equipment cleaning as shown in the attached map.</p>	
<p>Date:</p>		<p>Version: 2.0</p>

Legend		Tenant Gate Areas			
	Airport Boundary	Tenant	Gate	Tenant	Gate
	SDCRAA	Air Canada	22	SDCRAA	19
	ACE	Alaska	11, 13, 14, 15, 16, 17, 18	SSP	11, 12
	Flagship	Allegiant	23	United	38, 39, 40, 43, 44, 45, 46, W1, W2
	ASIG	American/Envoy	27, 28, 29, 31, 32	Virgin America	25
	Alaska	ARFF	N0	Volaris	20, 21, 22
	American	Delta	41, 42, 47, 48, 49, 50, 51, W3, W4, W5	West Jet	22, 24, 26
	Delta	DHL	N3		
	HMS Host	Hawaiian	51		
	Jet Blue	JAL	20, 22		
	Port Parking	Jet Blue	36, 37		
	United				



Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

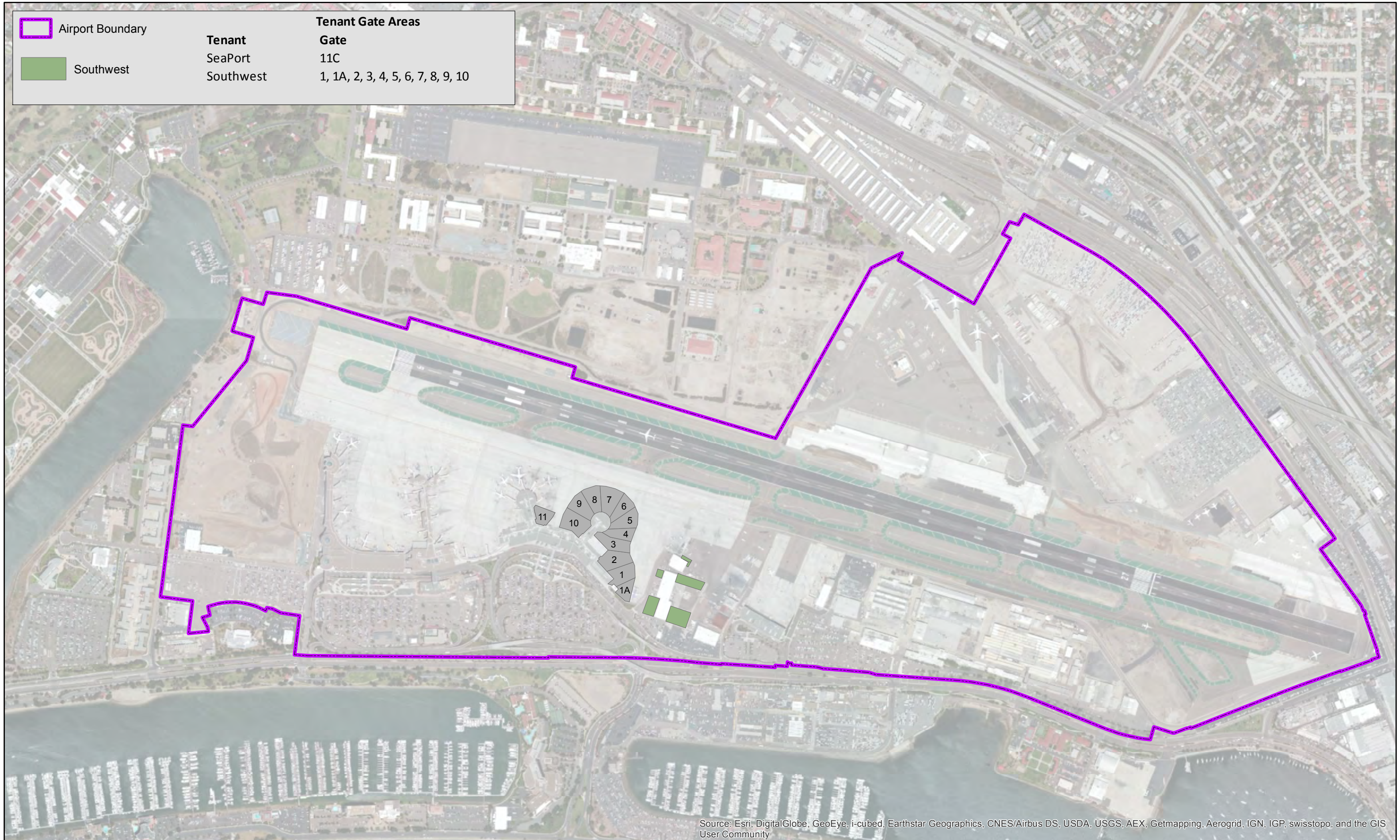
PROJECT: 5013-11-0003 DATE: 6/16/2015 DRAWN BY: KMB CHECKED BY: AJA				SAN DIEGO INTERNATIONAL AIRPORT San Diego, California	STORM WATER MANAGEMENT PLAN AT SAN DIEGO INTERNATIONAL AIRPORT
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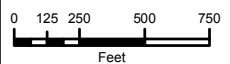

BMP SC05	AIRCRAFT DEICING/ANTI-ICING	
PURPOSE: Prevent or reduce the discharge of pollutants to storm water from aircraft deicing and anti-icing procedures.	TARGETED ACTIVITIES: → Aircraft Deicing → Aircraft Anti-Icing	
POLLUTION PREVENTION:		POLLUTANTS of CONCERN:
	<p>Implement the following pollution prevention practices and BMPs to prevent discharges to the storm water collection system from aircraft deicing and anti-icing activities:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Depending on conditions, apply only enough fluid to surfaces to ensure the safe operation of the aircraft. Excess fluid dripped to the ground contaminates soil and water if not properly contained. <input type="checkbox"/> Maintain adequate supplies of spill response equipment and materials in accessible locations near areas where spills may occur. <input type="checkbox"/> Recycle or dispose of the fluids in accordance with local, state, and federal regulations. <input type="checkbox"/> Implement forthcoming recommendations of the FAA technical committee on deicing. <input type="checkbox"/> Provide the appropriate level of employee training in the following areas: spill response and prevention, storm water pollution prevention education, right-to-know awareness training, and hazardous materials management. <input type="checkbox"/> DO NOT OVERSPRAY OR ALLOW ANY DISCHARGE OF DEICING/ANTI-ICING AGENTS TO A CATCH BASIN OR STORM DRAIN. Notify Airport Operations (619-400-2710) and the Airport Authority Environmental Affairs Department (619-400-2784) if any discharges of aircraft deicing or anti-icing fluids have occurred. 	→ Ethylene Glycol → Propylene Glycol
OPERATIONS:		APPLICABLE TENANTS/ DEPARTMENTS:
Sub-BMPs - 01 <input type="checkbox"/> - 02 <input type="checkbox"/> - 03 <input type="checkbox"/> - 04 <input type="checkbox"/>	Perform all anti-icing and deicing operations only in designated areas that are covered, bermed, enclosed or sloped/positioned away from the MS4. Monitor deicing and anti-icing operations regularly to ensure quantities of fluids used are at a minimum while not jeopardizing aircraft safety and operation. All fluids are captured or diverted to a structural treatment control BMP, recycling system, sanitary sewer or dead end sump with pump. Clean the designated anti-icing and deicing ramp areas following deicing/anti-icing operations with wet-type sweepers to remove deicing fluids from the paved areas.	→ SeaPort → Southwest

STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.		
BMP FREQUENCIES/EQUIPMENT/TOOLS: Aircraft deicing is conducted as needed away from storm drains. Equipment/tools to implement BMPs include capture devices, spill kits, ramp scrubbers, and drums.		
AUTHORIZED LOCATIONS TO PERFORM AIRCRAFT ANTI-ICING AND DEICING ACTIVITIES:		
<input type="checkbox"/>	Use only the designated areas for aircraft anti-icing and deicing activities as shown in the attached map.	
Date:		Version: 2.0

	Airport Boundary		Tenant Gate Areas
	Southwest	Tenant	Gate
		SeaPort	11C
		Southwest	1, 1A, 2, 3, 4, 5, 6, 7, 8, 9, 10



Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

PROJECT: 5013-11-0003 DATE: 6/16/2015 DRAWN BY: KMB CHECKED BY: AJA	 		SAN DIEGO INTERNATIONAL AIRPORT San Diego, California	STORM WATER MANAGEMENT PLAN AT SAN DIEGO INTERNATIONAL AIRPORT
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BMP SC06	OUTDOOR LOADING/UNLOADING OF MATERIALS	
<p>PURPOSE: Prevent or reduce the discharge of pollutants to storm water from loading and unloading of material and cargo.</p>	<p>TARGETED ACTIVITIES:</p> <ul style="list-style-type: none"> ➔ Cargo Handling ➔ Fuel Storage ➔ Chemical Storage ➔ Equipment Storage 	
<p>POLLUTION PREVENTION:</p>		<p>POLLUTANTS of CONCERN:</p>
	<p>Implement the following pollution prevention practices and BMPs to prevent non-storm water discharges of pollutants from outdoor loading and unloading of materials to the storm water collection system:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Transfer materials in paved areas, away from storm drain inlets. <input type="checkbox"/> Contain and absorb leaks during transfers and spillage from hose disconnections; dispose of residue properly. <input type="checkbox"/> Notify Airport Operations (619-400-2710) and the Airport Authority Environmental Affairs Department (619-400-2784) if any evidence of illegal discharges from outdoor material loading and unloading is observed. 	<ul style="list-style-type: none"> ➔ Fuel ➔ Pesticides/Herbicides/Fertilizers ➔ Oil and Grease ➔ Solvents/Cleaning Solutions ➔ Battery Acid
<p>OPERATIONS:</p>		<p>APPLICABLE TENANTS/ DEPARTMENTS:</p>
<p>Sub-BMPs</p>	<ul style="list-style-type: none"> - 01 <input type="checkbox"/> Contractors and haulers should be made aware of and adhere to BMPs specifications that are relevant to the loading and unloading of materials. - 02 <input type="checkbox"/> Loading and unloading areas should not be located directly in the path of storm drains. - 03 <input type="checkbox"/> Loading and unloading areas should be graded, bermed, covered or otherwise protected to prevent contact with rainfall and storm water run-on and runoff. - 04 <input type="checkbox"/> Equipment used for loading and unloading should be checked on a regular basis for leaks. - 05 <input type="checkbox"/> Use drip pans or other containment measures under hoses. - 06 <input type="checkbox"/> Keep loading and unloading areas free of spills and debris by containing and absorbing leaks during transfers and spillage from hose disconnections or cargo pallets; dispose of residue or debris properly. - 07 <input type="checkbox"/> Spill kits or other measures are available in accessible locations near areas where spills may be likely to occur to contain spills and/or prevent tracking off-site. 	<ul style="list-style-type: none"> ➔ Air Canada ➔ Alaska ➔ Allegiant ➔ Allied ➔ ASIG ➔ Bradford ➔ Delta ➔ DHL ➔ FedEx ➔ Frontier ➔ Hawaiian ➔ HFF ➔ HMS Host ➔ IAS ➔ JAL ➔ Jet Blue ➔ Landmark ➔ Mission Yogurt ➔ SDCRAA ➔ Southwest ➔ SSP ➔ United ➔ UPS ➔ Virgin America ➔ WestJet

STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.		
BMP FREQUENCIES/EQUIPMENT/TOOLS: Loading/unloading is conducted as on a daily basis. Equipment/tools to implement BMPs include capture devices, drip pans, spill kits, brooms, and drums.		
AUTHORIZED LOCATIONS FOR THE OUTDOOR LOADING AND UNLOADING OF SIGNIFICANT MATERIALS:		
<input type="checkbox"/>	Use only the designated areas for outdoor loading and unloading of significant materials as shown in the attached map.	
Date:		Version: 2.0

Airports Boundary		Tenant Gate Areas			
Tenant	Gate	Tenant	Gate		
ASIG		Landmark Aviation	N4		
Alaska		Mission Yogurt	4		
Allied Aviation		SDCRAA	19		
Bradford		Southwest	1, 1A, 2, 3, 4, 5, 6, 7, 8, 9, 10		
Delta		SSP	11, 12		
HMS Host		United	38, 39, 40, 43, 44, 45, 46, W1, W2		
Jet Blue		UPS	N2, N3		
Southwest		Virgin America	25		
United		West Jet	22, 24, 26		
Air Canada	22				
Alaska	11, 13, 14, 15, 16, 17, 18				
Alliant	23				
Delta	41, 42, 47, 48, 49, 50, 51, W3, W4, W5				
DHL	N3				
FedEx	N1				
Frontier	12				
Hawaiian	51				
HFF	7, 8				
IAS	N2, N3				
JAL	20, 22				
Jet Blue	36, 37				



Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

PROJECT: 5013-11-0003		
DATE: 6/16/2015		
DRAWN BY: KMB		
CHECKED BY: AJA		



SAN DIEGO INTERNATIONAL AIRPORT
San Diego, California

STORM WATER MANAGEMENT PLAN
AT SAN DIEGO INTERNATIONAL AIRPORT

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BMP SC07	OUTDOOR MATERIAL STORAGE	
<p>PURPOSE: Prevent or reduce the discharge of pollutants to storm water from outdoor storage areas for significant material (e.g., fuels, chemicals, bagged material on pallets, soils or asphalt materials bulk storage, deicing, compounds, etc.)</p>	<p>TARGETED ACTIVITIES:</p> <ul style="list-style-type: none"> ➔ Aircraft/Vehicle/Equipment Maintenance ➔ Aircraft/Vehicle Fueling ➔ Fuel/Chemical/Equipment Storage ➔ Cargo Handling 	
<p>POLLUTION PREVENTION:</p>		<p>POLLUTANTS of CONCERN:</p>
	<p>Implement the following pollution prevention practices and BMPs to prevent discharges of pollutants from outdoor storage areas to the storm water collection system:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Store all significant materials indoors or under cover areas with secondary containment (e.g. dog house design). <input type="checkbox"/> Develop and implement a Spill Prevention Control and Countermeasure (SPCC) Plan if required. <input type="checkbox"/> Install overflow protection devices on ASTs to warn the operator or install automatic shut-off transfer pumps. <input type="checkbox"/> Restrict access to AST, piping, valves. <input type="checkbox"/> Properly label all storage containers <input type="checkbox"/> Train personnel in the handling and management of hazardous materials. <input type="checkbox"/> Store hazardous materials away from high-traffic areas to prevent accidental spills or damage to storage containers. Make storage containers highly visible to traffic with traffic cones or posts. <input type="checkbox"/> Use tarpaulins, plastic sheeting (e.g. storm resistant polyethylene, polypropylene, or hypalon covering), roofs, buildings, and other enclosures for temporary or permanent coverings that are effective in preventing storm water contamination. <input type="checkbox"/> Stack storage containers in accordance with the manufacturers' directions. <input type="checkbox"/> In hazardous materials storage areas ensure sufficient aisle space to provide access for inspections and to improve the ease of material transport. <input type="checkbox"/> Place adequate spill kits in appropriate locations. 	<ul style="list-style-type: none"> ➔ Fuel ➔ Solvents/Cleaning Solutions ➔ Deicing/Anti-Icing Fluids

OPERATIONS:		APPLICABLE TENANTS/ DEPARTMENTS:
Sub-BMPs		
- 01 <input type="checkbox"/>	Outdoor material storage areas are not located directly in the path of storm drains.	→ ACE
- 02 <input type="checkbox"/>	Outdoor material storage areas have areas with overhead cover and secondary containment.	→ Alaska
- 03 <input type="checkbox"/>	Outdoor material storage areas are prevented from contacting stormwater run-on and run-off (e.g., by the use of berms, wood pallets etc).	→ Allied
- 04 <input type="checkbox"/>	Cover and contain material stockpiles or implement erosion control practices at the perimeter of the site and at any inlets or catch basins to prevent the off-site transport of eroded material.	→ American Airlines
- 05 <input type="checkbox"/>	Cover wood products treated with preservative chemicals with tarps or store them indoors.	→ ARFF
- 06 <input type="checkbox"/>	Install protection guards (bollards, posts, or guardrails) around ASTs and piping to prevent damage from vehicles or forklifts and any subsequent release.	→ ASIG
- 07 <input type="checkbox"/>	Regular inspections are performed on tanks, storage containers, and berms to check for corrosion, structural failure, loose fittings, poor welds, leaks etc. Repairs or replacements are performed as needed.	→ Bradford
- 08 <input type="checkbox"/>	Liquid materials in ASTs should be stored in double-walled, valved storage tanks or within concrete bermed secondary containment areas to provide the capacity to contain the entire volume of the single largest container, with sufficient freeboard to contain precipitation. The area inside the curb should slope to a drain.	→ Delta
- 09 <input type="checkbox"/>	Precipitation from bermed areas should be drained to the sanitary sewer if available, or inspected and tested according to applicable regulations prior to its release to a storm drain. The drain must have a positive control, such as a lock, valve, or plug, below the product level in the tank to prevent release of contaminated liquids.	→ DHL
- 10 <input type="checkbox"/>	Properly dispose of ponded storm water removed from bermed or containment areas.	→ Elite Line Service
- 11 <input type="checkbox"/>	The facility/operation has and displays a County hazardous materials permit for hazardous materials storage.	→ Envoy
- 12 <input type="checkbox"/>	Maintain an accurate, up-to-date inventory of the materials delivered and stored on site.	→ FedEx
		→ Flagship
		→ HMS Host
		→ IAS
		→ JAL
		→ Jet Blue
		→ Landmark
		→ SDCRAA
		→ Southwest
		→ Spirit
		→ SSP
		→ United
		→ UPS
		→ US Airways
		→ Virgin America
		→ Volaris
STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.		
BMP FREQUENCIES/EQUIPMENT/TOOLS: Outdoor material storage occurs on a daily basis. Equipment/tools to implement BMPs include spill pallets, outdoor sheds, overpack containers, tarps, flammable materials storage lockers, bermed or containment areas, indoor or covered storage areas, fiber rolls, wooden pallets, spill kits, brooms, and drums.		
AUTHORIZED LOCATIONS FOR THE OUTDOOR STORAGE OF SIGNIFICANT MATERIALS:		

<input type="checkbox"/>	To implement BMPs for the prevention of discharges of pollutants from outdoor storage areas, store significant materials at the designated storage areas as shown in the attached map.	
Date:		Version: 2.0

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Airports Boundary		Tenant Gate Areas			
	Airport Boundary	Tenant	Gate	Tenant	Gate
	ACE	Alaska	11, 13, 14, 15, 16, 17, 18	Landmark Aviation	N4
	ASIG	American/Envoy	27, 28, 29, 31, 32	SDCRAA	19
	Alaska	ARFF	N0	Southwest	1, 1A, 2, 3, 4, 5, 6, 7, 8, 9, 10
	Allied Aviation	Delta	41, 42, 47, 48, 49, 50, 51, W3, W4, W5	Spirit	20, 21, 22, 24, 26, 30
	American	DHL	N3	SSP	11, 12
	Bradford	FedEx	N1	United	38, 39, 40, 43, 44, 45, 46, W1, W2
	Delta	IAS	N2, N3	UPS	N2, N3
	ELS	JAL	20, 22	US Airways	33, 34, 35
	Flagship	Jet Blue	36, 37	Virgin America	25
	HMS Host	United		Volaris	20, 21, 22
	Jet Blue				
	Southwest				
	US Airways				
	United				
	Fuel Storage		Metal Storage		Underground Storage Tank
	Material Storage		Oil Storage		



Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

PROJECT: 5013-11-0003	
DATE: 6/16/2015	
DRAWN BY: KMB	
CHECKED BY: AJA	



SAN DIEGO INTERNATIONAL AIRPORT
San Diego, California

STORM WATER MANAGEMENT PLAN
AT SAN DIEGO INTERNATIONAL AIRPORT

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BMP SC08	WASTE HANDLING AND DISPOSAL	
<p>PURPOSE: Prevent or reduce the discharge of pollutants to storm water from waste handling, storage and disposal by through source reduction, re-use, and recycling; and preventing run-on and runoff from waste management areas, including waste/garbage collection areas.</p>	<p>TARGETED ACTIVITIES:</p> <ul style="list-style-type: none"> ➔ Fuel/Chemical/Oil Waste Storage ➔ Painting/Stripping ➔ Waste/Garbage Collection 	
<p>POLLUTION PREVENTION:</p>		<p>POLLUTANTS of CONCERN:</p>
	<p>Implement the following pollution prevention practices and BMPs to prevent discharges of pollutants from waste handling, storage and disposal to the storm water collection system:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Inspect on a regular basis waste/garbage collection areas for spills and waste/garbage management containers for leaks. <input type="checkbox"/> Enclose or berm waste/garbage storage areas, if possible, to prevent contact with storm water run-on and run-off. <input type="checkbox"/> Place adequate spill kits in appropriate locations. <input type="checkbox"/> Engage in waste reduction programs (e.g. recycling and food waste composting). Investigate new processes and techniques to turn waste into a resource for others in order to reduce the impact people have on the environment. 	<ul style="list-style-type: none"> ➔ Oil and Grease ➔ Paints ➔ Solvents/Cleaning Solutions ➔ Trash and Debris ➔ Vehicle Fluids
<p>OPERATIONS:</p>		<p>APPLICABLE TENANTS/ DEPARTMENTS:</p>
<p>Sub-BMPs</p>	<ul style="list-style-type: none"> - 01 <input type="checkbox"/> Reduce the amount of waste generated (e.g., use only amount needed, use solvents more than once, practice good inventory control, do not over-buying, purchase long-lasting products, etc.). - 02 <input type="checkbox"/> Recycle materials whenever possible. - 03 <input type="checkbox"/> Designate waste/recycling areas with restrict access. - 04 <input type="checkbox"/> Do not locate waste/recycling areas directly in the path of storm drains. - 05 <input type="checkbox"/> Provide secondary containment and cover for wastes. - 06 <input type="checkbox"/> Wastes that are not contained or covered are prevented from contacting storm water and run-on and run-off by the use of berms. - 07 <input type="checkbox"/> All dumpsters are covered and kept closed and any drain holes plugged. - 08 <input type="checkbox"/> Inspect on a frequent basis all waste collection and storage containers for evidence of leaks, spills, compromised structural integrity, and proper closure seal. - 09 <input type="checkbox"/> Train all employees in the proper handling and disposal of waste materials. - 10 <input type="checkbox"/> Store wastes and recyclable materials in appropriate containers and 	<ul style="list-style-type: none"> ➔ ACE ➔ Air Canada ➔ Alaska ➔ Allegiant ➔ Allied ➔ American Airlines ➔ ARFF ➔ ASIG ➔ Bradford ➔ British Airways ➔ Delta ➔ DHL ➔ Elite Line Service ➔ Envoy ➔ FedEx ➔ Flagship ➔ Frontier ➔ Hawaiian ➔ HFF ➔ HMS Host ➔ IAS ➔ JAL ➔ Jet Blue ➔ Landmark

<p>- 11 <input type="checkbox"/> Wastes are properly characterized and disposed of.</p> <p>- 12 <input type="checkbox"/> Prevent overflow of waste containers by timely pickup/service and removal.</p> <p>- 13 <input type="checkbox"/> Perform dumpster cleaning in designated areas that are bermed to contain wash water. Properly dispose of all fluids collected or discharge to the sanitary sewer.</p> <p>- 14 <input type="checkbox"/> Track waste generated, stored, and disposed.</p>	<p>segregate and properly labeled them.</p>	<p>→ Mission Yogurt → SDCRAA → SeaPort → Siemens → Southwest → Spirit → SSP → Sun Country → United → UPS → US Airways → Virgin America → Volaris → WestJet</p>
<p>STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.</p>		
<p>BMP FREQUENCIES/EQUIPMENT/TOOLS: Waste handling and disposal occurs on a daily basis. Equipment/tools to implement BMPs include spill pallets, outdoor sheds, overpack containers, tarps, bermed or containment areas, sumps and underground tanks, wooden pallets, covered dumpsters, covered storage areas, spill kits, brooms, and drums.</p>		
<p>AUTHORIZED LOCATIONS FOR WASTE HANDLING AND DISPOSAL:</p>		
<p><input type="checkbox"/></p>	<p>Conduct waste handling and disposal activities in the designated areas as shown in the attached map.</p>	
<p>Date:</p>		<p>Version: 2.0</p>



- Airport Boundary**
- ACE
 - ASIG
 - Alaska
 - Allied Aviation
 - American
 - Bradford
 - Delta
 - ELS
 - Flagship
 - HMS Host
 - Jet Blue
 - Southwest
 - US Airways
 - United
- Environmental Features:**
- Dumpsters
 - Recycling
 - Composting
 - Underground Storage Tank
 - Fueling
 - Fuel Storage
 - Grease Trap
 - Industrial Waste
 - Loading
 - Material Storage
 - Metal Storage
 - Oil Storage
 - Wash Area

Tenant Gate Areas	
Tenant	Gate
Air Canada	22
Alaska	11, 13, 14, 15, 16, 17, 18
Allegiant	23
American/Envoy	27, 28, 29, 31, 32
ARFF	N0
British Airways	20
Delta	41, 42, 47, 48, 49, 50, 51, W3, W4, W5
DHL	N3
FedEx	N1
Frontier	12
Hawaiian	51
HFF	7, 8
IAS	N2, N3
JAL	20, 22
Jet Blue	36, 37
Landmark Aviation	N4
Mission Yogurt	4
SDCRAA	19
SeaPort	11C
Siemens	7, 8
Southwest	1, 1A, 2, 3, 4, 5, 6, 7, 8, 9, 10
Spirit	20, 21, 22, 24, 26, 30
SSP	11, 12
Sun Country	51
United	38, 39, 40, 43, 44, 45, 46, W1, W2
UPS	N2, N3
US Airways	33, 34, 35
Virgin America	25
Volaris	20, 21, 22
West Jet	22, 24, 26

Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

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SAN DIEGO INTERNATIONAL AIRPORT
 San Diego, California

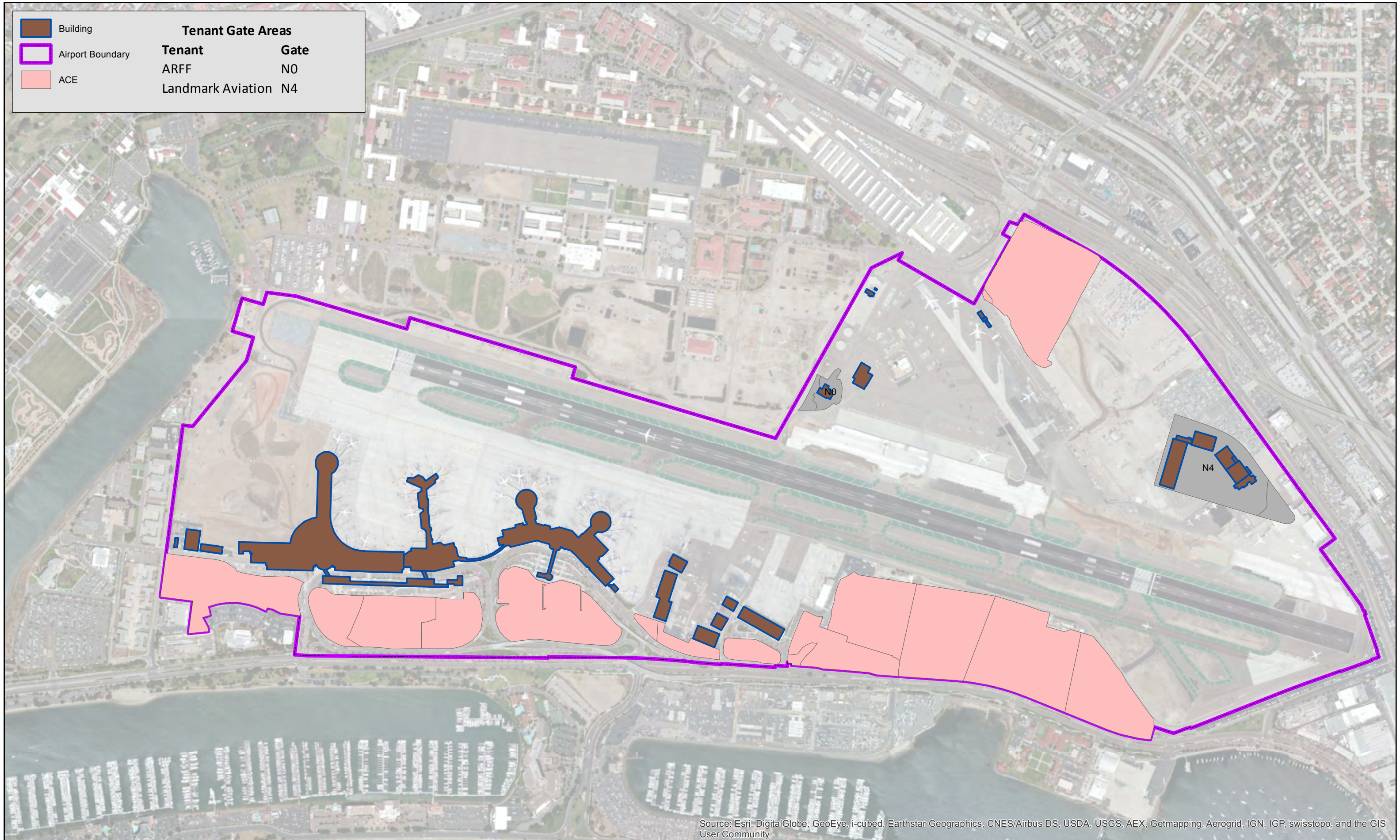
STORM WATER MANAGEMENT PLAN
 AT SAN DIEGO INTERNATIONAL AIRPORT

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BMP SC09	BUILDING AND GROUNDS MAINTENANCE	
PURPOSE: Prevent or reduce the discharge of pollutants to storm water from building and grounds maintenance by washing and cleaning up with as little water as possible, preventing and cleaning up spills immediately, keeping debris from entering storm drains, and maintaining the storm water collection system.		TARGETED ACTIVITIES: → Building Maintenance → Grounds Maintenance
POLLUTION PREVENTION:		POLLUTANTS of CONCERN:
	<p>Implement the following pollution prevention practices and BMPs to prevent discharges of pollutants from building and grounds maintenance to the storm water collection system:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Regularly clean paved surfaces that are exposed to industrial activity. Use “dry” cleaning techniques, such as sweeping, whenever possible. <input type="checkbox"/> Clean any catch basins that receive runoff from maintenance areas on a regular basis. Use a vacuum truck to remove accumulated materials. Do not flush wastes into the storm drain system. <input type="checkbox"/> Minimize use of pesticides, herbicides, and fertilizers and use according to directions. Seek less harmful/toxic products to replace ones currently used. <input type="checkbox"/> Reduce the exposure of galvanized metal structures to rainfall. Possible actions to reduce exposure include; application of a coating of inert paint to the metal surface, replace uncoated galvanized metal fence with vinyl coated galvanized steel or polyester coated galvanized steel. <input type="checkbox"/> Investigate the use of downspout filters on roof downspouts to minimize pollutants in roof runoff. <input type="checkbox"/> Use safer non-toxic products for the outside painting of buildings and grounds maintenance. Recycle residual paints, solvents, lumber, and other materials (such as landscape waste) as much as possible. <input type="checkbox"/> Reduce the exposure of galvanized metal structures to rainfall, by using coated galvanized structures or coating or painting existing structures with non-toxic paints or coatings. <input type="checkbox"/> Encourage proper xeriscaping management and landscaping, including the use of native vegetation, to reduce irrigation needs. <input type="checkbox"/> When applying pesticides, use the following practices: Do not use pesticides if rain is expected or is occurring, do not mix or prepare pesticides for application near storm drains, and apply pesticides only when wind speed is low. 	→ Pesticides/Herbicides/ Fertilizers → Oil and Grease → Sediment → Landscape Waste → Metals → Cleaning Solutions
OPERATIONS:		APPLICABLE TENANTS/ DEPARTMENTS:
Sub-BMPs - 01 <input type="checkbox"/>	Landscape, re-vegetate, or install erosion and sediment controls in areas of exposed soil.	→ Allied → ARFF → Flagship
- 02 <input type="checkbox"/>	Use hand weeding when practical.	

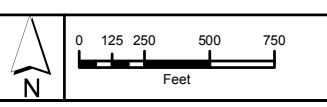
<p>- 03 <input type="checkbox"/></p> <p>- 04 <input type="checkbox"/></p> <p>- 05 <input type="checkbox"/></p> <p>- 06 <input type="checkbox"/></p> <p>- 07 <input type="checkbox"/></p>	<p>Implement integrated pest management methods, minimize the use of pesticides, herbicides, and fertilizers and use according to directions.</p> <p>Use temporary BMPs such as portable booms and vacuum trucks to contain water from outdoor building or structure washdown activities. Use reclaimed water, where possible, and collect and properly dispose of all waste water through a permitted connection to the sanitary sewer.</p> <p>Compost or recycle grass trimmings, leaves, sticks, or other collected vegetation, where possible, or dispose of appropriately.</p> <p>Remove temporary stockpiled materials at the end of the day or place away from watercourses and drainage inlets, and berm and cover stockpiles to prevent material releases to the storm drain.</p> <p>Clean pavement or sidewalk (using dry methods or reclaimed water) of any residual materials or spills before applying irrigation water, and capture and properly dispose of any wash water.</p> <p style="text-align: center;">SEE ALSO BMP SC12</p>	<p>➔ Landmark</p> <p>➔ SDCRAA</p>
<p>STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.</p>		
<p>BMP FREQUENCIES/EQUIPMENT/TOOLS: Building and grounds maintenance occurs on a daily basis. Equipment/tools to implement BMPs include portable booms, vacuum trucks, tarps, and fiber rolls.</p>		
<p>AUTHORIZED BUILDING AND GROUNDS MAINTENANCE LOCATIONS:</p>		
<p><input type="checkbox"/></p>	<p>To implement BMPs for the prevention of discharges or pollutants from buildings and grounds maintenance, perform maintenance activities within the designated areas as shown in the attached map.</p>	
<p>Date:</p>		<p>Version: 2.0</p>

	Building	Tenant Gate Areas	
	Airport Boundary	Tenant	Gate
	ACE	ARFF	N0
		Landmark Aviation	N4



Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

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








SAN DIEGO INTERNATIONAL AIRPORT
 San Diego, California

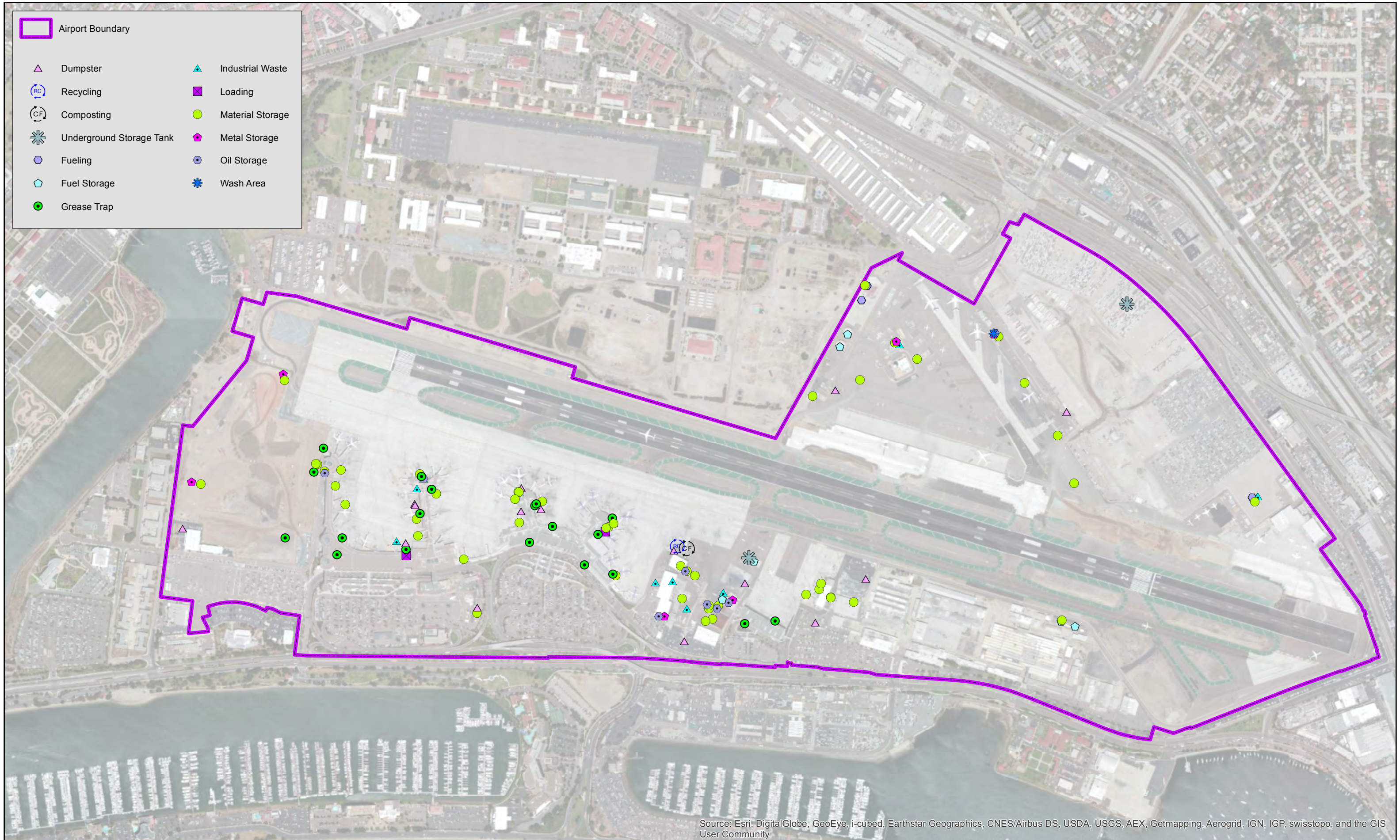
STORM WATER MANAGEMENT PLAN
AT SAN DIEGO INTERNATIONAL AIRPORT

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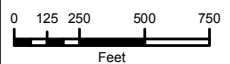
BMP SC10	EMPLOYEE TRAINING	
<p>PURPOSE: Prevent or reduce the discharge of pollutants to storm water from activities through implementing an education program targeting employees, tenants, vendors, contractors and the public.</p>	<p>TARGETED ACTIVITIES:</p> <ul style="list-style-type: none"> ➔ All Maintenance ➔ All Fueling ➔ All Washing ➔ Equipment Cleaning ➔ Cargo Handling ➔ All Storage ➔ Painting/Stripping ➔ Floor Washdowns ➔ Aircraft Deicing/Anti-Icing ➔ Garbage Collection ➔ Aircraft Lavatory Service ➔ Fire Fighting Equipment Testing ➔ Potable Water System Flush ➔ Runway Rubber Removal 	
<p>POLLUTION PREVENTION:</p>	<p>POLLUTANTS of CONCERN:</p>	
	<p>Implement the following pollution prevention practices and BMPs to prevent non-storm water discharges to the storm water collection system:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Implement an annual storm water pollution prevention education program for employees, tenants, contractors and the public that cover storm water issues, BMPs, spill cleanup, hazardous materials management, right-to-know awareness, and SWPPP implementation. <input type="checkbox"/> Provide adequate implementation training for facilities with a Spill Prevention Control and Countermeasure (SPCC) Plan. <input type="checkbox"/> Adequately train employees in the use of spill response equipment and materials. <input type="checkbox"/> Train construction contractors on the regulations prohibiting cross connections between sanitary sewers and storm drains. 	<ul style="list-style-type: none"> ➔ Oil and Grease ➔ Vehicle Fluids ➔ Fuel ➔ Solvents/Cleaning Solutions ➔ Deicing/Anti-Icing ➔ Battery Acid ➔ Pesticides/Herbicides/ Fertilizers ➔ Paint ➔ Aircraft Fire Fighting Foam ➔ Metals ➔ Dumpster Wastes ➔ Sediment ➔ Landscape Waste\ ➔ Floatables ➔ Lavatory Chemical Wastes ➔ Potable Water System Chemicals ➔ Rubber Particles
<p>OPERATIONS:</p>	<p>APPLICABLE TENANTS/ DEPARTMENTS:</p>	
<p>Sub-BMPs</p> <ul style="list-style-type: none"> - 01 <input type="checkbox"/> Update the Authority SWMP and tenant SWPPPs covering the facility or operation on a periodic basis and complete and insert the amendment pages for the SWMP or SWPPP, as needed. - 02 <input type="checkbox"/> Train Authority and tenant employees and contractors in storm water pollution prevention education covering all storm water issues, implementation and effectiveness of BMPs, spill prevention and cleanup, hazardous materials management, right-to-know awareness, and SWMP or SWPPP implementation. - 03 <input type="checkbox"/> Implement additional training programs for relevant Authority and tenant employees and contractors covering any Spill Plan 	<ul style="list-style-type: none"> ➔ ACE ➔ Air Canada ➔ Alaska ➔ Allegiant ➔ Allied ➔ American Airlines ➔ ARFF ➔ ASIG ➔ Bradford ➔ British Airways 	

<p>- 04 <input type="checkbox"/></p>	<p>implementation, the prohibition on cross-connections between sanitary sewers and storm drains, and contractor responsibility to comply with adopted BMPs.</p> <p>Maintain training records for 5 years of current employees that have participated in the storm water pollution prevention education program and other related training programs.</p>	<ul style="list-style-type: none"> → Delta → DHL → Elite Line Service → Envoy → FedEx → Flagship → Frontier → Hawaiian → HFF → HMS Host → IAS → JAL → Jet Blue → Landmark → SDCRAA → Siemens → Southwest → Spirit → SSP → Sun Country → United → UPS → US Airways → Virgin America → Volaris → WestJet
<p>STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.</p>		
<p>BMP FREQUENCIES/EQUIPMENT/TOOLS: Training frequencies and tools are described in Sections 7.0 and 9.0.</p>		
<p>AUTHORIZED LOCATIONS TO IMPLEMENT BMPs TO PREVENT NON-STORM WATER DISCHARGES:</p>		
<p><input type="checkbox"/></p>	<p>To implement BMPs for the prevention of non-storm water discharges, put into practice all lessons learnt from training in the designated areas as shown in the attached map.</p>	
<p>Date:</p>		<p>Version: 2.0</p>

-  Airport Boundary
-  Dumpster
-  Industrial Waste
-  Recycling
-  Loading
-  Composting
-  Material Storage
-  Underground Storage Tank
-  Metal Storage
-  Fueling
-  Oil Storage
-  Fuel Storage
-  Wash Area
-  Grease Trap



Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

PROJECT: 5013-11-0003	 
DATE: 6/16/2015	
DRAWN BY: KMB CHECKED BY: AJA	



SAN DIEGO INTERNATIONAL AIRPORT
San Diego, California

STORM WATER MANAGEMENT PLAN
AT SAN DIEGO INTERNATIONAL AIRPORT

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BMP SC11	LAVATORY SERVICE OPERATION	
<p>PURPOSE: Eliminate discharges to the storm drain system associated with ground servicing of aircraft lavatory facilities.</p>	<p>TARGETED ACTIVITIES:</p> <ul style="list-style-type: none"> ➔ Aircraft Lavatory Service ➔ Lavatory Truck/Cleanout Backflushing 	
<p>POLLUTION PREVENTION:</p>		<p>POLLUTANTS of CONCERN:</p> <ul style="list-style-type: none"> ➔ Lavatory Chemicals ➔ Lavatory Waste ➔ Lavatory Truck Wash Water
<p><input type="checkbox"/> Use only surfactants and disinfectants approved for discharge to the sanitary sewer system.</p>	<p>Implement the following pollution prevention practices and BMPs to prevent discharges to the storm drain system associated with ground servicing of aircraft lavatory facilities:</p>	
<p>OPERATIONS:</p>		<p>APPLICABLE TENANTS/ DEPARTMENTS:</p>
<p>Sub-BMPs</p> <ul style="list-style-type: none"> - 01 <input type="checkbox"/> Triturator facilities are covered and have low roll-over type berming. - 02 <input type="checkbox"/> Triturator facilities should not be located directly in the path of storm drains. - 03 <input type="checkbox"/> Perform regular inspections of all hoses and fittings used for transferring lavatory waste and keep the equipment in good condition. - 04 <input type="checkbox"/> Absorbent booms, spill kits and other containment equipment are present on lavatory service equipment and at the triturator facility. - 05 <input type="checkbox"/> Perform all mixing and transfers of surfactants and disinfectants within the covered and bermed triturator area or under a cover. - 06 <input type="checkbox"/> Use drip pans when draining aircraft lavatory systems. Immediately dump the collected drippage into the bulk storage tank on the lavatory service cart or lavatory service truck. - 07 <input type="checkbox"/> Immediately clean and properly dispose of all spills of lavatory wastes and lavatory chemicals at the triturator facility. - 08 <input type="checkbox"/> Secure all hoses, valves, and equipment when transporting lavatory waste. - 09 <input type="checkbox"/> Perform lavatory truck cleanouts/backflushing and lavatory waste discharging to sanitary sewer connections ONLY at triturator facilities. - 10 <input type="checkbox"/> Completely drain all hoses. 	<ul style="list-style-type: none"> ➔ Air Canada ➔ Alaska ➔ Allegiant ➔ American Airlines ➔ British Airways ➔ Delta ➔ Envoy ➔ Frontier ➔ Hawaiian ➔ JAL ➔ Jet Blue ➔ Landmark ➔ SDCRAA ➔ Sky West ➔ Southwest ➔ Spirit ➔ Sun Country ➔ United ➔ UPS ➔ Volaris ➔ WestJet 	

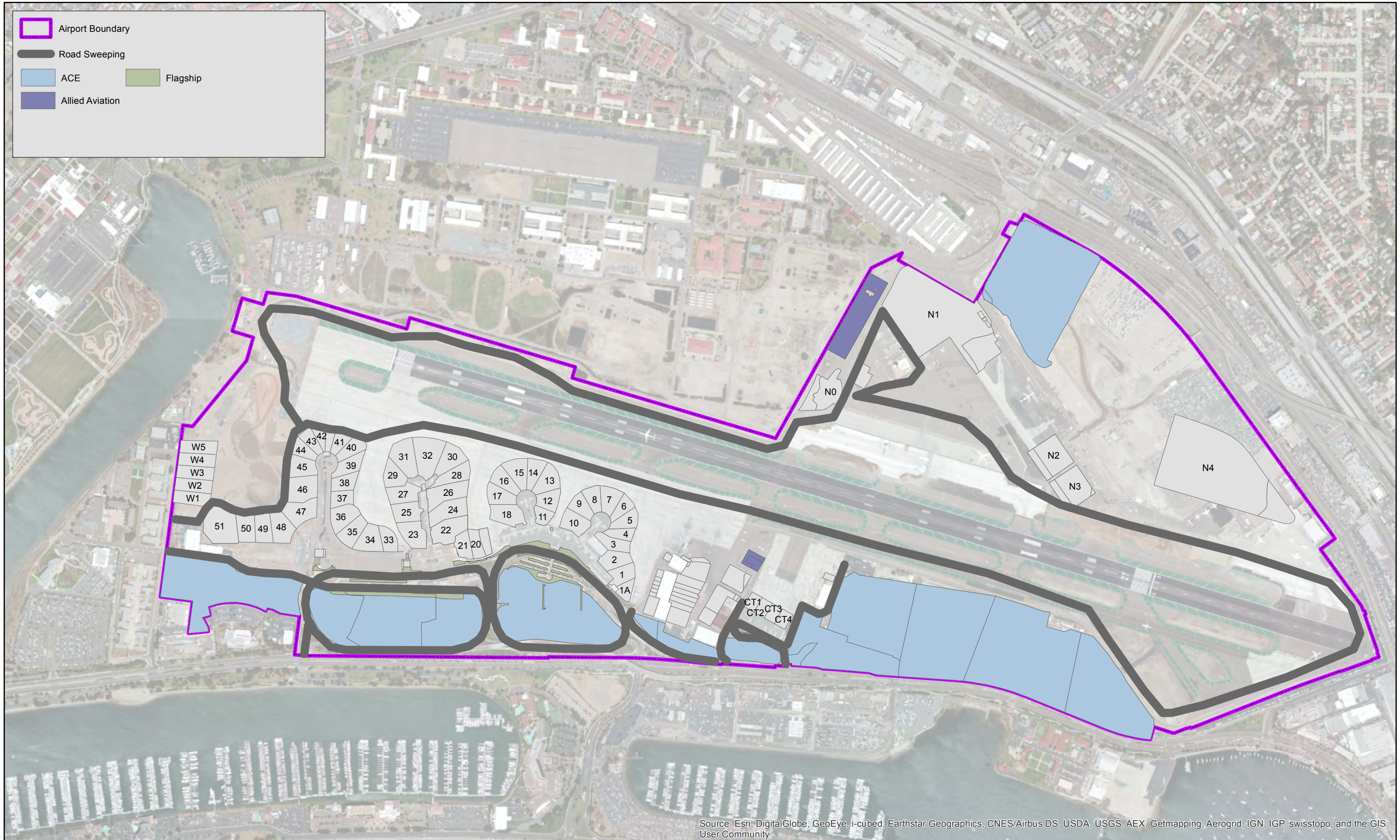
<p>- 11 <input type="checkbox"/></p> <p>- 12 <input type="checkbox"/></p> <p>- 13 <input type="checkbox"/></p>	<p>Use lavatory service cart or truck with spill prevention equipment installed, where possible.</p> <p>Temporary sanitary facilities must have secondary containment and be located away from watercourses, drainage facilities, traffic circulation and high wind areas.</p> <p>Regularly inspect temporary sanitary facilities for leaks and spills and clean or replace when necessary.</p>	
<p>STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.</p>		
<p>BMP FREQUENCIES/EQUIPMENT/TOOLS: Lavatory service operations occur on a daily basis. Equipment/tools to implement BMPs include secondary containment, bermed areas, overhead cover at triturator, drip pans, spill kits, and drums.</p>		
<p>AUTHORIZED LOCATIONS FOR LAVATORY SERVICE OPERATIONS:</p>		
<p><input type="checkbox"/></p>	<p>Use only the designated areas for ground servicing of aircraft lavatory facilities as shown in the attached map.</p>	
<p>Date:</p>		<p>Version: 2.0</p>

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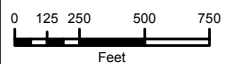
BMP SC12		OUTDOOR WASHDOWN/SWEEPING (APRON WASHING, RAMP SCRUBBING)	
<p>PURPOSE: Prevent or reduce the discharge of pollutants to storm water from outdoor washdown and sweeping operations.</p>		<p>TARGETED ACTIVITIES:</p> <ul style="list-style-type: none"> ➔ Apron Washing ➔ Ramp Scrubbing ➔ Outdoor Washdown ➔ Road Sweeping ➔ Ramp Sweeping 	
<p>POLLUTION PREVENTION:</p>		<p>POLLUTANTS of CONCERN:</p> <ul style="list-style-type: none"> ➔ Oil and Grease ➔ Solvents/Cleaning Solutions ➔ Fuel ➔ Aircraft Fire Fighting Foam ➔ Deicing/Anti-Icing Fluids ➔ Sediment ➔ Floatables 	
	<p>Implement the following pollution prevention practices and BMPs to prevent non-storm water discharges of pollutants from outdoor washdown and sweeping operations to the storm water collection system:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Use biodegradable or non-toxic cleaning products for outdoor washdown activities. <input type="checkbox"/> Investigate newer sweeping technologies such as high-efficiency sweepers or the CASQA-recommended regenerative air and vacuum-assisted dry sweepers. <input type="checkbox"/> Investigate non-potable or alternative sources of water when performing outdoor washdowns. Reuse water as much as possible before disposing it. <input type="checkbox"/> Follow water conservation practices when performing washdowns. <input type="checkbox"/> DO NOT DISCHARGE WASH WATER TO A STORM DRAIN. Notify Airport Operations (619-400-2710) and the Airport Authority Environmental Affairs Department (619-400-2784) if any discharges associated with outdoor washdowns have occurred. 		
<p>OPERATIONS:</p>		<p>APPLICABLE TENANTS/ DEPARTMENTS:</p> <ul style="list-style-type: none"> ➔ ACE ➔ Allied ➔ Flagship ➔ SDCRAA 	
<p>Sub-BMPs</p>	<ul style="list-style-type: none"> - 01 <input type="checkbox"/> Inspect and maintain sweeping and scrubbing equipment regularly to ensure effectiveness at removing pollutants and to avoid leaks. - 02 <input type="checkbox"/> Roads, ramp areas, apron areas, and, if feasible, runway/taxiway areas are swept on a regular basis. - 03 <input type="checkbox"/> Perform sweeping during dry weather using dry sweeping techniques where feasible. - 04 <input type="checkbox"/> Operate sweepers at manufacturer-recommended optimal speeds. - 05 <input type="checkbox"/> Properly dispose of debris and sediment from sweeping. - 06 <input type="checkbox"/> Berm outdoor washdown areas to contain the wash water and to prevent run-on to adjacent areas. 		

<p>- 07 <input type="checkbox"/></p> <p>- 08 <input type="checkbox"/></p> <p>- 09 <input type="checkbox"/></p> <p>- 10 <input type="checkbox"/></p> <p>- 11 <input type="checkbox"/></p>	<p>Minimize the amount of water used during outdoor washdown activities.</p> <p>Wash water is collected and filtered and reused, or discharged to the sanitary sewer system through a permitted connection at designated and approved discharge facilities (i.e., dewatering bin).</p> <p>Maintain records of the sweeping or scrubbing activities including the miles swept or scrubbed and the amount of waste collected.</p> <p>Do not use a running hose to wash down sidewalks, or other hard surface areas. A water-efficient, filtering and recycling device must be used and all wash water must be prevented from entering the storm drain system (curb gutters, streets, alleys, and inlets)</p> <p>Use reclaimed or recycled/filtered water.</p>	
<p>STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.</p>		
<p>BMP FREQUENCIES/EQUIPMENT/TOOLS: Outdoor washdown/sweeping occurs on a daily basis. Equipment/tools to implement BMPs include recycling/filtering power washers, ramp scrubbers, mechanical and regenerative air sweepers, booms, containment devices, spill kits, brooms, dumpsters, dewatering bins and drums.</p>		
<p>AUTHORIZED LOCATIONS FOR OUTDOOR WASHDOWN AND SWEEPING ACTIVITIES:</p>		
<p><input type="checkbox"/></p>	<p>To implement BMPs for the prevention of non-storm water discharges, perform outdoor washdown and sweeping activities in the designated areas as shown on the attached map.</p>	
<p>Date:</p>		<p>Version: 2.0</p>

Airport Boundary
 Road Sweeping
 ACE Flagship
 Allied Aviation






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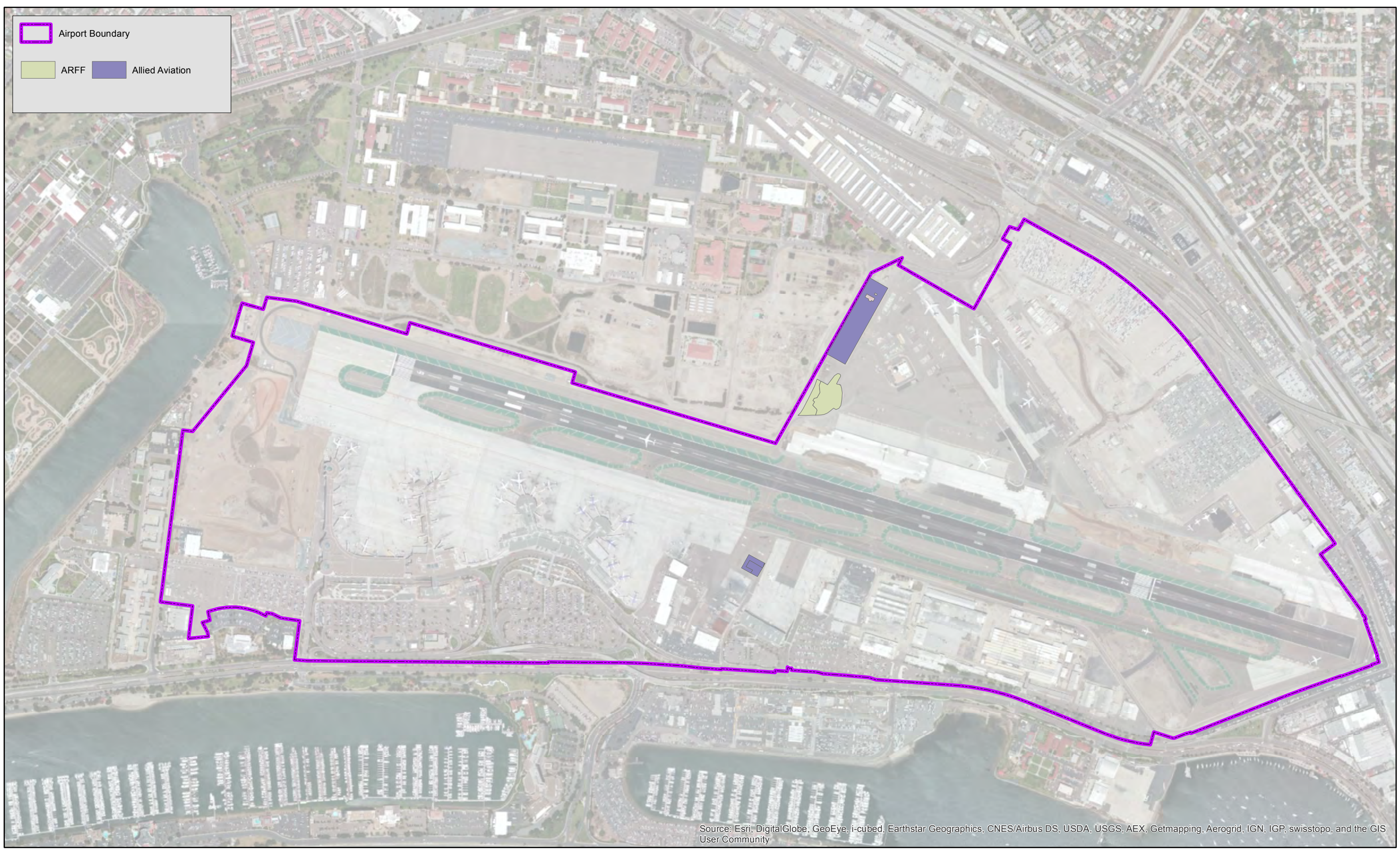
PROJECT: 5013-11-0003 DATE: 6/16/2015 DRAWN BY: KMB CHECKED BY: AJA	 N	 Feet		SAN DIEGO INTERNATIONAL AIRPORT San Diego, California	STORM WATER MANAGEMENT PLAN AT SAN DIEGO INTERNATIONAL AIRPORT
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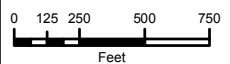

BMP SC13	FIRE FIGHTING FOAM DISCHARGE	
PURPOSE: To prevent the discharge of pollutants to storm water associated with flushing or testing of fire fighting foam.	TARGETED ACTIVITIES: → Fire Fighting Foam Testing	
POLLUTION PREVENTION:		
	Implement the following pollution prevention practices and BMPs to prevent discharges of pollutants from fire fighting foam testing entering the storm water collection system: <ul style="list-style-type: none"> <input type="checkbox"/> Preform fire fighting foam testing during dry weather and in designated areas only. <input type="checkbox"/> Before performing fire fighting foam testing, block off all storm drain inlets within the designated testing area. <input type="checkbox"/> All discharges should be collected and disposed of properly. <input type="checkbox"/> DO NOT DISCHARGE AFFF OR WASTEWATER TO A CATCH BASIN OR STORM DRAIN. Notify Airport Operations (619-400-2710) and the Airport Authority Environmental Affairs Department (619-400-2784) if any discharges of AFFF have occurred. 	POLLUTANTS of CONCERN: → Aircraft Fire Fighting Foam (AFFF)
OPERATIONS:		
Sub-BMPs	<ul style="list-style-type: none"> - 01 <input type="checkbox"/> Do not perform fire fighting foam testing directly in the path of storm drains. - 02 <input type="checkbox"/> Inspect and test fire fighting equipment on a regular basis. - 03 <input type="checkbox"/> Perform fire fighting foam testing ONLY in a designated area that captures or divers all foam waste to a structural treatment control, sanitary sewer, or dead end sump with pump. - 04 <input type="checkbox"/> Service sump(s) and/or oil/water separators on a regular basis. - 05 <input type="checkbox"/> Prevent all designated testing areas from contacting storm water run on and run-off or from reaching storm drains (e.g. by the use of berms and sandbags). 	APPLICABLE TENANTS/ DEPARTMENTS: → ARFF → Allied
STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.		
BMP FREQUENCIES/EQUIPMENT/TOOLS: Firefighting operation frequencies and tools are described in Section 3.0.		
AUTHORIZED LOCATIONS FOR FIRE FIGHTING FOAM TESTING:		
<input type="checkbox"/>	Use only the designated areas for fire fighting foam testing as shown in the attached map.	
Date:	Version: 2.0	

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 Airport Boundary
 ARFF  Allied Aviation




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PROJECT: 5013-11-0003 DATE: 6/16/2015 DRAWN BY: KMB CHECKED BY: AJA	 		SAN DIEGO INTERNATIONAL AIRPORT San Diego, California	STORM WATER MANAGEMENT PLAN AT SAN DIEGO INTERNATIONAL AIRPORT
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BMP SC14	POTABLE WATER SYSTEM FLUSHING	
PURPOSE: To prevent the discharge of pollutants to storm water drains associated with flushing and cleaning of aircraft potable water systems.		TARGETED ACTIVITIES: → Aircraft potable water system cleaning and flushing → Water truck cleaning and flushing
POLLUTION PREVENTION: Implement the following pollution prevention practices and BMPs to prevent discharges from potable water system flushing: <input type="checkbox"/> Perform flushing activities within designated areas that divert the flushed water away from the storm drain system whenever possible. <input type="checkbox"/> DO NOT DISCHARGE WASTE WATER OR CLEANING AGENTS TO A CATCH BASIN OR STORM DRAIN. Notify Airport Operations (619-400-2710) and the Airport Authority Environmental Affairs Department (619-400-2784) if any discharges associated with flushing and cleaning of aircraft potable water systems have occurred.		POLLUTANTS of CONCERN: → Chlorine Bleach → Purine
OPERATIONS:		APPLICABLE TENANTS/ DEPARTMENTS: → Alaska → American Airlines → British Airways → Elite Line Services → FedEx → Frontier → Hawaiian → Jet Blue → SDCRAA → Sky West → Southwest → Spirit → US Airways → Virgin America → Volaris
Sub-BMPs - 01 <input type="checkbox"/> The aircraft potable water system and water truck flushing/cleaning areas should not be located directly in the path of storm drains. - 02 <input type="checkbox"/> Perform potable water system flushing only in designated flushing/cleaning areas that capture or divert all wastewater away from storm drains, or to a structural treatment control, sanitary sewer, or dead end sump with pump. - 03 <input type="checkbox"/> Prevent flushing/cleaning areas from contacting storm water run-on and run-off.		
STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.		
BMP FREQUENCIES/EQUIPMENT/TOOLS: Potable water system flushing frequencies and tools are described in Section 3.0.		
AUTHORIZED LOCATIONS FOR POTABLE WATER SYSTEM FLUSHING/CLEANING:		
<input type="checkbox"/> Use only the designated areas for aircraft potable water system flushing/cleaning as shown in the attached map.		
Date:		Version: 2.0

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 Airport Boundary

 Flagship

Tenant	Gate
Alaska	11, 13, 14, 15, 16, 17, 18
American	27, 28, 29, 31, 32
FedEx	N1
Frontier	12
Hawaiian	51
Jet Blue	36, 37
SDCRAA	19

Tenant Gate Areas

Tenant	Gate
SkyWest	34, 35, 36, 37, 38
Southwest	1, 1A, 2, 3, 4, 5, 6, 7, 8, 9, 10
Spirit	20, 21, 22, 24, 26, 30
United	38, 39, 40, 43, 44, 45, 46, W1, W2
US Airways	33, 34, 35
Virgin America	25
Volaris	20, 21, 22




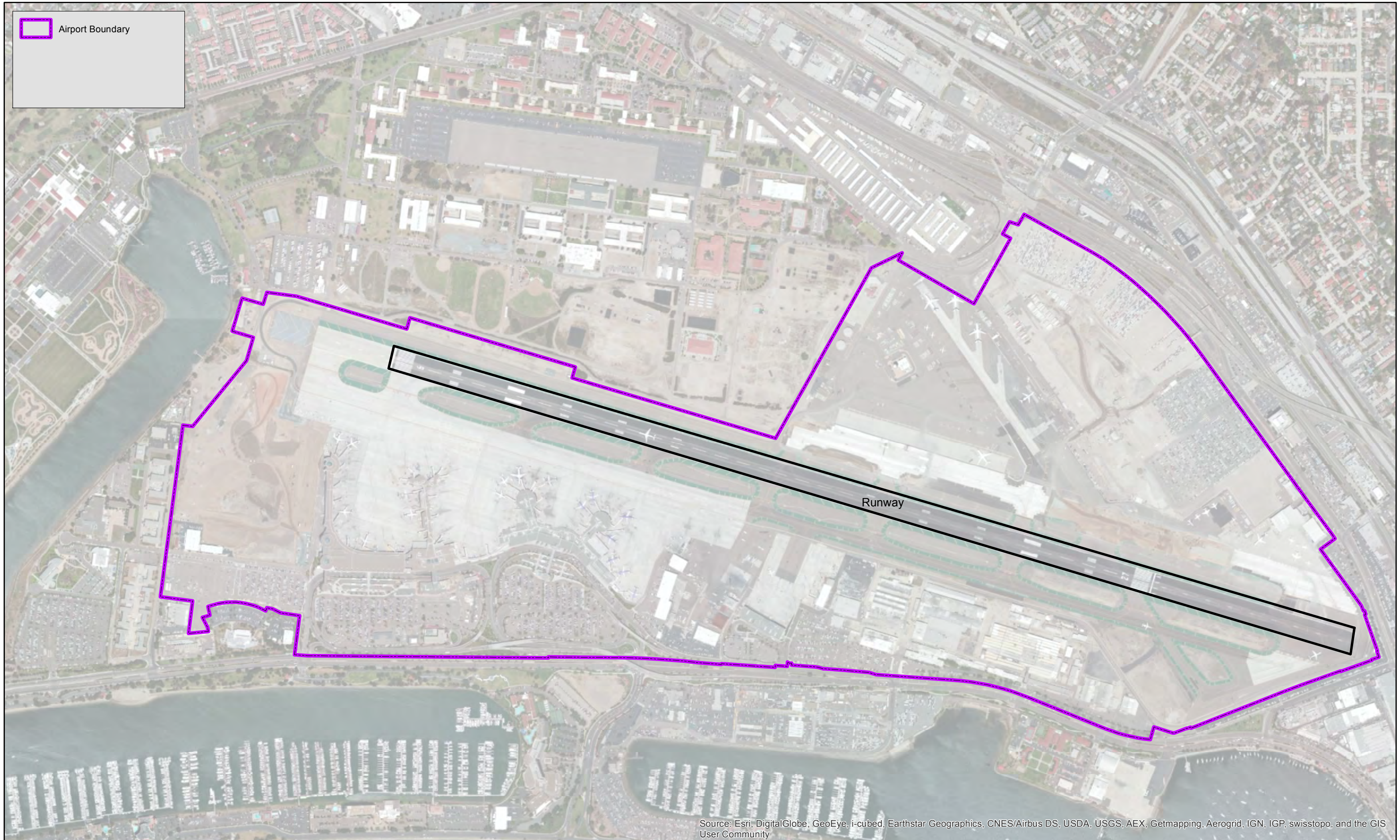
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BMP SC15	RUNWAY RUBBER REMOVAL	
PURPOSE: Eliminate discharges to the storm drain of particulate rubber and other pollutants generated by runway rubber removal activities.	TARGETED ACTIVITIES: → Runway Rubber Removal	
POLLUTION PREVENTION:		POLLUTANTS of CONCERN:
	Implement the following pollution prevention practices and BMPs to prevent non-storm water discharges of particulate rubber and other pollutants generated by runway rubber removal activities to the storm water collection system: <input type="checkbox"/> Use biodegradable or non-toxic cleaning products for runway rubber removal activities.	→ Rubber particles → Dirt particles → Metals
OPERATIONS:		APPLICABLE TENANTS/ DEPARTMENTS:
Sub-BMPs - 01 <input type="checkbox"/> - 02 <input type="checkbox"/> - 03 <input type="checkbox"/> - 04 <input type="checkbox"/> - 05 <input type="checkbox"/>	Minimize the amount of water used during runway rubber removal activities. Prevent waste water produced from runway rubber removal activities from entering the storm drainage system by immediately collecting and properly disposing of it. Use manual or mechanical cleaning methods such as mechanical street sweepers to remove rubber particulates from the runway and adjacent paved areas following runway rubber removal activities. Inspect storm drain inlets, catch basins, and runway drainage areas following runway rubber removal activities for any resulting debris, and remove and properly dispose of debris. Use reclaimed water, where possible.	→ SDCRAA
STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.		
BMP FREQUENCIES/EQUIPMENT/TOOLS: Runway rubber removal frequencies and tools are described in Section 7.0.		
AUTHORIZED LOCATIONS FOR RUNWAY RUBBER REMOVAL ACTIVITIES:		
	<input type="checkbox"/> Perform all runway rubber removal activities in the designated areas as shown in the attached map.	
Date:	Version: 1.0	

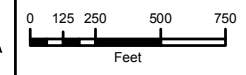
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 Airport Boundary



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PROJECT: 5013-11-0003
DATE: 6/16/2015
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CHECKED BY: AJA










SAN DIEGO
INTERNATIONAL AIRPORT
San Diego, California

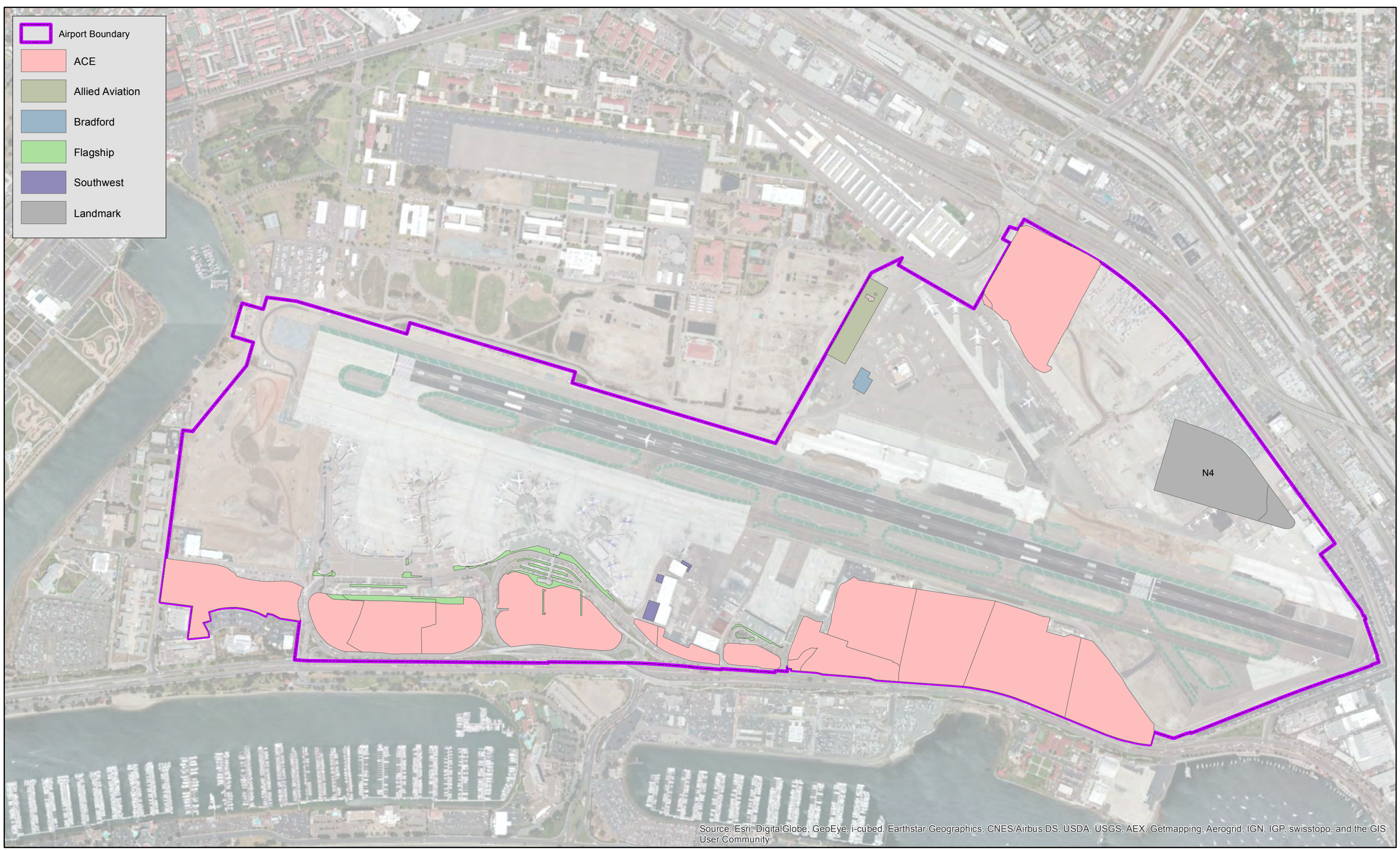
STORM WATER MANAGEMENT PLAN
AT SAN DIEGO INTERNATIONAL AIRPORT

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BMP SC16	PARKING LOTS	
PURPOSE: Prevent and reduce the discharge of pollutants from parking areas.		TARGETED ACTIVITIES: → Vehicle parking → Surface cleaning and maintenance → Litter control
POLLUTION PREVENTION:		POLLUTANTS of CONCERN:
	Implement the following pollution prevention practices and BMPs to prevent non-storm water discharges from parking areas to the storm water collection system: <input type="checkbox"/> Install treatment control BMPs, where practicable, in parking lot areas to treat parking lot runoff. <input type="checkbox"/> Design parking lot areas to include semi-permeable hardscape and Low Impact Development practices. <input type="checkbox"/> Inspect and maintain sweeping equipment regularly to ensure effectiveness at removing pollutants and to avoid leaks. <input type="checkbox"/> Sweep parking lots regularly and before onset of wet season.	→ Trash → Suspended solids → Hydrocarbons → Oil and grease → Heavy Metals
OPERATIONS:		APPLICABLE TENANTS/ DEPARTMENTS:
Sub-BMPs - 01 <input type="checkbox"/> - 02 <input type="checkbox"/> - 03 <input type="checkbox"/> - 04 <input type="checkbox"/> - 05 <input type="checkbox"/> - 06 <input type="checkbox"/> - 07 <input type="checkbox"/> - 08 <input type="checkbox"/> - 09 <input type="checkbox"/> - 10 <input type="checkbox"/> - 11 <input type="checkbox"/>	Post “No Littering” signs around parking lots and regularly empty trash receptacles. Trash receptacles must be covered. Sweep all parking lot areas on a regular basis to remove accumulated debris and sediment. Operate sweepers at manufacturer-recommended optimal speeds. Perform sweeping in parking lot areas when the number of parked vehicles is lowest to maximize areas swept. Maintain records of the sweeping activities including the miles swept and the amount of waste collected. Clean oily spots from parking lot surfaces with absorbent materials. Perform all repairs to parking lot surfaces during periods of dry weather. Cover and seal nearby storm drain inlets, catch basins, and manholes during parking lot repairs. Use drip pans and absorbent materials to catch and collect drips and leaks from paving equipment that are not in use. Hot bituminous materials used for parking lot repairs are to be preheated and transferred or loaded away from storm drain inlets. Properly dispose of used absorbent materials, debris, and collected	→ ACE → Allied Aviation → ARFF → ASIG → Bradford → FedEx → Landmark → SDCRAA → Southwest

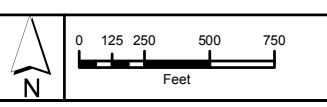
<p>- 12 <input type="checkbox"/></p> <p>- 13 <input type="checkbox"/></p> <p>- 14 <input type="checkbox"/></p>	<p>drips.</p> <p>Avoid draining rooftop downspout drains onto paved parking lot surfaces.</p> <p>Sweep, vacuum, or use other dry methods to remove waste materials generated from repairs.</p> <p>Temporarily store waste materials and debris generated from parking lot repairs in containers or in stockpiles with cover and berm around them and away from storm drain inlets.</p> <p style="text-align: center;">SEE ALSO BMP SC21</p>	
<p>STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.</p>		
<p>BMP FREQUENCIES/EQUIPMENT/TOOLS: Sweeping of parking lots occurs five days a week or as described in Section 6.0. Equipment/tools to implement BMPs include mechanical and regenerative air sweepers, drip pans, spill kits, brooms, and drums.</p>		
<p>AUTHORIZED LOCATIONS TO IMPLEMENT BMPs FOR PARKING LOTS:</p>		
<p><input type="checkbox"/></p>	<p>To reduce pollutants in parking lot storm water discharges, implement BMPs in areas as shown in the attached map.</p>	
<p>Date:</p>		<p>Version: 2.0</p>

-  Airport Boundary
-  ACE
-  Allied Aviation
-  Bradford
-  Flagship
-  Southwest
-  Landmark



Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

PROJECT:	5013-11-0003
DATE:	6/16/2015
DRAWN BY:	KMB
CHECKED BY:	AJA



**SAN DIEGO
INTERNATIONAL AIRPORT**
San Diego, California

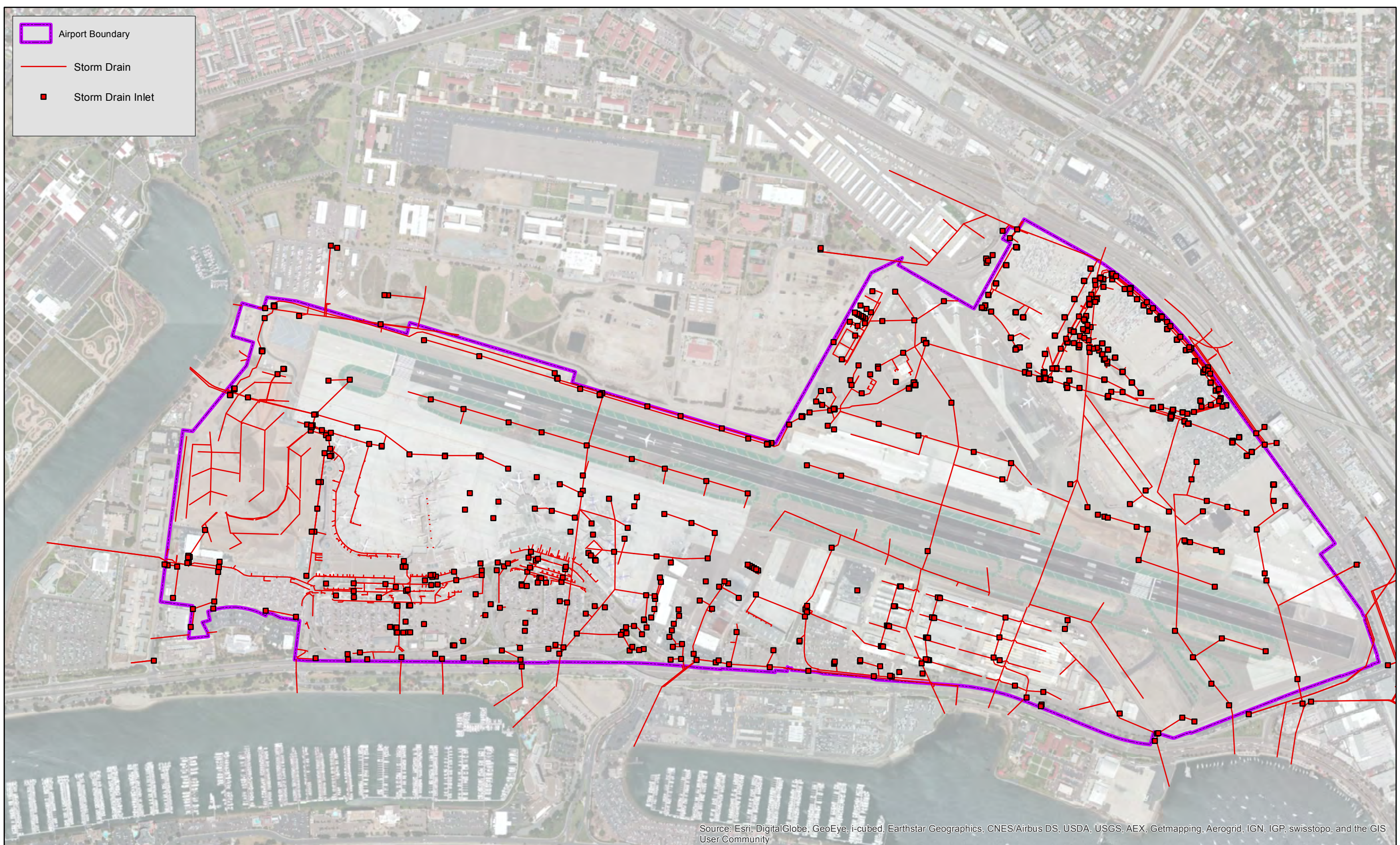
**STORM WATER MANAGEMENT PLAN
AT SAN DIEGO INTERNATIONAL AIRPORT**

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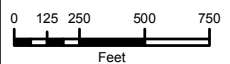
BMP SC17	STORM DRAIN MAINTENANCE	
<p>PURPOSE: Maintain catch basins, storm water inlets, and other storm water conveyance structures on a regular basis to remove pollutants, reduce high pollutant concentrations during the first flush of storms, prevent clogging of the downstream conveyance system, restore catch basins' sediment trapping capacity, and ensure the system functions properly hydraulically to avoid flooding.</p>	<p>TARGETED ACTIVITIES:</p> <ul style="list-style-type: none"> ➔ Storm water conveyance system 	
<p>POLLUTION PREVENTION:</p>		<p>POLLUTANTS of CONCERN:</p> <ul style="list-style-type: none"> ➔ Trash ➔ Suspended solids ➔ Hydrocarbons ➔ Oil and grease ➔ Heavy Metals ➔ Bacteria ➔ Organics
<p><input type="checkbox"/></p>	<p>Implement the following pollution prevention practices and BMPs to remove pollutants, sediment, and debris from the storm water collection system:</p> <p><input type="checkbox"/> Look for evidence of illegal dumping, illegal discharges or illicit connections during routine inspection, cleaning, and maintenance of the storm drainage system and drainage structures.</p>	
<p>OPERATIONS:</p>		<p>APPLICABLE TENANTS/ DEPARTMENTS:</p> <ul style="list-style-type: none"> ➔ ACE ➔ Alaska ➔ ARFF ➔ DHL ➔ Landmark ➔ SDCRAA ➔ Virgin America
<p>Sub-BMPs</p> <ul style="list-style-type: none"> - 01 <input type="checkbox"/> Stencil storm drains with "No Dumping" messages. - 02 <input type="checkbox"/> Conduct routine self-inspections of the storm drainage system. The Authority should inspect the entire MS4 at least annually, between the dates of May 1 and September 30. - 03 <input type="checkbox"/> Use appropriate measures to prevent discharges during MS4 cleaning and maintenance. - 04 <input type="checkbox"/> Clean and maintain storm drain inlets, catch basins, pipes, and other conveyance structures before the wet season and as needed. - 05 <input type="checkbox"/> Clear open channels of accumulated litter in a timely manner. - 06 <input type="checkbox"/> Properly dispose of all accumulated sediments, contaminants, debris and waste water from cleaning and maintenance activities. - 07 <input type="checkbox"/> Maintain records for all inspections, cleaning, and maintenance, including the quantity of waste removed. 		

STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.		
BMP FREQUENCIES/EQUIPMENT/TOOLS: Storm drain maintenance frequencies are described in Section 6.0. Equipment/tools to implement BMPs include stenciling equipment, measuring devices, flashlights, vactor trucks, spill kits, brooms, and drums.		
AUTHORIZED LOCATIONS FOR STORM DRAIN MAINTENANCE:		
<input type="checkbox"/>	To implement BMPs for the removal of pollutants, sediment, and debris from the storm drain system, maintenance of the storm drain system will be performed at the designated areas as shown on the attached map.	
Date:		Version: 2.0

Airport Boundary
 Storm Drain
■ Storm Drain Inlet



Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

PROJECT: 5013-11-0003	 N	 Feet
DATE: 6/16/2015		
DRAWN BY: KMB		
CHECKED BY: AJA		



SAN DIEGO
INTERNATIONAL AIRPORT
 San Diego, California

STORM WATER MANAGEMENT PLAN
AT SAN DIEGO INTERNATIONAL AIRPORT

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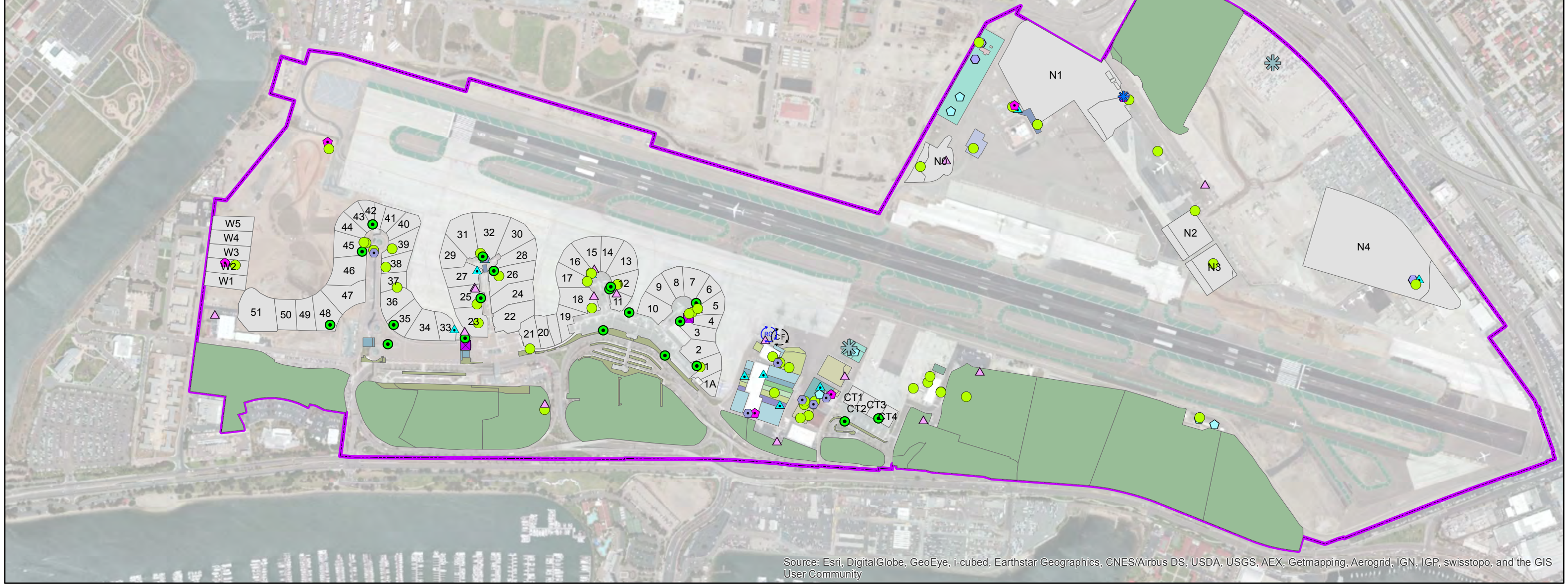
BMP SC18	HOUSEKEEPING	
<p>PURPOSE: Implement good housekeeping measures to eliminate non-storm water discharges and reduce the potential for pollutants to enter the storm water collection system.</p>	<p>TARGETED ACTIVITIES:</p> <ul style="list-style-type: none"> ➔ Aircraft Deicing/Anti-Icing ➔ Aircraft Lavatory Service ➔ All Fueling ➔ All Maintenance ➔ All Storage ➔ All Washing ➔ Cargo Handling ➔ Equipment Cleaning ➔ Fire Fighting Equipment Testing ➔ Floor Washdowns ➔ Garbage Collection ➔ Painting/Stripping ➔ Potable Water System Flushing ➔ Runway Rubber Removal 	
<p>POLLUTION PREVENTION:</p>	<p>Implement the following pollution prevention practices and BMPs to eliminate non-storm water discharges and reduce the potential for pollutants to enter the storm water collection system:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Clean operation areas and facilities using dry methods. <input type="checkbox"/> Maintain adequate supplies of spill response equipment and absorbent materials in accessible locations where significant materials are stored and used. <input type="checkbox"/> Apply integrated pest management mechanical and cultural controls to control for pests and reduce the need of pesticides. Cultural controls targets pest attractants using sanitation practices, education, and communication. Mechanical controls creates physical barriers as a means of prevention. Create partnerships with other organizations for better implementation of an integrated pest management program. <input type="checkbox"/> NEVER HOSE DOWN PAVED AREAS TO THE STORM DRAINS. 	<p>POLLUTANTS of CONCERN:</p> <ul style="list-style-type: none"> ➔ Aircraft Fire Fighting Foam ➔ Battery Acid ➔ Cleaning Solution ➔ Deicing/Anti-Icing Fluid ➔ Dirt particles ➔ Dumpster Wastes ➔ Floatables ➔ Fuel ➔ Heavy Metals ➔ Hydrocarbons ➔ Landscape Waste ➔ Lavatory Chemicals ➔ Lavatory Chemical Waste ➔ Lavatory Truck Wash Water ➔ Lavatory Waste ➔ Metals ➔ Oil and Grease ➔ Paint ➔ Pesticides/Herbicides/ Fertilizers ➔ Potable Water System Chemicals ➔ Rubber Particles ➔ Sediment ➔ Solvents ➔ Suspended solids ➔ Trash ➔ Vehicle Fluids

OPERATIONS:		APPLICABLE TENANTS/ DEPARTMENTS:
Sub-BMPs - 01 <input type="checkbox"/> - 02 <input type="checkbox"/> - 03 <input type="checkbox"/> - 04 <input type="checkbox"/> - 05 <input type="checkbox"/> - 06 <input type="checkbox"/> - 07 <input type="checkbox"/> - 08 <input type="checkbox"/> - 09 <input type="checkbox"/>	Perform and document on a regular basis self-inspections and evaluations of the implemented BMPs. Keep all facility and operation areas clean and orderly. Place trash receptacles that have covers in appropriate locations. Sweep all facility and operation areas at least once per week to prevent the accumulation of sediments, debris, and contaminants. Properly dispose of all debris and sediment from sweeping. Store significant materials in the appropriate containers that are properly sealed and labeled. Store significant materials within secondary containment. Store significant materials in a restricted access area. Material Safety Data Sheets (MSDSs) are readily available for all significant materials.	→ ACE → Air Canada → Alaska → Allegiant → Allied → American Airlines → ARFF → ASIG → Bradford → British Airways → Delta → DHL → Elite Line Service → Envoy → FedEx → Flagship → Frontier → Hawaiian → HFF → HMS Host → IAS → JAL → Jet Blue → Landmark → Mission Yogurt → SDCRAA → SeaPort → Siemens → Southwest → Spirit → SSP → Sun Country → United → UPS → US Airways → Virgin America → Volaris → WestJet
STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.		
BMP FREQUENCIES/EQUIPMENT/TOOLS: Good housekeeping occurs on a daily basis. Equipment/tools to implement BMPs include trash receptacles, spill pallets, outdoor sheds, overpack containers, tarps, flammable materials storage lockers, bermed or containment areas, indoor or covered storage areas, fiber rolls, wooden pallets, spill kits, brooms, and drums.		
AUTHORIZED LOCATIONS TO IMPLEMENT HOUSEKEEPING BMPs:		

<input type="checkbox"/>	Prevent non-storm water discharges, and contact of pollutants with storm water discharges by implementing good housekeeping BMPs in the designated areas as shown in the attached map.	
Date:		Version: 2.0

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Airports Boundary		Tenant Gate Areas	
	Airport Boundary	Tenant	Gate
	ACE	Air Canada	22
	ASIG	Alaska	11, 13, 14, 15, 16, 17, 18
	Alaska	Allegiant	23
	Allied Aviation	American/Envoy	27, 28, 29, 31, 32
	American	ARFF	N0
	Bradford	British Airways	20
	Delta	Delta	41, 42, 47, 48, 49, 50, 51, W3, W4, W5
	ELS	DHL	N3
	Flagship	FedEx	N1
	HMS Host	Frontier	12
	Jet Blue	Hawaiian	51
	Southwest	HFF	7, 8
	US Airways	IAS	N2, N3
	United	JAL	20, 22
	Dumpsters	Jet Blue	36, 37
	Recycling		
	Composting		
	Underground Storage Tank		
	Fueling		
	Fuel Storage		
	Material Storage		
	Grease Trap		
	Metal Storage		
	Oil Storage		
	Wash Area		
	Industrial Waste		



Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

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CHECKED BY: AJA	



SAN DIEGO INTERNATIONAL AIRPORT
San Diego, California







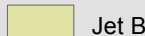






STORM WATER MANAGEMENT PLAN
AT SAN DIEGO INTERNATIONAL AIRPORT

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BMP SC19	SAFER/ALTERNATIVE PRODUCTS	
<p>PURPOSE: Reduce the use of harmful, toxic and non-biodegradable products that could pollute storm water runoff.</p>	<p>TARGETED ACTIVITIES:</p> <ul style="list-style-type: none"> → Aircraft Deicing/Anti-Icing → Aircraft Lavatory Service → All Fueling → All Maintenance → All Storage → All Washing → Cargo Handling → Equipment Cleaning → Fire Fighting Equip. Testing → Floor Washdowns → Garbage Collection → Outdoor Washdown → Painting/Stripping → Potable Water System Flush → Runway Rubber Removal 	
<p>POLLUTION PREVENTION:</p>		<p>POLLUTANTS of CONCERN:</p>
<p><input type="checkbox"/> Develop an Environmentally Preferable Purchasing Program to (1) minimize the purchase of products containing hazardous ingredients, (2) maximize the purchase of alternative products that pose less risk to employees and to the environment, and (3) maximize the purchase of products containing recycled materials.</p>	<p>Implement the following pollution prevention practices and BMPs to prevent toxic, non-biodegradable materials from entering the storm water collection system:</p>	<ul style="list-style-type: none"> → Aircraft Fire Fighting Foam → Battery Acid → Cleaning Solution → Deicing/Anti-Icing Fluid → Fuel → Heavy Metals → Hydrocarbons → Lavatory Chemicals → Metals → Oil and Grease → Paint → Pesticides/Herbicides/ Fertilizers → Potable Water System Chemicals → Solvents → Vehicle Fluids
<p>OPERATIONS:</p>		<p>APPLICABLE TENANTS/ DEPARTMENTS:</p>
<p>Sub-BMPs</p> <p>- 01 <input type="checkbox"/> Whenever possible, use alternative products that are “Regionally Accepted” and are identified as being non-toxic, less toxic, or biodegradable.</p> <p>- 02 <input type="checkbox"/> Whenever possible, maximize the purchase and use of products containing recycled materials.</p>	<ul style="list-style-type: none"> → ACE → Air Canada → Alaska → Allegiant → Allied → American Airlines → ARFF → ASIG → Bradford → British Airways 	


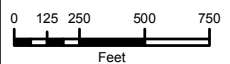
		<ul style="list-style-type: none"> → Delta → DHL → Elite Line Service → Envoy → FedEx → Flagship → Frontier → Hawaiian → HFF → HMS Host → IAS → JAL → Jet Blue → Landmark → Mission Yogurt → SDCRAA → SeaPort → Siemens → Southwest → SSP → Sun Country → United → UPS → US Airways → Virgin America → WestJet
STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.		
BMP FREQUENCIES/EQUIPMENT/TOOLS: Safer/alternative products are used whenever possible and according to the Authority's and tenant's policies.		
AUTHORIZED LOCATIONS TO USE SAFER/ALTERNATIVE PRODUCTS:		
<input type="checkbox"/>	Use non-toxic, less toxic, biodegradable, alternative products whenever possible in the designated areas shown in the attached map.	
Date:	Version: 2.0	

Airport Boundary

 ACE	 ELS	Tenant	Gate	Tenant	Gate
 ASIG	 Flagship	Air Canada	22	Landmark Aviation	N4
 Alaska	 HMS Host	Alaska	11, 13, 14, 15, 16, 17, 18	Mission Yogurt	4
 Allied Aviation	 Jet Blue	Allegiant	23	SDCRAA	19
 American	 Southwest	American/Envoy	27, 28, 29, 31, 32	SeaPort	11C
 Bradford	 US Airways	ARFF	N0	Siemens	7, 8
 Delta	 United	British Airways	20	Southwest	1, 1A, 2, 3, 4, 5, 6, 7, 8, 9, 10
		Delta	41, 42, 47, 48, 49, 50, 51, W3, W4, W5	SSP	11, 12
		DHL	N3	Sun Country	51
		FedEx	N1	United	38, 39, 40, 43, 44, 45, 46, W1, W2
		Frontier	12	UPS	N2, N3
		Hawaiian	51	US Airways	33, 34, 35
		HFF	7, 8	Virgin America	25
		IAS	N2, N3	West Jet	22, 24, 26
		JAL	20, 22		
		Jet Blue	36, 37		



Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

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

SAN DIEGO INTERNATIONAL AIRPORT
San Diego, California

STORM WATER MANAGEMENT PLAN
AT SAN DIEGO INTERNATIONAL AIRPORT

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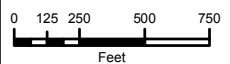

BMP SC20	ERODIBLE AREAS	
PURPOSE: Prevent or reduce the discharge of pollutants to storm water from erodible areas by implementation of erosion control BMPs to stabilize soils and reduce pollutant discharges. This does not apply to natural, undeveloped areas, except where erosion is occurring as a direct result of onsite human activity, such as paving, land disturbance, or vegetation removal.		TARGETED ACTIVITIES: → Erodible Areas → Grounds Maintenance → Construction Activities
POLLUTION PREVENTION:		POLLUTANTS of CONCERN: → Sediment
<input type="checkbox"/>	Implement the following pollution prevention practices and BMPs to prevent discharges of pollutants from building and grounds maintenance to the storm water collection system: <input type="checkbox"/> Minimize site operations on erodible areas.	
OPERATIONS:		APPLICABLE TENANTS/ DEPARTMENTS: → ARFF → Landmark → SDCRAA
Sub-BMPs	- 01 <input type="checkbox"/> Implement erosion control BMPs to stabilize soils. - 02 <input type="checkbox"/> Implement wind erosion control BMPs to control dust. - 03 <input type="checkbox"/> Maintain effective perimeter controls. - 04 <input type="checkbox"/> Stabilize loose soils and slopes prior to a forecasted storm event. - 05 <input type="checkbox"/> Prevent material tracking offsite. - 06 <input type="checkbox"/> Divert all storm water away from erodible materials.	
STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.		
BMP FREQUENCIES/EQUIPMENT/TOOLS: Erosion and sediment controls, and diversionary measures are used as needed. Equipment/tools to implement BMPs include various erosion and sediment controls, as applicable for the area, such as fiber rolls.		
AUTHORIZED BUILDING AND GROUNDS MAINTENANCE LOCATIONS:		
<input type="checkbox"/>	To implement BMPs for the prevention of discharges or pollutants from grounds maintenance, erodible areas and construction activities, perform maintenance activities within the designated areas as shown in the attached map.	
Date:		Version: 1.0

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 Airport Boundary
 Erodible Area





Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

PROJECT: 5013-11-0003 DATE: 6/16/2015 DRAWN BY: KMB CHECKED BY: AJA				SAN DIEGO INTERNATIONAL AIRPORT San Diego, California	STORM WATER MANAGEMENT PLAN AT SAN DIEGO INTERNATIONAL AIRPORT
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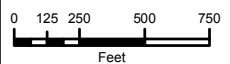

BMP SC21	BUILDING REPAIR AND CONSTRUCTION	
<p>PURPOSE: Prevent or reduce the discharge of pollutants to storm water from site modifications such as minor and normal building repair and remodeling to construction of new facilities by using soil erosion controls, enclosing or covering building materials storage areas, using good housekeeping practices, using safer alternative products, and training employees.</p>	<p>TARGETED ACTIVITIES:</p> <ul style="list-style-type: none"> ➔ Building Remodeling/Repair ➔ Construction Activities 	
<p>POLLUTION PREVENTION:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Implement the following pollution prevention practices and BMPs to eliminate non-storm water discharges and reduce the potential for pollutants to enter the storm water collection system: <input type="checkbox"/> Implementation of erosion control BMPs for temporary stabilization of inactive areas. <input type="checkbox"/> Implementation of sediment control BMPs for perimeter control, runoff/runoff control, and inlet protection. <input type="checkbox"/> Implementation of tracking control BMPs to prevent offsite tracking. <input type="checkbox"/> Implementation of wind erosion control BMPs to control dust that can contribute to air pollution. <input type="checkbox"/> Implementation of materials and waste management BMPs to properly manage materials and waste on site. <input type="checkbox"/> Implementation of non-stormwater BMPs to prevent discharge of pollutants and properly manage wastewater or wash water generated from the construction activities such as equipment or vehicle maintenance and fueling; saw cutting and grinding from pavement removal; pavement paving and sealing; concrete curing etc. <input type="checkbox"/> Use recycled or non-potable water for construction purposes when available. 	<p>POLLUTANTS of CONCERN:</p> <ul style="list-style-type: none"> ➔ Asphalt ➔ Basic Materials ➔ Concrete ➔ Construction Materials ➔ Construction Debris ➔ Floatables ➔ Fuel ➔ Metals ➔ Oil and Grease ➔ Paint ➔ Sediment ➔ Sealants ➔ Septic Wastes ➔ Solvents ➔ Suspended solids ➔ Synthetic Organics ➔ Trash ➔ Vehicle Fluids 	
<p>OPERATIONS:</p> <p>Sub-BMPs</p> <ul style="list-style-type: none"> - 01 <input type="checkbox"/> Avoid outdoor repairs and construction during rain events or during any period for which the National Weather Service is forecasting a 50% chance of precipitation. - 02 <input type="checkbox"/> Stabilize inactive areas (where there will be no construction for 14 days) or finished slopes or erodible areas with erosion control. - 03 <input type="checkbox"/> Implement wind erosion control BMPs to control dust, and limit traffic to stabilized roadways within the site, where possible. - 04 <input type="checkbox"/> Maintain effective perimeter and run-on controls. - 05 <input type="checkbox"/> Maintain effective inlet protection. 	<p>APPLICABLE TENANTS/ DEPARTMENTS:</p> <ul style="list-style-type: none"> ➔ SDCRAA ➔ Any tenant conducting targeted activities 	

<ul style="list-style-type: none"> - 06 <input type="checkbox"/> - 07 <input type="checkbox"/> - 08 <input type="checkbox"/> - 09 <input type="checkbox"/> - 10 <input type="checkbox"/> - 11 <input type="checkbox"/> - 12 <input type="checkbox"/> - 13 <input type="checkbox"/> - 14 <input type="checkbox"/> - 15 <input type="checkbox"/> - 16 <input type="checkbox"/> 	<p>Install a stabilized construction entrance to prevent offsite tracking.</p> <p>Sweep streets of any loose dirt or materials.</p> <p>Cover and contain all chemicals, liquids, erodible landscape materials, and fertilizers when not in use.</p> <p>Discontinue use of erodible landscape material within 2 days prior to forecasted rain event or when it's raining.</p> <p>Cover and berm material and waste stockpiles when inactive and before the onset of a rain event. Use plastic under-sheets when appropriate.</p> <p>Cover waste containers at the end of each work day and prior to a rain event, and have waste recycled or collected and properly disposed of frequently.</p> <p>Perform concrete washout in designated areas away from inlets and drainage courses, and in appropriately sized and designed pits or containers. Empty regularly.</p> <p>Temporary sanitary facilities must have secondary containment and be located away from storm drains and traffic circulation.</p> <p>Minimize water usage and use reclaimed water where possible.</p> <p>Contain any particulate generating activities.</p> <p>Designate areas for fueling equipment and vehicles away from inlets and drainage courses, or perform offsite.</p> <p style="text-align: center;">SEE ALSO BMP SC20 AND INDIVIDUAL CONSTRUCTION SWPPPs OR WPCPs</p>	
<p>STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.</p>		
<p>BMP FREQUENCIES/EQUIPMENT/TOOLS: Building repair and construction BMPs are used as needed and as outlined in the SWPPPs or WPCPs. Equipment/tools to implement BMPs include fiber rolls, gravel bags, straw waddles, silt fences, mulch, hydraulic mulch, water trucks, rumble plates, sweepers, brooms, spill kits, drums, secondary containment devices, tarps, cover, covered dumpsters etc.</p>		
<p>AUTHORIZED LOCATIONS TO IMPLEMENT HOUSEKEEPING BMPs:</p>		
<input type="checkbox"/>	<p>Prevent non-storm water discharges, and contact of pollutants with storm water discharges by implementing remodeling/repair, and construction BMPs in the designated areas as shown in the attached map.</p>	
<p>Date:</p>	<p>Version: 1.0</p>	

 Airport Boundary
 Building



Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

PROJECT: 5013-11-0003 DATE: 6/16/2015 DRAWN BY: KMB CHECKED BY: AJA				SAN DIEGO INTERNATIONAL AIRPORT San Diego, California	STORM WATER MANAGEMENT PLAN AT SAN DIEGO INTERNATIONAL AIRPORT
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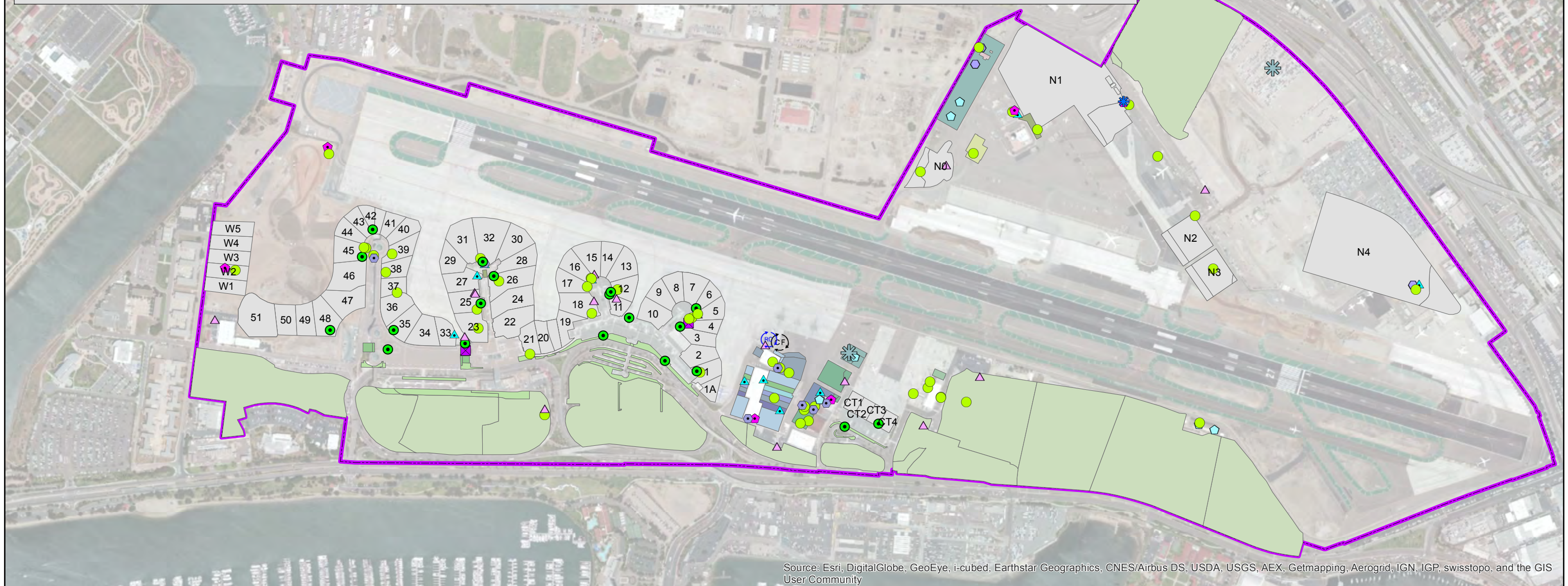
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BMP SR01	SPILL PREVENTION, CONTROL, AND CLEAN-UP	
<p>PURPOSE: Prevent or reduce the discharge of pollutants to storm water resulting from spills, leaks and improper cleanup of significant and other materials.</p>	<p>TARGETED ACTIVITIES:</p> <ul style="list-style-type: none"> ➔ Aircraft Deicing/Anti-Icing ➔ Aircraft Lavatory Service ➔ All Fueling ➔ All Maintenance ➔ All Storage ➔ All Washing ➔ Cargo Handling ➔ Equipment Cleaning ➔ Fire Fighting Equip. Testing ➔ Floor Washdowns ➔ Garbage Collection ➔ Outdoor Washdown ➔ Painting/Stripping ➔ Runway Rubber Removal 	
<p>POLLUTION PREVENTION:</p>		<p>POLLUTANTS of CONCERN:</p>
	<p>Implement the following pollution prevention practices and BMPs to prevent spills and leaks of significant and other materials to the storm water collection system:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Provide formal training in execution of the Spill Plan(s) to key personnel, with additional training for first responder level personnel. All employees should have basic knowledge of spill control procedures and potential dangers of spills on human health and the environment. Incorporate spill control procedures in regular safety meetings to reinforce practices. <input type="checkbox"/> Maintain an inventory of appropriate cleanup materials and equipment on-site and strategically deploy cleanup materials and equipment based on the type and quantities of chemicals present. 	<ul style="list-style-type: none"> ➔ Aircraft Fire Fighting Foam ➔ Battery Acid ➔ Cleaning Solution ➔ Deicing/Anti-Icing Fluid ➔ Fuel ➔ Heavy Metals ➔ Hydrocarbons ➔ Lavatory Chemicals ➔ Metals ➔ Oil and Grease ➔ Paint ➔ Pesticides/Herbicides/ Fertilizers ➔ Potable Water System Chemicals ➔ Solvents ➔ Vehicle Fluids
<p>OPERATIONS:</p>		<p>APPLICABLE TENANTS/ DEPARTMENTS:</p>
<p>Sub-BMPs</p>	<ul style="list-style-type: none"> - 01 <input type="checkbox"/> Develop, implement and keep current Spill Plan, and develop facility spill prevention and response procedures. - 02 <input type="checkbox"/> Post a summary of the Spill Plan and spill response procedures, at key locations, identifying the spill cleanup coordinators, location of cleanup equipment, and phone numbers of regulatory agencies to be contacted in the event of a spill. - 03 <input type="checkbox"/> Train relevant employees and contractors in the implementation of the Spill Plan, if applicable, or spill control procedures. - 04 <input type="checkbox"/> Use leak and spill prevention devices. 	<ul style="list-style-type: none"> ➔ ACE ➔ Air Canada ➔ Alaska ➔ Allegiant ➔ Allied ➔ American Airlines ➔ ARFF ➔ ASIG ➔ Bradford ➔ British Airways ➔ Delta

<p>- 05 <input type="checkbox"/></p> <p>- 06 <input type="checkbox"/></p> <p>- 07 <input type="checkbox"/></p> <p>- 08 <input type="checkbox"/></p> <p>- 09 <input type="checkbox"/></p> <p>- 10 <input type="checkbox"/></p>	<p>Place adequate spill kits in appropriate locations.</p> <p>Notify Airport Operations (619-400-2710), the Airport Authority Environmental Affairs Department (619-400-2784), and any agencies or companies identified in the Spill Plan or facility spill prevention and response procedures in the event of a spill.</p> <p>In the event of a spill or release, immediately follow procedures identified in the Spill Plan or facility spill prevention and response procedures.</p> <p>Use only dry cleaning methods.</p> <p>Properly dispose of all used spill control and clean-up materials.</p> <p>Waste water from washing activities is captured by vacuum and properly disposed of, or is diverted to a structural treatment control, sanitary sewer, or dead end sump with pump.</p>	<ul style="list-style-type: none"> ➔ DHL ➔ Elite Line Service ➔ Envoy ➔ FedEx ➔ Flagship ➔ Frontier ➔ Hawaiian ➔ HFF ➔ HMS Host ➔ IAS ➔ JAL ➔ Jet Blue ➔ Landmark ➔ Mission Yogurt ➔ SDCRAA ➔ SeaPort ➔ Siemens ➔ Sky West ➔ Southwest ➔ Spirit ➔ SSP ➔ Sun Country ➔ United ➔ UPS ➔ US Airways ➔ Virgin America ➔ Volaris ➔ WestJet
<p>STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.</p>		
<p>BMP FREQUENCIES/EQUIPMENT/TOOLS: Spill prevention and control occurs on a daily basis. Clean up is as needed. Equipment/tools to implement BMPs include spill pallets, outdoor sheds, overpack containers, tarps, flammable materials storage lockers, bermed or containment areas, fiber rolls, shop vacuums, spill kits, brooms, and drums.</p>		
<p>AUTHORIZED LOCATIONS TO IMPLEMENT SPILL PREVENTION, CONTROL AND CLEANUP BMPs:</p>		
<p><input type="checkbox"/></p>	<p>Implement BMPs for the prevention of non-storm water discharges from spills, leaks or improper cleanups at the designated areas as shown in the attached map.</p>	
<p>Date:</p>		<p>Version: 2.0</p>

Airline Legend		Tenant Gate Areas	
ACE	ELS	Air Canada	22
ASIG	Flagship	Alaska	11, 13, 14, 15, 16, 17, 18
Alaska	HMS Host	Allegiant	23
Allied Aviation	Jet Blue	American/Envoy	27, 28, 29, 31, 32
American	Southwest	ARFF	N0
Bradford	US Airways	British Airways	20
Delta	United	Delta	41, 42, 47, 48, 49, 50, 51, W3, W4, W5
		DHL	N3
		FedEx	N1
		Frontier	12
		Hawaiian	51
		HFF	7, 8
		IAS	N2, N3
		JAL	20, 22
		Jet Blue	36, 37
		Landmark Aviation	N4
		Mission Yogurt	4
		SDCRAA	19
		SeaPort	11C
		Siemens	7, 8
		SkyWest	34, 35, 36, 37, 38
		Southwest	1, 1A, 2, 3, 4, 5, 6, 7, 8, 9, 10
		Spirit	20, 21, 22, 24, 26, 30
		SSP	11, 12
		Sun Country	51
		United	38, 39, 40, 43, 44, 45, 46, W1, W2
		UPS	N2, N3
		US Airways	33, 34, 35
		Virgin America	25
		Volaris	20, 21, 22
		West Jet	22, 24, 26

△ Dumpsters	◇ Fueling	✖ Loading
♻️ Recycling	⬡ Fuel Storage	● Material Storage
♻️ Composting	● Grease Trap	◆ Metal Storage
⊗ Underground Storage Tank	▲ Industrial Waste	⬢ Oil Storage
		⚙️ Wash Area



Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

PROJECT: 5013-11-0003		
DATE: 6/16/2015		
DRAWN BY: KMB		
CHECKED BY: AJA		



SAN DIEGO INTERNATIONAL AIRPORT
San Diego, California



















STORM WATER MANAGEMENT PLAN
AT SAN DIEGO INTERNATIONAL AIRPORT

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BMP TC01	TREATMENT CONTROLS	
<p>PURPOSE: Eliminate non-storm water discharges to the storm water collection system and remove petroleum compounds, grease, sediments, trash and debris, metals and other contaminants from storm water through the use of structural treatment control BMPs.</p>	<p>TARGETED ACTIVITIES:</p> <ul style="list-style-type: none"> ➔ Aircraft Deicing/Anti-Icing ➔ Aircraft Lavatory Service ➔ All Fueling ➔ All Maintenance ➔ All Storage ➔ All Washing ➔ Cargo Handling ➔ Equipment Cleaning ➔ Fire Fighting Equip. Testing ➔ Floor Washdowns ➔ Garbage Collection ➔ Outdoor Washdown ➔ Painting/Stripping ➔ Potable Water System Flush ➔ Runway Rubber Removal 	
<p>POLLUTION PREVENTION:</p>	<p>POLLUTANTS of CONCERN:</p>	
	<p>Implement the following pollution prevention practices and BMPs to reduce pollutants in storm water and non-storm water discharges and to maintain the proper functioning of structural treatment control BMPs:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Properly dispose of any standing water and accumulated waste removed during cleaning operations in accordance with federal, state, and local requirements. <input type="checkbox"/> CASQA recommends cleaning of water quality inlets (which includes oil water separators (OWS)) at least twice during the wet season. However, the schedule depends on the operating conditions of the SDIA OWS. <input type="checkbox"/> Inspect and maintain OWS as follows: <ol style="list-style-type: none"> 1. Inspect OWS regularly to establish trends in operating conditions of the SDIA OWS. 2. Prior to the wet season, inspect for sediment accumulation in the pre-separator and/or separator chambers, and if it is greater than 12 inches deep, remove the accumulated material (for example, with a vactor truck), characterize it, and properly dispose of it. 3. Prior to the wet season, inspect for oil accumulation in the oil chamber, and if it is more than 50 percent of the chamber volume, remove the oil and grease, characterize it, and properly dispose of it. 4. Inspect coalescer for debris and gummy deposits. If these are present, wash the coalescer in an appropriate area with high pressure hot water. 5. Inspect for general mechanical integrity per manufacturer's guidelines at least annually and operate each mechanical component to ensure proper operation. Repair as needed. 	<ul style="list-style-type: none"> ➔ Aircraft Fire Fighting Foam ➔ Battery Acid ➔ Cleaning Solution ➔ Deicing/Anti-Icing Fluid ➔ Fuel ➔ Heavy Metals ➔ Hydrocarbons ➔ Lavatory Chemicals ➔ Metals ➔ Oil and Grease ➔ Paint ➔ Pesticides/Herbicides/ Fertilizers ➔ Potable Water System Chemicals ➔ Solvents ➔ Vehicle Fluids


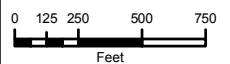

	<p><input type="checkbox"/> Inspect and maintain drain inserts as follows:</p> <ol style="list-style-type: none"> 1. Inspect inserts every 3 months in the dry season and prior to every storm event in the wet season. Remove any trash and debris that could interfere with the proper functioning of the insert. 2. Replace inserts if sediment reaches a depth of greater than 6 inches, or if rips or tears are observed. Properly characterize and dispose of the insert and sediment. 3. Inspect monthly for saturation of any oil absorbent material. Upon saturation, replace absorbent material. <p><input type="checkbox"/> Inspect and maintain Contech CDS units as follows:</p> <ol style="list-style-type: none"> 1. Inspect CDS unit every 6 months. 2. Check for blockages or obstructions in inlet and separation screen. 3. Clean CDS unit during dry weather conditions when level of sediments reach 75% of capacity in isolated sump or when a sufficient level of hydrocarbon and trash has accumulated. Using a vactor truck is recommended. 4. Properly characterize and dispose of accumulated wastes. <p><input type="checkbox"/> Inspect and maintain Contech StormFilter units as follows:</p> <ol style="list-style-type: none"> 1. Inspect and maintain StormFilter unit annually during the dry season or more frequently depending on high sediment accumulation after major storms. Maintenance will be done every 3 years as minimum. 2. Check level of sediment accumulation on vault floor and top of cartridge. Use vactor truck to remove sediments if sediment loading is >4" on vault floor or >1/4" on top of cartridge. 3. Check if cartridges are submerged 24 hours after rain event, and for plugged media, extended bypass condition, or pronounced scum line present above top cap; replace cartridges. 4. Properly characterize and dispose of accumulated wastes. <p><input type="checkbox"/> Inspect and maintain Clearwater BMP unit as follows:</p> <ol style="list-style-type: none"> 1. Inspect and maintain BMP unit every 2 months during the rainy season and at the end of the rainy season. 2. Check hydrocarbon sock for full absorption. Replace if hard when squeezed. 3. Remove trash and debris in trash collection baskets. 4. Clean primary settling chamber of floatables and sediments when it is 50% full. Recommend using vactor truck to remove sediment area thoroughly. 5. Replace filter canister and filter media bag when media is spent. Replace filter matt if condition is poor. 6. Properly characterize and dispose of accumulated wastes and spent parts. <p><input type="checkbox"/> Inspect and maintain Bioclean trench drain filters as follows:</p> <ol style="list-style-type: none"> 1. Inspect and maintain trench drain filters every 3 months for cleaning and debris removal. Remove all trash, debris, organics, and sediments collected and dispose of properly. 2. Inspect and replace hydrocarbon booms in trench drain filters every 6 months. Properly dispose hydrocarbon boom as hazardous waste. 	
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	Airport Boundary		
	Allied Aviation		Bradford
	Pervious Pavers		
	Oil/Water Separator		Bio-Clean Curb Inlet Skimmer
	Inlet Filter		Infiltration Trench
	Asphalt Strip-Permeable		Contech Storm Filter
	Bio-Clean Trench Drain Filter		Contech CDS
	Bio-Clean Grate Inlet Skimmer		Clearwater Solutions BMP Unit
			Modular Wetland System
			Detention Basin
			Bioswale
			Artificial Turf Infiltration
			Aquafilter CDS



Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

PROJECT: 6013-11-0003 DATE: 6/16/2015 DRAWN BY: KMB CHECKED BY: AJA	 		SAN DIEGO INTERNATIONAL AIRPORT San Diego, California	STORM WATER MANAGEMENT PLAN AT SAN DIEGO INTERNATIONAL AIRPORT
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APPENDIX C
STANDARD URBAN STORMWATER MITIGATION PLAN

Appendix C – Standard Urban Stormwater Mitigation Plan



SAN DIEGO COUNTY REGIONAL AIRPORT AUTHORITY SUSMP

*Standard Urban Stormwater Mitigation Plan
Requirements for Development Applications*

January 14, 2011

Table of Contents

CHAPTER 1. INTRODUCTION	1
Background.....	1
Development Review Process	2
Tenant Projects	3
Capital Projects	3
Departmental Responsibilities	4
Adequacy of Proposed Plans	4
How to Use This SUSMP	7
Compliance Process at a Glance	9
Policies and Procedures	9
Phased Projects.....	10
LID Design Procedure	10
Requirements for All Development Projects	11
Additional Requirements for Priority Development Projects	11
Compliance with Flow-Control Requirements.....	14
Waivers From Numeric Sizing Criteria	15
Conflicts with Other Regulations	16
CHAPTER 2. CONCEPTS AND CRITERIA	17
Water-Quality Regulations.....	17
Pollutants of Concern	19
Selection of Permanent Source Control BMPs.....	23
Selection of Stormwater Treatment Facilities.....	23
Hydrology for NPDES Compliance	26
Criteria for Infiltration Devices.....	28

CHAPTER 3. THE PROJECT SUBMITTAL	31
Step by Step.....	31
Step 1: Assemble Needed Information.....	33
Step 2: Identify Constraints & Opportunities.....	34
Step 3: Prepare and Document The LID Design	34
Step 4. Specify Source Control BMPs	35
Step 5: Stormwater Facility Maintenance.....	37
Step 6: Complete The SUSMP Project Submittal	37
CHAPTER 4. LOW IMPACT DEVELOPMENT DESIGN GUIDE.....	41
Analyze The Project for LID.....	41
Develop and Document The Drainage Design	46
Specify Preliminary Design Details	55
Alternatives to Integrated LID Design.....	55
Self-Treating and Self-Retaining Areas	59
Pervious Pavements	63
Bioretention Facilities	65
Flow-through Planter	73
Dry Wells and Infiltration Basins	78
Cistern with Bioretention Facility	79
CHAPTER 5. OPERATION & MAINTENANCE OF STORMWATER FACILITIES	83
Maintenance Mechanisms	83
Verification Mechanisms	84
Maintenance Requirements.....	84
Maintenance Plans	84
Stage 1: General Maintenance Requirements.....	85

Stage 2: Detailed Maintenance Plan	85
Stage 3: Interim Maintenance	90
Stage 4: Transfer Responsibility	90
Stage 5: Operation and Maintenance Verification	90
BIBLIOGRAPHY	91
APPENDIX A: GLOSSARY	93
APPENDIX B: POLLUTANT SOURCES AND SOURCE CONTROL CHECKLIST	99
APPENDIX C: INFORMATION ON SIC CODES.....	109
APPENDIX D: EXAMPLE TENANT CONDITION OF APPROVAL	117

Figures

FIGURE 1-1 TENANT DEVELOPMENT REVIEW PROCESS	5
FIGURE 1-2 CAPITAL PROJECTS DEVELOPMENT REVIEW PROCESS	6
FIGURE 4-1 SELF-TREATING AREAS	47
FIGURE 4-2 SELF-RETAINING AREAS.....	48
FIGURE 4-3 RELATIONSHIP OF IMPERVIOUS TO PERVIOUS AREA	48
FIGURE 4-4 MORE THAN ONE DMA CAN DRAIN TO ONE IMP	50
FIGURE 4-5 ONE DMA CANNOT DRAIN TO MORE THAN ONE IMP	50

Tables

TABLE 1-1 DEPARTMENTAL RESPONSIBILITIES FOR SUSMP IMPLEMENTATION	7
TABLE 1-2 PRIORITY DEVELOPMENT PROJECTS	13
TABLE 1-3 PROJECT TYPES FOR WHICH TREATMENT CONTROL REQUIREMENTS DO NOT APPLY	14
TABLE 2-1 ANTICIPATED AND POTENTIAL POLLUTANTS BY LAND USE TYPE AT SAN DIEGO INTERNATIONAL AIRPORT.....	21
TABLE 2-2 GROUPING OF POTENTIAL POLLUTANTS OF CONCERN BY FATE DURING STORMWATER TREATMENT	23

TABLE 2-3 GROUPS OF POLLUTANTS AND RELATIVE EFFECTIVENESS OF TREATMENT FACILITIES	24
TABLE 3-1 FORMAT FOR TABLE OF SOURCE CONTROL MEASURES	36
TABLE 3-2 FORMAT FOR CONSTRUCTION PLAN CHECKLIST	38
TABLE 4-1 IDEAS FOR RUNOFF MANAGEMENT	43
TABLE 4-2 RUNOFF FACTORS FOR SURFACES DRAINING TO IMPS	49
TABLE 4-3 FORMAT FOR TABULATING SELF-TREATING AREAS	51
TABLE 4-4 FORMAT FOR TABULATING SELF-RETAINING AREAS	51
TABLE 4-5 FORMAT FOR TABULATING AREAS DRAINING TO SELF-RETAINING AREAS	51
TABLE 4-6 IMP SIZING FACTORS	52
TABLE 4-7 FORMAT FOR PRESENTING CALCULATIONS OF MINIMUM IMP AREAS FOR BIORETENTION AREAS AND PLANTER BOXES ..	52
TABLE 4-8 FORMAT FOR PRESENTING SUMMARY CALCULATIONS OF IMP AREAS	54

Checklists

SUBMITTAL CHECKLIST	32
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Chapter 1 - INTRODUCTION

The San Diego County Regional Airport Authority (Authority) Standard Urban Storm Water Mitigation Plan (SUSMP) addresses post-construction urban runoff pollution from new development and redevelopment projects. This SUSMP provides airport tenants and Authority staff with information on how to comply with the urban runoff management requirements for development projects at the San Diego International Airport (SDIA). This SUSMP guides the project manager or engineer through the selection, design, and incorporation of stormwater best management practices (BMPs) or stormwater treatment control/management facilities into the project design plans.

Background

Impervious surfaces now cover much of the land, and storm drains discharge runoff from urban areas directly into streams, bays, and the ocean. As in many of California's urban areas, growth and development have caused changes in the timing and intensity of stream flows. Once altered, natural streams and their ecosystems generally cannot be fully restored. Nonetheless, it is possible to stop, and partially reverse the trend of declining habitat and preserve some ecosystem values for the benefit of future generations. Managing runoff from a single development site may seem inconsequential, but by changing the way most sites are developed (and redeveloped), it may be possible to preserve and enhance existing stream ecosystems in urban and urbanizing areas. That is the goal of the SUSMP process. In January 2007, the California Regional Water Quality Control Board for the San Diego Region (RWQCB) reissued National Pollutant Discharge Elimination System (NPDES) Permit No. CAS0108758 as RWQCB Order No. R9-2007-0001, hereinafter referred to as "Municipal Permit." The Municipal Permit was issued to the County of San Diego, the Port of San Diego, the Authority, and the 18 cities in San Diego County – known collectively as the Copermittees. Among other things, the reissued permit updates and expands stormwater requirements for new developments and redevelopments. Stormwater treatment requirements have been made more widely applicable and more stringent; minimum standards for Low Impact Development (LID) have been added, and the Copermittees have been required to develop and implement criteria for the control of runoff peaks and durations from development sites.

The Municipal Permit also required the Copermittees to prepare an updated Countywide Model SUSMP to replace the model that had been in effect since 2002. The Model SUSMP created the template for all the individual Copermittee SUSMP processes. The goal of the updated Model SUSMP still remains to develop and implement practicable policies to ensure to the maximum extent practicable that development does not increase pollutant loads from a project site and addresses the impacts of changes in urban runoff flow rates and velocities. The updated Model SUSMP, and the Hydromodification Plan contained therein, has been reviewed and approved by the RWQCB in a public process.

The most recent, updated version of the Copermitttee Model SUSMP, including updates and errata between editions, is available on the Project Clean Water website (www.projectcleanwater.org). The on-line Model SUSMP is presented in Adobe Acrobat format and features hyperlinks to help navigate the document and to access various references.

The Copermitttees are required to update their own Local SUSMP and ordinances consistent with the RWQCB-approved Model SUSMP. Under the Local SUSMP, each Copermitttee will approve project plans as part of the development plan approval process for discretionary projects, and prior to issuing permits for ministerial projects. Structural treatment control BMPs may be located on- or off-site, used singly or in combination, or shared by multiple developments, provided certain conditions are met, to allow flexibility in meeting SUSMP design standards. This document, hereafter referred to as the Authority SUSMP, is the SUSMP required for use with projects proposed within the jurisdiction of the Authority.

Applicants must also incorporate into their project design those features which have been identified by the Copermitttees as necessary to control pollutants from specified on-site sources, such as refuse areas, outdoor storage areas, and vehicle washing and repair facilities. The Copermitttees have developed a table listing the types of sources to be controlled and, for each, the corresponding source control measures required. All such applicable measures are incorporated here in the Authority SUSMP.

Development Review Process

As described in the Authority's Storm Water Management Plan (SWMP), the Authority is a special government entity, created in 2003 by the California legislature and granting the Authority the responsibility of managing the San Diego International Airport. Several tenants and subtenants operate businesses at the SDIA under the Authority's jurisdiction. In addition, the Authority operates its own "municipal" facilities including the terminals, parking lots, and other support buildings.

Article 8 of the Authority Code, referred to as the Storm Water Code, consists of its storm water management and discharge controls. Section 8.74(a)(3) address New Development and Redevelopment and states that "the Executive Director may establish controls on the volume and rate of storm water runoff from new developments and redevelopments as may be reasonably necessary to minimize the discharge and transport of pollutants." The Authority SUSMP represents one mechanism by which the Executive Director has established such controls in order to comply with the Municipal Permit.

New development and redevelopment projects are conducted by two major categories of project proponents, tenants of the airport (hereafter referred to as "tenant projects") and the Authority itself (hereafter referred to as "capital projects"). The Authority has a different project approval process for each of these two project proponent categories and these differences are reflected in the Authority SUSMP project review and approval processes. The Authority SUSMP project

approval process, including roles and responsibilities of Authority departments, is described below for both tenant and capital projects.

Tenant Projects

Authority tenants desiring to implement surface or subsurface improvements or to perform new construction, reconstruction, modification, or demolition, must submit a request for approval. Project approval typically involves several steps and review by several Authority departments. The process is outlined in the flow chart in Figure 1-1 and is further described below.

Project approval starts with the project proponent submitting a project description to the Real Estate Management Department, where a project completeness check is conducted. Real Estate Management will then coordinate with the Facilities Development Department to complete a review of the project. These two departments complete a Project Evaluation Form (PEF) and submit the PEF to Environmental Affairs. The PEF includes information pertinent to the SUSMP, such as land use, location, and the project square footage. Based on the PEF, Environmental Affairs determines whether SUSMP requirements apply to the project. The guidelines used to assist project proponents, Environmental Affairs, and others, in determining whether SUSMP requirements apply to projects conducted under the Authority jurisdiction are presented further below.

If SUSMP requirements apply, in order for the project application to be considered complete, the project proponent must submit an SUSMP Project Submittal (Project Submittal) in accordance with the Authority SUSMP describing how the project will meet the SUSMP requirements. Once the entire project application is complete, a project manager from either Real Estate Management or Facilities Development is assigned to the project. The project manager coordinates technical review and approval of the project including obtaining review from other Authority Departments. Environmental Affairs reviews and approves all Project Submittal documents and associated final design plans to ensure that SUSMP requirements are met. The approval of an Authority tenant project becomes part of the lease or part of a use permit. For discretionary projects, measures specified in the Project Submittal, such as implementation and maintenance of stormwater BMPs, are typically incorporated as mitigation measures as part of the California Environmental Quality Act (CEQA) environmental review process. Therefore, in addition to becoming part of the lease or use permit, the measures are also typically adopted by the Executive Officer or the Board of Authority Commissioners as part of the CEQA Mitigation Monitoring and Reporting Program.

Capital Projects

Development projects at the airport which are carried out by the Authority itself are considered Capital Projects or Major Maintenance Projects. The process for implementing SUSMP requirements for Authority capital projects and major maintenance projects is outlined in the flow chart in Figure 1-2 and is further described below.

All Capital and Major Maintenance Projects undergo an environmental review as part of the standard development review process. Authority staff from the department proposing a project act as the project sponsors and initiate the review process by submitting project information to Facilities Development Department. Facilities Development completes a PEF and forwards the PEF to Environmental Affairs for evaluation of the applicability of SUSMP requirements. If SUSMP requirements apply, Environmental Affairs advises Facilities Development that a Project Submittal must be submitted prior to final plan approval. Facilities Development coordinates with the project proponents and consultants to prepare the Project Submittal. Environmental Affairs reviews and approves the Project Submittal documents and associated final design plans to ensure that SUSMP requirements are met.

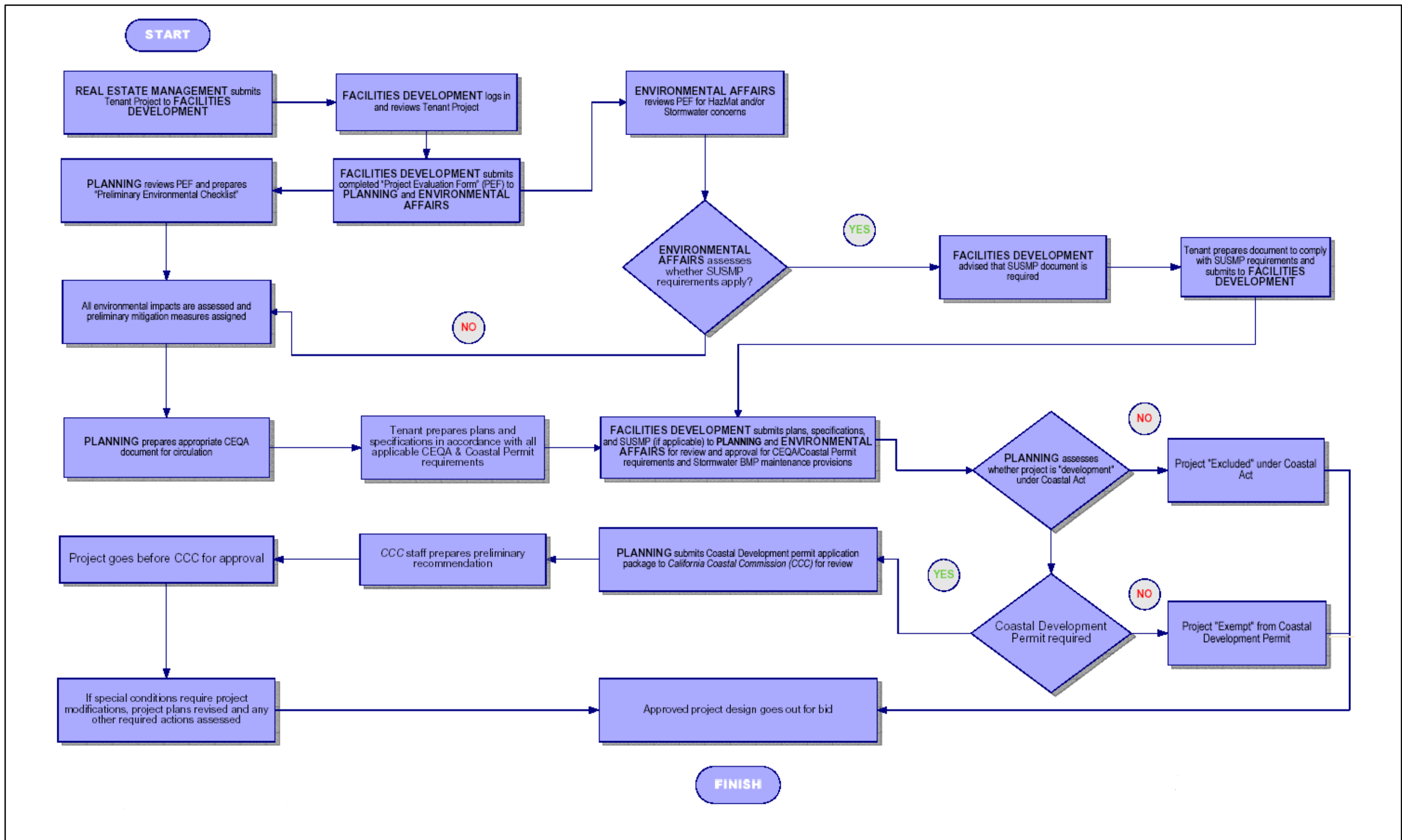
The approval of development and improvement projects carried out by the Authority itself includes the incorporation of environmental mitigation measures that are self-imposed as a result of the CEQA review process. Such mitigation measures become part of the project design and/or implementation and are formalized as an adopted CEQA Mitigation Monitoring and Reporting Program.

Departmental Responsibilities

The general responsibilities of those departments involved in the implementation of the Authority's SUSMP process are listed in Table 1-1. The inspectors of Facilities Development ensure that structural BMPs are installed according to approved plans. Real Estate Management and Environmental Affairs are responsible for ensuring that tenants properly operate and maintain any stormwater pollution control measures that were required as part of the project approval. The Facilities Maintenance Department and Airside Operations Department and Land Operations Department staffs are involved with the operation and proper maintenance of BMPs installed for capital projects and major maintenance projects.

Adequacy of Proposed Plans

Environmental Affairs will review Project Submittal documents and other relevant plans for compliance with the applicable SUSMP requirements. Environmental Affairs may approve proposed alternatives to the BMP requirements in the Authority SUSMP if they are determined to be applicable and equally effective. Additional analysis or information may be required to enable staff to determine the adequacy of proposed BMPs and will be requested following the conclusion of a staff review cycle. The Project Submittal will be deemed complete once Environmental Affairs determines that the project's compliance with the Authority SUSMP is adequately described in the Project Submittal and related plans.



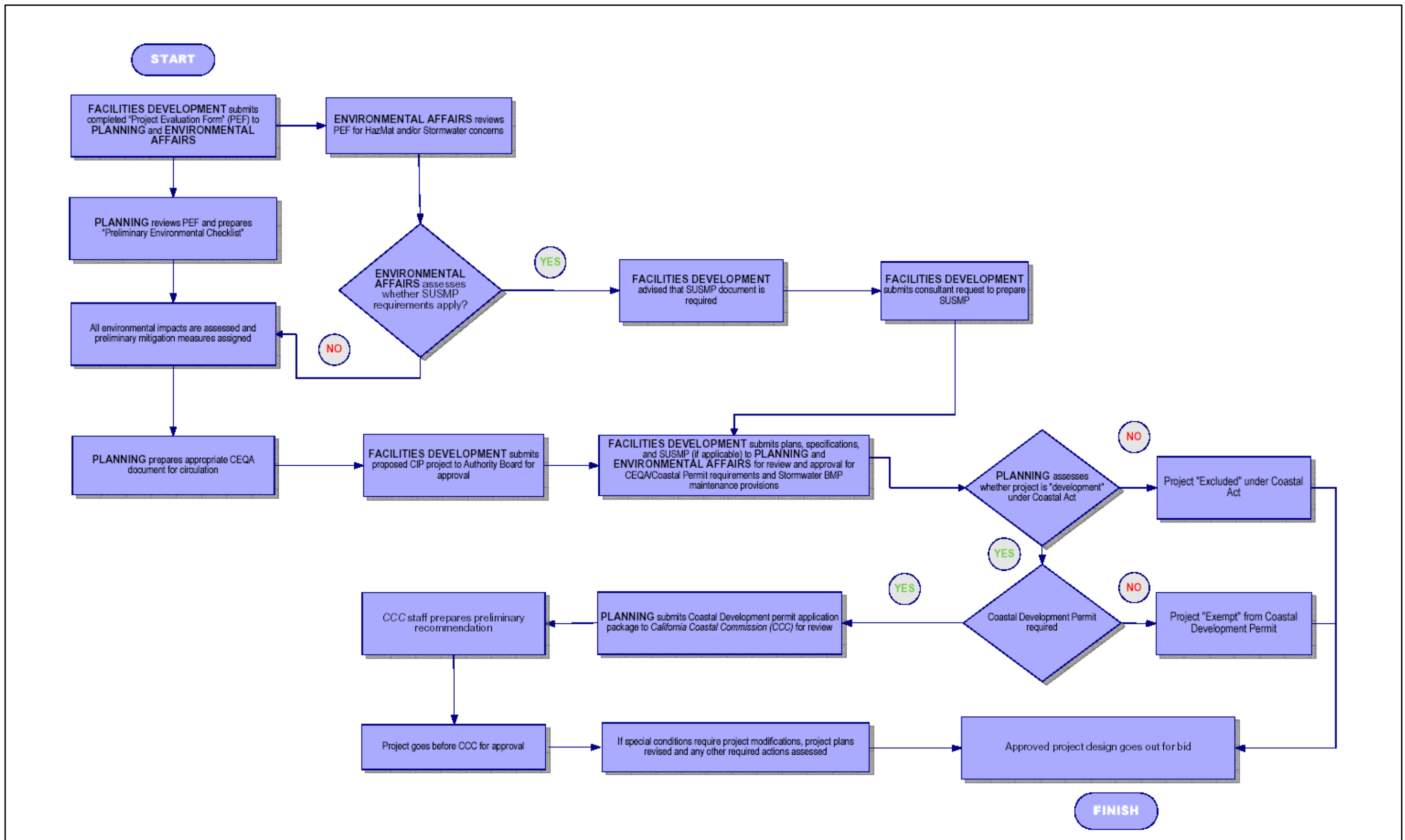


TABLE 1-1. DEPARTMENTAL RESPONSIBILITIES FOR SUSMP IMPLEMENTATION

Department	Education	Tenant Project Review	Tenant Project Approval	Capital Project Planning	Capital Project Review	Capital Project Approval	Construction Inspection	Capital Project Operations and Maintenance	Enforcement
Airport Planning	O	O		X					
Airside Operations	O						O	X	O
Environmental Affairs	X	X	X	O	X	X	O	O	X
Facilities Development	O	X	X	X	X	X	X		
Facilities Maintenance	O							X	
Landside Operations	O						O	X	O
Real Estate Management	X	X	X				O		X
X – Primary responsibility O – Secondary responsibility									

How to Use this SUSMP

While the Authority SUSMP details the process for ensuring that the project complies with the Municipal Permit requirements, most applicants will also require the assistance of a qualified civil engineer, architect, and/or landscape architect to ensure an effective project design. Because every project is different, project applicants should also check with staff from the Environmental Affairs Department on the specific requirements for the project.

This updated Authority SUSMP provides the applicant with step-by-step instructions for preparing a Project Submittal for review by the Authority Environmental Affairs Department.

CHAPTER 1 - INTRODUCTION

These steps are:

1. Assemble needed information.
2. Identify site opportunities and constraints.
3. Follow the LID Design Guidance to analyze the project for LID and to develop and document the drainage design.
4. Identify the specific source control requirements using the sources/source control checklist in the appendix.
5. Plan for ongoing maintenance of treatment and flow-control facilities.
6. Complete the Project Submittal.

The step-by-step instructions are augmented by a checklist which Environmental Affairs Department staff use as a guide when reviewing the Project Submittal. This SUSMP also includes a Project Submittal outline and content requirements.

Chapter 1 provides an overview of when and how stormwater quality management requirements apply to the proposed project. Chapter 1 also provides an overview of the process of planning, design, construction, operation, and maintenance leading to compliance.

Chapter 2 provides background on key stormwater concepts, terms, issues, and water quality regulations, including design criteria.

Chapter 3 provides a step-by-step guide to and checklist for preparing a Project Submittal.

Chapter 4, the Low Impact Development Design Guide, includes design procedures, calculation procedures, and instructions for presenting the design and calculations in the Project Submittal.

Chapter 5 outlines acceptable means for ensuring that stormwater treatment facility maintenance plans are prepared and implemented, as required by the Municipal Permit.

At the end of each Chapter, there are references and resources to help facilitate understanding of the regulations, complete the Project Submittal, and design effective stormwater control measures for the project.

The most common (and costly) errors made by applicants for development approvals with respect to stormwater quality compliance are:

1. Not planning for compliance early enough. The strategy for stormwater quality compliance should be developed before completing a conceptual site design or sketching a layout of the project site (Chapter 3).
2. Mistakenly assuming proprietary stormwater treatment facilities will be adequate for compliance (Chapter 2).

3. Not planning for periodic inspections and maintenance of treatment and flow-control facilities. Consider who will own and who will maintain the facilities in perpetuity and how they will obtain access, and identify which arrangements are acceptable to the Authority (Chapter 5).

Compliance Process at a Glance

The applicant for development project approval must follow these general steps to ensure compliance with stormwater regulations:

1. Discuss requirements during a pre-application meeting with staff from the Environmental Affairs Department.
2. Review the instructions in this SUSMP before preparing preliminary site plans or maps, drainage plans, and landscaping plans.
3. Prepare the Project Submittal, which is typically made with the application for development approvals.
4. Create a detailed project design, incorporating the features described in the Project Submittal.
5. In a table on the construction plans, list each stormwater compliance feature and facility and the plan sheet where it appears.
6. Prepare and submit a draft Stormwater Facility Operation and Maintenance Plan.
7. Maintain stormwater facilities during construction and following construction in accordance with required warranties.
8. Following construction, ensure that responsibility for maintenance is properly transferred to the owner.
9. The owner must periodically verify stormwater facilities are properly maintained.

Preparation of a complete and detailed Project Submittal is the key to cost-effective stormwater compliance and expeditious project review. Instructions for preparing the Project Submittal are in Chapter 3.

Policies and Procedures

There are several policies and procedures which determine if and how the proposed development project must comply with stormwater quality requirements several of which are discussed below.

Phased Projects

When determining whether SUSMP requirements apply, a “project” should be defined consistent with the CEQA definitions of “project.” That is, the “project” is the whole of an action which has the potential for adding or replacing or resulting in the addition or replacement of roofs, pavement, or other impervious surfaces and thereby resulting in increased flows and stormwater pollutants. “Whole of an action” means the project may not be segmented or piecemealed into small parts if the effect is to reduce the quantity of impervious area for any part to below the SUSMP thresholds.

For phased projects, Environmental Affairs Department staff may request a conceptual or master Project Submittal which describes and illustrates, in broad outline, how the drainage for the project will comply with the SUSMP requirements. The level of detail in the conceptual or master Project Submittal should be consistent with the scope and level of detail of the development approval being considered. The conceptual or master Project Submittal should specify that a more detailed Project Submittal for each later phase or portion of the project will be submitted with subsequent applications for approval of various project components.

A Low Impact Development Design Procedure

The Municipal Permit requires that LID practices be incorporated into all development projects to minimize runoff pollutant loads and to control the peak flow and runoff duration. To assist the land development community, to streamline project reviews, and to maximize cost-effective environmental benefits, the updated Model SUSMP incorporated a unified LID design procedure. This design procedure integrates site planning and design measures with engineered, small-scale Integrated Management Practices (IMPs) such as bioretention. By following the procedure outlined here in the Authority SUSMP (which is again based upon the Model SUSMP), applicants can develop a single integrated design which complies with the complex and overlapping Municipal Permit LID requirements, stormwater treatment requirements, and any applicable runoff peak-and-duration-control (hydromodification management) requirements. Low Impact Development is an integrated site design methodology that uses small-scale detention and retention to minimize pollutants conveyed by runoff and to mimic pre-project site hydrological conditions.

Along with the detailed design procedures incorporated from the Model SUSMP, this updated Authority SUSMP includes design information and criteria for dispersal of runoff to landscaped areas and for pervious pavements, bioretention facilities, flow-through planters, dry wells, infiltration basins, and cisterns. Where feasible and where allowed, water in cisterns may be directed to non-potable uses, augmenting water supplies. Bioretention facilities and planter boxes can be designed with an impermeable barrier so that runoff does not saturate native soils; instead, runoff is filtered through an engineered soil mix before being captured in an underdrain and conveyed to off-site storm drains. Such a configuration may be needed here at the airport where groundwater is high, may be contaminated, or where increasing soil moisture may present a hazard to foundations.

The updated Authority SUSMP requires that runoff be infiltrated or else treated by bioretention facilities, planter boxes, and filters. Although the Model SUSMP envisions the use of settling ponds and/or constructed wetlands, such facilities would not likely be allowed at the airport since they are generally wildlife/bird attractants which could present hazards to aircraft. In some special circumstances (such as retrofit of existing drainage systems, some pedestrian-oriented developments, roadway widening, some parking lot pavement, and airfield pavement projects) where it can be demonstrated it is not be feasible to construct any of the infiltration and/or bioretention facilities, higher-rate surface biofilters or higher-rate vault based filtration units may be used.

The design approach is detailed in Chapter 4. General instructions for preparing a complete Project Submittal are in Chapter 3, and specific local submittal requirements are available from Environmental Affairs Department staff.

Applicants for development project approvals may choose not to use the unified LID design procedure; in such cases, however, they will still need to demonstrate compliance with the applicable LID criteria, and stormwater treatment criteria. These criteria are described in Chapter 4 and in the Municipal Permit.

Requirements for All Development Projects

All development projects must include control measures to reduce the discharge of stormwater pollutants to the maximum extent practicable.

In general, for projects that are not “Priority Development Projects,” this will include:

- Implementation of source control BMPs as listed in the Appendix B.
- Inclusion of some LID features that conserve natural features, set back development from natural water bodies, minimize imperviousness, maximize infiltration, and retain and slow runoff.
- Compliance with requirements for construction-phase controls on sediment and other pollutants.

Please note that Environmental Affairs Department staff may determine that additional stormwater treatment controls are also required for the project. LID treatment controls such as infiltration or bioretention are generally preferred (see “Selection of Treatment Facilities” in Chapter 2). If treatment facilities are included, provisions must be made to ensure their long-term maintenance.

Additional Requirements for Priority Development Projects

The Municipal Permit requires that more specific runoff treatment controls be incorporated into Priority Development Projects. There are several factors used to define a Priority Development

CHAPTER 1 - INTRODUCTION

Project, namely, the stormwater pollutant generation capacity of the project, the type of development, and the project footprint. Each of these factors is further discussed below.

► POLLUTANT GENERATING PROJECTS WHICH DISTURB ONE ACRE OR MORE OF LAND

Projects that generate pollutants at levels greater than background levels and disturb one acre or more of land are considered Priority Development Projects. Environmental Affairs Department staff should be consulted in determining the applicability of this definition to a project. However, in most cases, linear pathway projects that are for infrequent vehicle use (such as emergency or maintenance access) or for pedestrian use are not considered pollutant generating above background levels if they are built with pervious surfaces or if they allow runoff to sheet flow to surrounding pervious surfaces.

► NEW DEVELOPMENT

Projects on undeveloped land are Priority Development Projects if they are in one or more of the categories listed in Table 1-2. While the Municipal Permit also includes a few new development categories that do not appear in Table 1-2, those few categories (such as Hillside Development) are not applicable at San Diego International Airport. If any of the definitions in Table 1-2 apply, then the project is a Priority Development Project. Note some thresholds are defined by square footage of impervious area created; others by the total area of the development. If a project feature such as a parking lot falls into one of these Priority Development Project categories, then the entire project footprint is subject to Priority Project requirements.

► PREVIOUSLY DEVELOPED SITES

Projects on previously developed sites (“redevelopment projects”) are Priority Development Projects if they create, add, or replace 5,000 square feet or more of impervious surface and are also listed in one of the categories in Table 1-2.

THE “50% RULE” FOR PREVIOUSLY DEVELOPED PROJECT SITES: Projects on previously developed sites may also need to retrofit drainage of ALL impervious areas of the ENTIRE project site. For projects creating or replacing more than 5,000 square feet of impervious area:

- If the new project results in an increase of, or replacement of, 50% or more of the previously existing impervious surface, and the existing development was not subject to SUSMP requirements, then the entire project must be included in the treatment measure design.
- If less than 50% of the previously impervious surface is to be affected, only that portion must be included in the treatment measure design.

If a redevelopment project feature such as a parking lot falls into a Priority Development Project category, then the entire project footprint is subject to Priority Project requirements.

TABLE 1-2. PRIORITY DEVELOPMENT PROJECT CATEGORIES APPLICABLE AT SAN DIEGO INTERNATIONAL AIRPORT

Priority Development Project Categories
<p>Commercial — greater than one acre. Any development other than heavy industry or residential. Examples: hospitals; laboratories and other medical facilities; educational institutions; recreational facilities; municipal facilities; commercial nurseries; multi-apartment buildings; car wash facilities; mini-malls and other business complexes; shopping malls; hotels; office buildings; public warehouses; automotive dealerships; airfields; and other light industrial facilities.</p>
<p>Heavy industry — greater than one acre. Examples: manufacturing plants, food processing plants, metal working facilities, printing plants, and fleet storage areas (bus, truck, etc.).</p>
<p>Automotive repair shops. A facility categorized in any one of Standard Industrial Classification (SIC) codes 5013, 5014, 5541, 7532-7534, or 7536-7539 (See Appendix C for descriptions of SIC codes).</p>
<p>Restaurants. Any facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812), where the land area for development is greater than 5,000 square feet. Restaurants where land development is less than 5,000 square feet shall meet all SUSMP requirements except for structural treatment BMP and numeric sizing criteria requirements and hydromodification requirements.</p>
<p>Environmentally Sensitive Areas (ESAs). All development located within or directly adjacent to or discharging directly to an ESA (where discharges from the development or redevelopment will enter receiving waters within the ESA), which either creates 2,500 square feet of impervious surface on a proposed project site or increases the area of imperviousness of a proposed project site to 10% or more of its naturally occurring condition. “Directly adjacent” means situated within 200 feet of the ESA. “Discharging directly to” means outflow from a drainage conveyance system that is composed entirely of flows from the subject development or redevelopment site, and not commingled with flows from adjacent lands.</p>
<p>Parking lots: 5,000 square feet or more or with 15 or more parking spaces and potentially exposed to urban runoff.</p>
<p>Street, Roads, Highways, and Freeways. Any paved surface that is 5,000 square feet or greater used for the transportation of automobiles, trucks, motorcycles, and other vehicles.</p>
<p>Retail Gasoline Outlets (RGOs): that are: (a) 5,000 square feet or more or (b) a projected Average Daily Traffic (ADT) of 100 or more vehicles per day.</p>

► EXCEPTIONS TO THE RULES

The following project types (listed in Table 1-3) are not subject to the SUSMP treatment control requirements: redevelopment projects which are limited to interior remodels; routine maintenance or repair; roof or exterior surface replacement; resurfacing and reconfiguring surface parking lots and existing roadways; new sidewalk construction or pedestrian ramps; bike lanes on existing roads; and routine replacement of damaged pavement, such as pothole repair. Nonetheless, the project is still obligated to meet the requirements for All Development Projects outlined above and must also incorporate any applicable source control requirements.

Also note that Environmental Affairs Department staff may choose to designate a project that is not defined within any of the categories in Table 1-2 as Priority Development Project, based on the project’s potential impacts to stormwater quality.

TABLE 1-3. PROJECTS TYPES FOR WHICH TREATMENT CONTROL REQUIREMENTS DO NOT APPLY*

Project Type
<ul style="list-style-type: none"> ▪ Redevelopment projects limited to interior remodeling. ▪ Routine maintenance or repair. ▪ Roof or exterior surface replacement. ▪ Any resurfacing and reconfiguring of surface parking lots and existing roadways. ▪ New sidewalk or pedestrian ramp construction. ▪ Construction of bike-lanes on existing roads. ▪ Replacement of damaged pavement or impervious surfaces as part of routine maintenance activities. ▪ Application of asphalt overlay to existing pavement. ▪ Projects (except mandatory categories above) that create less than 2,500 square feet of impervious surfaces or do not increase the area of imperviousness of a project site to 10% or more of its naturally occurring condition.

* Note: the project is still obligated to meet the requirements for All Development Projects and must incorporate any applicable source control requirements. Refer to the SUSMP definitions and Model SUSMP for more information as necessary.

Compliance with Flow-Control Requirements

Changes to downstream erosion conditions and stream habitat caused by development are referred to as hydromodification. Applicants for approval of Priority Development Projects (defined herein) must comply with the hydromodification management criteria in Provision D.1.g of the Municipal Permit and design projects such that runoff rates and durations are controlled to maintain or reduce pre-project downstream erosion conditions and protect stream habitat. The Copermittees developed, and the RWQCB approved, a Hydromodification Management Plan (HMP) that has been incorporated into the Model SUSMP.

Both the Municipal Permit and the Model SUSMP allow for exemptions to the hydromodification requirements in the HMP under the following conditions relevant to the jurisdiction of the Authority:

1. The project would discharge directly into San Diego Bay; or
2. The project would discharge to a stabilized conveyance system that extends to San Diego Bay; or
3. The contributing watershed area to which the project discharges has an impervious area percentage greater than 70%.

Given the location of the airport, the urban environment surrounding the airport, and that San Diego Bay is the receiving water for stormwater runoff from the airport, every project proposed at the airport and within the jurisdiction of the Authority is exempt from hydromodification requirements. Nonetheless, the Authority does have the authority to require a project to implement applicable HMP requirements even if the project might typically be exempt.

Projects determined to be exempt from HMP flow control requirements are still required to implement the LID and water quality treatment control requirements of the Municipal Permit and the Authority SUSMP.

Waivers from Numeric Sizing Criteria

The Municipal Permit allows for a project to be waived from numeric sizing criteria for stormwater treatment only if all available treatment facilities have been considered and found infeasible. Environmental Affairs Department staff must inform the Water Board within 5 days of granting a waiver. Other SUSMP requirements — including site designs to minimize imperviousness and source control BMPs — will still apply.

Experience has shown implementation of LID facilities, as described in Chapter 4, is feasible on nearly all development sites. However, the use of LID to retrofit existing drainage systems, to manage runoff from sites smaller than one acre in pedestrian-oriented developments, or to manage runoff from widened portions of roadways, sometimes presents special challenges. In these special situations, applicants should see the discussion of “Selection of Stormwater Treatment Facilities” in Chapter 2 and, in consultation with staff from the Environmental Affairs Department staff, evaluate the options described in order in that section. All the options listed meet the numeric sizing criteria in the Municipal Permit.

If infeasibility of all these options can be established, Environmental Affairs Department staff will determine the eligibility of the project for a waiver.

Conflicts With Other Regulations

The Authority knows of no apparent conflicts between the Model SUSMP requirements and established Authority codes or ordinances. If an apparent conflict is identified by a project proponent, it should be brought to the attention of the Authority Project Architect for tenant projects or the Authority Environmental Affairs Department for capital projects.

References and Resources:

RWQCB Order R9-2007-0001 (Municipal Permit)

Model SUSMP

Project Clean Water

Chapter 2 – CONCEPTS AND CRITERIA

Municipal Permit Provision D.1.d. requires Copermittees to regulate projects in specific categories (Table 1-1) to:

1. Reduce discharges of pollutants to the maximum extent practicable.
2. Prevent runoff discharges from causing or contributing to a violation of water quality standards.

The Copermittees have created a Low Impact Development (LID) design procedure (Chapter 4) that ensures consistent and thorough implementation of the Municipal Permit requirements. This chapter explains the technical background of the LID approach and how it was derived.

The previous permit, issued in 2001, included a requirement to control the post-development peak storm water runoff rates and velocities to maintain or reduce pre-development downstream erosion and protect stream habitat. The 2007 permit includes, in addition to this ongoing requirement, a new requirement to develop a hydromodification management plan (HMP) to identify and define a methodology and performance criteria to ensure flow rates and durations do not exceed pre-project runoff where increased runoff could cause erosion or other significant adverse impacts to beneficial uses.

As required by the Municipal Permit, the Copermittees have adopted final hydromodification criteria. See Chapter 1.

Water-Quality Regulations

Provision D.1 of the Municipal Permit requires the Copermittees to condition development approvals on incorporation of specified stormwater controls.

Provision D.1 requires new developments and redevelopments to:

- Design the site to conserve natural areas, existing trees and vegetation and soils, to maintain natural drainage patterns, to minimize imperviousness, to detain runoff, and to infiltrate runoff where feasible
- Cover or control sources of stormwater pollutants
- Treat runoff prior to discharge. Provision E.10 of the Municipal Permit states: “Urban runoff treatment and/or mitigation must occur prior to the discharge of urban runoff into a receiving water. Federal regulations at 40 CFR 131.10(a) state that in no case shall a state adopt waste transport or waste assimilation as a designated use for any waters of the U.S.”

CHAPTER 2: CONCEPTS AND CRITERIA

- Ensure runoff does not exceed pre-project peaks and durations where increases could affect downstream habitat or other beneficial uses
- Maintain treatment and flow-control facilities

The Authority maintains a database to track approved installations of treatment facilities and to verify facilities are maintained. In an annual report to the RWQCB, the Authority includes a list of development projects subject to SUSMP conditions and descriptions of those projects that:

- Received a waiver from SUSMP criteria;
- Used hydrologic controls used to meet HMP requirements, including a description of the controls;
- Have an area of 50 acres or greater, and are thus subject to the IHC.

The Authority must also annually report the number of violations and enforcement actions taken upon development projects. The Authority's program is subject to audit by the RWQCB.

The Authority is charged with ensuring development projects comply with the Municipal Permit D.1 requirements. RWQCB staff may review stormwater controls and hydromodification impacts in connection with applications for Clean Water Act Section 401 water-quality certification, which is required for projects that involve work, such as dredging or placement of fill, within waters of the US.

► MAXIMUM EXTENT PRACTICABLE

Clean Water Act Section 402(p)(3)(iii) sets the standard for stormwater controls as “maximum extent practicable,” but doesn't define that term. As implemented, “maximum extent practicable” is ever-changing and varies with conditions.

Many stormwater controls, including LID facilities, have proven to be practicable in most site development projects. To achieve fair and effective implementation, criteria, guidance, and requirements for controls must be detailed and specific—while also offering the right amount of flexibility or exceptions for special cases. The Municipal Permit includes various standards, including hydrologic criteria, which comprise the “maximum extent practicable” standard. The Model SUSMP, upon which the Authority SUSMP is based, will be continuously improved and refined based on the experience of land use and municipal planners and engineers, with input from land developers and development professionals. By following the Model SUSMP (and in turn, the Authority SUSMP), applicants can ensure their project design meets the “maximum extent practicable” standard.

► BEST MANAGEMENT PRACTICES

Clean Water Act Section 402(p) and USEPA regulations (40 CFR 122.26) specify a municipal program of “management practices” to control stormwater pollutants. **Best Management Practice (BMP)** refers to any kind of procedure, activity or device designed to minimize the quantity of pollutants that enter the storm drain system. BMPs are typically used in place of

assigning numeric effluent limits. The criteria for source control BMPs and treatment and flow-control facilities are crafted to fulfill “maximum extent practicable.”

The Authority SUSMP refers to stormwater management/treatment “facilities,” “features,” or “controls” interchangeably; all of these are considered to be BMPs.

Pollutants of Concern

Municipal Permit Provision D.1.d.(3) requires each Copermittee to develop and implement a procedure for pollutants of concern to be identified for each Priority Development Project. The Copermittees have considered this requirement jointly and have determined the LID design procedures described in Chapters 3 and 4 of the Authority SUSMP fully address the need to identify pollutants of concern insofar as that identification may affect the selection of source control BMPs and treatment facilities.

Documentation of the approach to identifying pollutants of concern and selecting BMPs and facilities follows.

► GROUPING OF POTENTIAL POLLUTANTS OF CONCERN

Urban runoff from a developed site has the potential to contribute pollutants, including oil and grease, suspended solids, metals, gasoline, pesticides, and pathogens to the storm water conveyance system and receiving waters. For the purposes of identifying pollutants of concern and associated storm water BMPs, pollutants are grouped in nine general categories as follows:

- **Sediments** are soils or other surficial materials eroded and then transported or deposited by the action of wind, water, ice, or gravity. Sediments can increase turbidity, clog fish gills, reduce spawning habitat, lower young aquatic organisms survival rates, smother bottom dwelling organisms, and suppress aquatic vegetation growth.
- **Nutrients** are inorganic substances, such as nitrogen and phosphorus. They commonly exist in the form of mineral salts that are either dissolved or suspended in water. Primary sources of nutrients in urban runoff are fertilizers and eroded soils. Excessive discharge of nutrients to water bodies and streams can cause excessive aquatic algae and plant growth. Such excessive production, referred to as cultural eutrophication, may lead to excessive decay of organic matter in the water body, loss of oxygen in the water, release of toxins in sediment, and the eventual death of aquatic organisms.
- **Metals** are raw material components in non-metal products such as fuels, adhesives, paints, and other coatings. Primary sources of metal pollution in storm water are typically commercially available metals and metal products. Metals of concern include cadmium, chromium, copper, lead, mercury, and zinc. Lead and chromium have been used as corrosion inhibitors in primer coatings and cooling tower systems. At low concentrations naturally occurring in soil, metals are not toxic. However, at higher

concentrations, certain metals can be toxic to aquatic life. Humans can be impacted from contaminated groundwater resources, and bioaccumulation of metals in fish and shellfish. Environmental concerns, regarding the potential for release of metals to the environment, have already led to restricted metal usage in certain applications.

- **Organic compounds** are carbon-based. Commercially available or naturally occurring organic compounds are found in pesticides, solvents, and hydrocarbons. Organic compounds can, at certain concentrations, indirectly or directly constitute a hazard to life or health. When rinsing off objects, toxic levels of solvents and cleaning compounds can be discharged to storm drains. Dirt, grease, and grime retained in the cleaning fluid or rinse water may also adsorb levels of organic compounds that are harmful or hazardous to aquatic life.
- **Trash** (such as paper, plastic, polystyrene packing foam, and aluminum materials) and biodegradable organic matter (such as leaves, grass cuttings, and food waste) are general waste products on the landscape. The presence of trash & debris may have a significant impact on the recreational value of a water body and aquatic habitat. Excess organic matter can create a high biochemical oxygen demand in a stream and thereby lower its water quality. Also, in areas where stagnant water exists, the presence of excess organic matter can promote septic conditions resulting in the growth of undesirable organisms and the release of odorous and hazardous compounds such as hydrogen sulfide.
- **Oxygen-Demanding Substances** includes biodegradable organic material as well as chemicals that react with dissolved oxygen in water to form other compounds. Proteins, carbohydrates, and fats are examples of biodegradable organic compounds. Compounds such as ammonia and hydrogen sulfide are examples of oxygen-demanding compounds. The oxygen demand of a substance can lead to depletion of dissolved oxygen in a water body and possibly the development of septic conditions.
- Primary sources of **oil and grease** are petroleum hydrocarbon products, motor products from leaking vehicles, esters, oils, fats, waxes, and high molecular-weight fatty acids. Introduction of these pollutants to the water bodies are very possible due to the wide uses and applications of some of these products in municipal, residential, commercial, industrial, and construction areas. Elevated oil and grease content can decrease the aesthetic value of the water body, as well as the water quality.
- **Bacteria and Viruses** are ubiquitous microorganisms that thrive under certain environmental conditions. Their proliferation is typically caused by the transport of animal or human fecal wastes from the watershed. Water, containing excessive bacteria and viruses can alter the aquatic habitat and create a harmful environment for humans and aquatic life. Also, the decomposition of excess organic waste causes increased growth of undesirable organisms in the water.

- **Pesticides** (including herbicides) are chemical compounds commonly used to control nuisance growth or prevalence of organisms. Excessive application of a pesticide may result in runoff containing toxic levels of its active component.

► **IDENTIFYING POLLUTANTS OF CONCERN BASED ON LAND USES**

Table 2-1 associates pollutants with the Priority Development Project categories described in Table 1-2. Pollutants associated with any hazardous material sites that have been remediated or are not threatened by the proposed project are not considered a pollutant of concern.

TABLE 2-1. ANTICIPATED AND POTENTIAL POLLUTANTS GENERATED BY LAND USE TYPE AT SAN DIEGO INTERNATIONAL AIRPORT.

Priority Project Categories	General Pollutant Categories								
	Sediment	Nutrients	Heavy Metals	Organic Compounds	Trash & Debris	Oxygen Demanding Substances	Oil & Grease	Bacteria & Viruses	Pesticides
Commercial Development >one acre	P(1)	P(1)	X	P(2)	X	P(5)	X	P(3)	P(5)
Heavy Industry	X		X	X	X	X	X		
Automotive Repair Shops			X	X(4)(5)	X		X		
Restaurants					X	X	X	X	P(1)
Parking Lots	P(1)	P(1)	X		X	P(1)	X		P(1)
Retail Gasoline Outlets			X	X	X	X	X		
Streets, Highways & Freeways	X	P(1)	X	X(4)	X	P(5)	X	X	P(1)
X = anticipated P = potential (1) A potential pollutant if landscaping exists on-site. (2) A potential pollutant if the project includes uncovered parking areas. (3) A potential pollutant if land use involves food or animal waste products. (4) Including petroleum hydrocarbons. (5) Including solvents.									

► **WATERSHEDS WITH SPECIAL POLLUTANT CONCERNS**

Local receiving water quality conditions may require specialized attention. There are two water quality issues in the vicinity of the airport that should be considered, namely:

- 303(d) listed waters; and
- Waters with established TMDLs.

The Municipal Permit identifies several receiving waters as impaired for constituents or water quality effects pursuant to **Section 303(d)** of the Clean Water Act. Placement of a water onto the list requires the RWQCB to make further analysis of the impairment and development of total maximum daily loads (TMDLs) for addressing the impairment. The 303(d) listing in itself does not demand that a project proponent select BMPs on the basis of the impairment; however, the project proponent should be cognizant of the impairment and the future implications a TMDL might have upon the proposed land use.

Once a TMDL is established it may impose conditions on development either through an implementation plan and schedule for the listed water, or through special conditions required of the jurisdiction affected by the numeric criteria of the TMDL. At this time, several 303(d) listings in San Diego County are at various stages of TMDL development with only four TMDLs having been adopted by the RWQCB. However, there are approximately 190 pending TMDLs in the county.

The **adopted TMDLs** in the San Diego region include:

- Diazinon for Chollas Creek;
- Nitrogen and phosphorous for Rainbow Creek;
- Dissolved copper for Shelter Island Yacht Basin;
- Copper, lead, and zinc for Chollas Creek, and
- Indicator bacteria for beaches and creeks in the San Diego Region.

Chollas Creek, Shelter Island Yacht Basin and the airport all lie within the Pueblo San Diego hydrologic unit (908.00) of the RWQCB San Diego Basin Plan (1994). However, the airport is more specifically located in the San Diego Mesa hydrologic area (908.20), and Lindbergh hydrologic sub-area (HAS 908.21), while Chollas Creek is located in the Chollas hydrologic sub-area (HAS 908.22) and Shelter Island Yacht Basin is located in the Point Loma hydrologic area (HA 908.10). Project proponents should meet with staff from the Environmental Affairs Department to determine if any project characteristics or watershed characteristics affect the selection and design of BMPs. Except in rare circumstances, the use of the LID Design Guide (Chapter 4) and the Stormwater Pollutant Sources/Source Control Checklist (Appendix B) will ensure the project complies with all stormwater requirements.

Selection of Permanent Source Control BMPs

Based on identification of potential pollutants of concern associated with various types of facilities, the Copermittees have developed a Stormwater Pollutant Sources/Source Control Checklist (Appendix B) of “maximum extent practicable” source controls associated with each facility type. This approach ensures appropriate BMPs are applied to potential sources of each pollutant of concern.

Selection of Stormwater Treatment Facilities

As in the Model SUSMP, the Authority SUSMP groups pollutants of concern by how easily they are removed by various treatment processes (see Table 2-2).

Table 2-3 presents a general comparison of how various types of treatment facilities perform for each group of pollutants.

TABLE 2-2. GROUPING OF POTENTIAL POLLUTANTS OF CONCERN BY FATE DURING STORMWATER TREATMENT

Pollutant	Coarse Sediment and Trash	Pollutants that tend to associate with fine particles during treatment	Pollutants that tend to be dissolved following treatment
Sediment	X	X	
Nutrients		X	X
Heavy Metals		X	
Organic Compounds		X	
Trash & Debris	X		
Oxygen Demanding		X	
Bacteria		X	
Oil & Grease		X	
Pesticides		X	

TABLE 2-3. GROUPS OF POLLUTANTS AND RELATIVE EFFECTIVENESS OF TREATMENT FACILITIES

Pollutants of Concern	Bioretention Facilities (LID)	Settling Basins (Dry Ponds)	Wet Ponds and Constructed Wetlands	Infiltration Facilities or Practices (LID)	Media Filters	Higher-rate biofilters*	Higher-rate media filters*	Trash Racks & Hydro-dynamic Devices	Vegetated Swales
Coarse Sediment and Trash	High	High	High	High	High	High	High	High	High
Pollutants that tend to associate with fine particles during treatment	High	High	High	High	High	Medium	Medium	Low	Medium
Pollutants that tend to be dissolved following treatment	Medium	Low	Medium	High	Low	Low	Low	Low	Low

*See text for further discussion of selection of treatment facilities in special situations.

The following types of facilities are appropriate for treatment of runoff potentially containing most pollutants of concern. These types of facilities can be used for stormwater treatment for all land uses in all watersheds, except where site-specific constraints make them infeasible.

- Infiltration facilities or practices, including dry wells, infiltration trenches, infiltration basins, and other facilities that infiltrate runoff to native soils (sized to detain and infiltrate a volume equivalent to the 85th percentile 24-hour event).
- Bioretention facilities and media filters that detain stormwater and filter it slowly through soil or sand (sized with a surface area at least 0.04 times the effectively impervious tributary area).
- Extended detention basins, wet ponds, and wetlands or other facilities using settling (sized to detain a volume equivalent to runoff from the tributary area generated by the 85th percentile 24-hour event). As noted in Chapter 1, such facilities would not likely be allowed at the airport since they are generally wildlife/bird attractants which could present hazards to aircraft.

The recommended design procedure in Chapter 4 integrates LID practices—optimizing the site design, using pervious surfaces, and dispersing of runoff to adjacent pervious areas—with the use of infiltration facilities and practices and bioretention facilities to meet Municipal Permit LID requirements, treatment requirements, and flow-control requirements in a cost-effective, unified design.

Oil/water separators (“water quality inlets”), storm drain inlet filters, and hydrodynamic separators, including vortex separators and continuous deflection separators (“CDS units”), are less effective means of stormwater treatment, although they may be used in series with more effective facilities.

Underground vaults typically lack the detention time required for settling of fine particles associated with stormwater pollutants. They also require frequent maintenance and may retain stagnant water, potentially providing harborage for mosquitoes. Because vaults may be “out of sight, out of mind,” experience has shown that the required maintenance may not always occur.

Lack of space, in itself, is not a suitable justification for using a less-effective treatment on a development site, because the uses of the site and the site design can be altered as needed to accommodate bioretention facilities or planter boxes. In most cases, these effective facilities can be fit into required landscaping setbacks, easements, or other unbuildable areas.

Where possible, drainage to inlets, and drainage away from overflows and underdrains, should be by gravity. Where site topography makes it infeasible to accommodate gravity-fed facilities in the project design, the design flow may be captured in a vault or sump and pumped via force main to an effective facility.

The following situations sometimes present special challenges:

- Portions of sites which are not being developed or redeveloped, but which must be retrofit to meet treatment requirements in accordance with Municipal Permit Provision D.1.d.(1)(a) which states in part: “Where redevelopment results in an increase of, or replacement of, more than fifty percent of the impervious surface of a previously existing development, the numeric sizing criteria applies to the entire development.”
- Sites smaller than one acre approved for development or redevelopment as part of a jurisdiction’s stated objective to preserve or enhance a pedestrian-oriented “smart-growth” type of urban design. Such objectives are not currently listed in the Authority’s Airport Master Plan.
- Roadway widening projects.

In these special situations, the following types of facilities should be evaluated in priority order (or as determined by the Environmental Affairs Department) until a feasible design is found.

1. Bioretention areas or planter boxes fed by gravity.
2. Capture of the design flow in a vault or sump and pumping to bioretention areas or planter boxes.
3. A subsurface sand or media filter with a maximum design surface loading rate of 5 inches per hour and a minimum media depth of 18 inches. The sand surface must be made accessible for periodic inspection and maintenance (for example, via a removable grating).

4. A higher-rate surface biofilter, such as a tree-pit-style unit. The grading and drainage design should minimize the area draining to each unit and maximize the number of discrete drainage areas and units.
5. A higher-rate vault-based filtration unit (for example, vaults with replaceable cartridge filters filled with inorganic media).

Many proprietary stormwater treatment devices are currently marketed, and new devices will no doubt be introduced in the future. Applicants and applicants' engineers and design professionals should review any proposals for using proprietary devices for stormwater treatment with Environmental Affairs Department staff before they commence work on preliminary site layout, drainage plans, grading plans, or landscape plans.

Hydrology for NPDES Compliance

► IMPERVIOUSNESS

Schueler (1995) proposed **imperviousness** as a “unifying theme” for the efforts of planners, engineers, landscape architects, scientists, and local officials concerned with urban watershed protection. Schueler argued (1) that imperviousness is a useful indicator linking urban land development to the degradation of aquatic ecosystems, and (2) imperviousness can be quantified, managed, and controlled during land development.

Imperviousness has long been understood as the key variable in urban hydrology. Peak runoff flow and total runoff volume from small urban catchments is usually calculated as a function of the ratio of impervious area to total area (**rational method**). The ratio correlates to the runoff factor, usually designated as “C”. Increased flows resulting from urban development tend to increase the frequency of small-scale flooding downstream.

Imperviousness links urban land development to degradation of aquatic ecosystems in two ways. First, the combination of paved surfaces and piped runoff efficiently collects urban pollutants and transports them, in suspended or dissolved form, to surface waters. These pollutants may originate as airborne dust, be washed from the atmosphere during rains, or may be generated by automobiles and outdoor work activities.

Second, increased peak flows and runoff durations typically cause erosion of stream banks and beds, transport of fine sediments, and disruption of aquatic habitat. Measures taken to control stream erosion, such as hardening banks with riprap or concrete, may permanently eliminate habitat. By reducing infiltration to groundwater, imperviousness may also reduce dry-weather stream flows.

Imperviousness has two major components: rooftops and transportation corridors (and associated facilities, including streets, highways, and parking areas). The transportation component is usually larger and is more likely to be **directly connected** to the storm drain system.

The effects of imperviousness can be mitigated by disconnecting impervious areas from the drainage system and by encouraging detention and retention of runoff near the point where it is generated. Detention and retention reduce peak flows and volumes and allow pollutants to settle out or adhere to soils before they can be transported downstream.

► **LOW IMPACT DEVELOPMENT REQUIREMENTS**

The Municipal Permit requires LID be used on all projects to minimize directly connected impervious area and promote infiltration. For Priority Development Projects, the minimum standards are:

- Drain a portion of impervious areas into pervious areas, if any.
- Design and construct pervious areas, if any, to effectively receive and infiltrate runoff from impervious areas, taking into account soil conditions, slope, and other pertinent factors.
- Construct a portion of paved areas with low traffic and appropriate soil conditions with permeable surfaces.

The LID design procedure in Chapter 4 incorporates these requirements into an integrated design which also meets sizing requirements for stormwater treatment facilities.

► **SIZING REQUIREMENTS FOR STORMWATER TREATMENT FACILITIES**

The guidance in Chapter 4 was crafted to ensure LID facilities comply with the Municipal Permit requirements for hydraulic sizing of stormwater treatment facilities and flow-control facilities. The technical background follows.

Most runoff is produced by frequent storms of small or moderate intensity and duration. Treatment facilities are designed to treat smaller storms and the first flush of larger storms—approximately 80% of average annual runoff.

The Municipal Permit identifies two types of treatment facilities—volume-based and flow-based.

Volume-based facilities must be designed to infiltrate, filter, or treat the volume of runoff produced from a 24-hour 85th percentile storm event as determined from the County of San Diego’s 85th Percentile Precipitation Isopluvial Map. As shown on the map, rainfall depths vary from about 0.55" to 1.55".

For **flow-based** facilities, the Municipal Permit specifies the rational method be used to determine flow. The rational method uses the equation

$$Q = CiA$$

where Q = flow

C = weighted runoff factor between 0 and 1

i = rainfall intensity

A = area

The permit identifies two alternatives for calculating rainfall intensity:

1. the 85th percentile rainfall intensity times two, or
2. 0.2 inches per hour.

It is typically found that both methods yield similar results. The 0.2 inches per hour rainfall intensity should generally be used for sizing flow-based treatment facilities within the Authority's jurisdiction.

The 0.2 inches per hour criterion is the basis for a **consistent countywide sizing factor** for bioretention facilities when used for stormwater treatment only (i.e., not for flow control). The factor is based on maintaining a minimum percolation rate of 5 inches per hour through the engineered soil mix. The sizing factor is the ratio of the design intensity of rainfall on tributary impervious surfaces (0.2 inches/hour) to the design percolation rate in the facility (5 inches/hour), or **0.04** (dimensionless).

Criteria for Infiltration Devices

The Municipal Permit restricts the design and location of “infiltration devices” that, as designed, may bypass filtration through surface soils before reaching groundwater. These devices include:

- Infiltration basins.
- Infiltration trenches (includes French drains).
- Unlined retention basins (i.e., basins with no outlets).
- Unlined or open-bottomed vaults or boxes installed below grade (dry wells).

To protect groundwater quality, Section D.1.d.(12) of the Municipal Permit requires that each Copermittee “apply restrictions to the use of treatment control BMPs that are designed to primarily function as centralized infiltration devices (such as large infiltration trenches and infiltration basins). Such restrictions shall be designed so that the use of such infiltration treatment control BMPs shall not cause or contribute to an exceedance of groundwater quality objectives. At a minimum, each treatment control BMP designed to primarily function as a centralized infiltration device shall meet the restrictions below, unless it is demonstrated that a restriction is not necessary to protect groundwater quality. The Copermittees may collectively or individually develop alternative restrictions on the use of treatment control BMPs which are designed to primarily function as centralized infiltration devices. Alternative restrictions developed by the Copermittees can partially or wholly replace the restrictions listed below. The restrictions are not intended to be applied to small infiltration systems dispersed throughout a development project.

- (a) Urban runoff shall undergo pretreatment such as sedimentation or filtration prior to infiltration;

- (b) All dry weather flows containing significant pollutant loads shall be diverted from infiltration devices;
- (c) Pollution prevention and source control BMPs shall be implemented at a level appropriate to protect groundwater quality at sites where infiltration treatment control BMPs are to be used;
- (d) Infiltration treatment control BMPs shall be adequately maintained so that they remove pollutants to the MEP;
- (e) The vertical distance from the base of any infiltration treatment control BMP to the seasonal high groundwater mark shall be at least 10 feet. Where groundwater basins do not support beneficial uses, this vertical distance criteria may be reduced, provided groundwater quality is maintained;
- (f) The soil through which infiltration is to occur shall have physical and chemical characteristics (such as appropriate cation exchange capacity, organic content, clay content, and infiltration rate) which are adequate for proper infiltration durations and treatment of urban runoff for the protection of groundwater beneficial uses;
- (g) Infiltration treatment control BMPs shall not be used for areas of industrial or light industrial activity; areas subject to high vehicular traffic (25,000 or greater average daily traffic on main roadway or 15,000 or more average daily traffic on any intersecting roadway); automotive repair shops; car washes; fleet storage areas (bus, truck, etc.); nurseries; and other high threat to water quality land uses and activities as designated by each Permittee; and
- (h) Infiltration treatment control BMPs shall be located a minimum of 100 feet horizontally from any water supply wells.”

In regards to Municipal Permit Section D.1.d.(12)(e) above and the requirement that “the vertical distance from the base of any infiltration treatment control BMP to the seasonal high groundwater mark shall be at least 10 feet [except w]here groundwater basins do not support beneficial uses [in which case] this vertical distance criteria may be reduced, provided groundwater quality is maintained,” it should be noted that groundwater at San Diego International Airport does not support beneficial uses (Water Quality Control Plan for the San Diego Basin, 1994/1995 with amendments effective prior to April 25,2007). As such, the vertical distance from the base of any infiltration treatment control BMP to the seasonal high groundwater mark at the San Diego International Airport may be less than 10 feet, provided groundwater quality is maintained and the remaining restrictions of Municipal Permit Section D.1.d.(12) are met.

In addition, infiltration devices are generally not recommended where:

- The infiltration device would receive drainage from areas where chemicals are used or stored, where vehicles or equipment are washed, or where refuse or wastes are handled.

CHAPTER 2: CONCEPTS AND CRITERIA

- Surface soils or groundwater are polluted.
- The facility could receive sediment-laden runoff from disturbed areas or unstable slopes.
- Increased soil moisture could affect the stability of slopes of foundations.
- Soils are insufficiently permeable to allow the device to drain within 72 hours.

► MOST LID FEATURES AND FACILITIES ARE NOT INFILTRATION DEVICES

Self-treating and self-retaining areas, pervious pavements, bioretention facilities, and planter boxes are not considered to be infiltration devices.

Bioretention facilities work by percolating runoff through 18 inches or more of engineered soil. This removes most pollutants before the runoff is allowed to seep into native soils below. Further pollutant removal typically occurs in the unsaturated (vadose) zone before moisture reaches groundwater.

Where there is concern about the effects of increased soil moisture on slopes or foundations, an impermeable barrier may be added so the facility is “flow through” and all treated runoff is underdrained away from the facility. See the design sheets for Bioretention Facilities and Flow-Through Planters in Chapter 4.

References and Resources:

RWQCB Order R9-2007-0001 (Stormwater Municipal Permit)

County of San Diego Low Impact Development Handbook

Clean Water Act Section 402(p)

40 CFR 122.26

San Diego Regional Water Quality Control Board—TMDLs

State Water Resources Control Board—Ocean Standards

Site Planning for Urban Stream Protection (Scheuler, 1995).

“Application of Water-Quality Engineering Fundamentals to the Assessment of Stormwater Treatment Devices” (Salvia, 2000).

Chapter 3 – THE PROJECT SUBMITTAL

A properly prepared SUSMP Project Submittal should demonstrate that the project complies with all applicable requirements in the stormwater Municipal Permit—to minimize imperviousness, retain or detain stormwater, slow runoff rates, incorporate required source controls, treat stormwater prior to discharge, control runoff rates and durations, and provide for operation and maintenance of treatment and flow-control facilities.

Typically, the Project Submittal must be coordinated with the application for discretionary approvals and must have sufficient detail to ensure the stormwater design, site plan, and landscaping plan are congruent. A complete and thorough SUSMP Project Submittal will facilitate quick review and perhaps fewer cycles of review. The Authority requires a submittal for each development project. Be sure to obtain specific submittal requirements from the Authority. The SUSMP Project Submittal may consist of a report and an exhibit. Environmental Affairs Department staff use the following checklist to evaluate the SUSMP Project Submittal.

Step by Step

Plan and design the stormwater controls integrally with the site planning and landscaping for the project. After start with general project requirements and preliminary site design concepts, then simultaneously prepare the detailed site design, landscape design, and stormwater control design. This will help ensure that the site plan, landscape plan, and Project Submittal are congruent.

The following step-by-step procedure should optimize the design by identifying the best opportunities for stormwater controls early in the design process. The recommended steps are:

1. Assemble needed information.
2. Identify site opportunities and constraints.
3. Follow the LID design guidance in Chapter 4 to analyze the project for LID and to develop and document the drainage design.
4. Specify source controls using the sources/source control checklist in the Appendix B.
5. Plan for ongoing maintenance of treatment and flow-control facilities.
6. Complete the Project Submittal.

Environmental Affairs Department staff recommend that a preliminary site design be submitted prior to formally applying for project approvals. The preliminary site design should incorporate a conceptual plan for site drainage, including self-treating and self-retaining areas and the location and approximate sizes of any treatment facilities. This additional up-front design effort will likely save time and avoid potential delays later in the review process.

SUSMP PROJECT SUBMITTAL CHECKLIST

CONTENTS OF EXHIBIT

Show all of the following on drawings:

- Existing natural hydrologic features (depressions, watercourses, floodplains, relatively undisturbed areas) and significant natural resources. (Step 1 in the following step-by-step instructions)
- Soil types and depth to groundwater. (Step 1)
- Existing and proposed site drainage network and connections to drainage off-site. (Step 3)
- Proposed design features and surface treatments used to minimize imperviousness. (Step 3)
- Entire site divided into separate drainage areas, with each area identified as self-treating, self-retaining (zero-discharge), draining to a self-retaining area, or draining to an IMP. (Step 3)
- For each drainage area, types of impervious area proposed (roof, plaza/sidewalk, and streets/parking) and area of each. (Step 3)
- Proposed locations and sizes of treatment or flow-control facilities. (Step 3)
- Potential pollutant source areas, including refuse areas, outdoor work and storage areas, etc. listed in the Appendix B and corresponding required source controls. (Step 4)

CONTENTS OF REPORT

Include all of the following in a report:

- Narrative analysis or description of site features and conditions that constrain, or provide opportunities for, stormwater control. (Step 2)
- Narrative description of site design characteristics that protect natural resources. (Step 3)
- Narrative description and/or tabulation of site design characteristics, building features, and pavement selections that reduce imperviousness of the site. (Step 3)
- Tabulation of proposed pervious and impervious area, showing self-treating areas, self-retaining areas, and areas tributary to each treatment or flow-control facility. (Step 3)
- Preliminary designs, including calculations, for each infiltration, treatment, or flow-control facility. Elevations should show sufficient hydraulic head for each. (Step 3)
- A table of identified pollutant sources and for each source, the source control measure(s) used to reduce pollutants to the maximum extent practicable. See worksheet in the Appendix B. (Step 4)
- General maintenance requirements for infiltration, treatment, and flow-control facilities (Step 5)
- Means by which facility maintenance will be financed and implemented in perpetuity. (Step 5)
- Identification of any conflicts with codes or requirements or other anticipated obstacles to implementing the proposed facilities in the submittal (Step 6).
- Construction Plan SUSMP Checklist (Step 6).
- Certification by a civil engineer, architect, and landscape architect (Step 6).

Step 1: Assemble Needed Information

To select types and locations of treatment facilities, the designer needs to know the following site characteristics:

- **Existing natural hydrologic features** and natural resources, including any contiguous natural areas, wetlands, watercourses, seeps, or springs.
- **Existing site topography**, including contours of any slopes of 4% or steeper, general direction of surface drainage, local high or low points or depressions, any outcrops or other significant geologic features.
- **Zoning**, including requirements for **setbacks** and **open space**.
- **Public Works Standards** or applicable other local codes governing minimum street widths, sidewalk construction, allowable pavement types, and drainage. Note that these codes may conflict with proposed project stormwater management controls designed to meet the Low Impact Development objectives of minimizing imperviousness and maintaining or restoring natural site hydrology. Such conflicts should be resolved by the project proponents where it is possible to do so.
- Soil types (including **hydrologic soil groups**) and depth to groundwater, which may determine whether infiltration is a feasible option for managing site runoff. Depending on site location and characteristics, and on the selection of treatment and flow-control facilities, site-specific information (e.g. from boring logs or geotechnical studies) may be required.
- **Existing site drainage**. For undeveloped sites, this should be obtained by inspecting the site and examining topographic maps and survey data. For previously developed sites, site drainage and connection to the Authority's storm drain system can be located from site inspection, storm drain maps, and plans for previous development.
- Existing **vegetative cover** and **impervious areas**, if any.

References and Resources

- *Site Planning for Urban Stream Protection* (Scheuler 1995).
- *Start at the Source* (BASMAA 1999), p. 36

Step 2: Identify Constraints & Opportunities

Review the information collected in Step 1. Identify the principal constraints on site design and selection of treatment and flow-control facilities as well as opportunities to reduce imperviousness and incorporate facilities into the site and landscape design. For example, **constraints** might include impermeable soils, high groundwater, groundwater pollution or contaminated soils, steep slopes, geotechnical instability, high-intensity land use, heavy pedestrian or vehicular traffic, restricted right-of-way, or safety concerns. **Opportunities** might include existing natural areas, low areas, oddly configured or otherwise unbuildable parcels, easements and landscape amenities including open space and buffers (which can double as locations for bioretention facilities), and differences in elevation (which can provide hydraulic head).

Prepare a brief **narrative** describing site opportunities and constraints. This narrative will help applicants proceed with LID design and help explain the design decisions to others.

Step 3: Prepare and Document the LID Design

Use the Low Impact Development Design Guide (Chapter 4) to analyze the project for LID, design and document drainage, and specify preliminary design details for integrated management practices. **Follow the detailed instructions in Chapter 4 to ensure the project complies with Municipal Permit LID requirements (Provision D.1.d.(4)) as well as stormwater treatment requirements in Provision D.1.d.(6).** The LID Design Guide has been designed so that hydromodification management requirements are also met via this unified design procedure. Chapter 4 includes calculation procedures and formats for presenting the calculations.

As shown in the SUSMP Project Submittal Checklist, the Submittal should include a drawing showing:

- The entire site divided into separate drainage management areas(DMAs), with each area identified as one of the following: self-treating, self-retaining, draining to a self-retaining area, or draining to an IMP. Each area should be clearly marked with a unique identifier.
- For each drainage area, the types of impervious area proposed, and the area of each.
- Proposed locations and sizes of treatment facilities. Each facility should be clearly marked with a unique identifier.

The SUSMP Project Submittal should include:

- Tabulation of proposed self-treating areas, self-retaining areas, areas draining to self-retaining areas, and areas draining to IMPs, and the corresponding IMPs identified on the Exhibit.

- Calculations, in the format shown in Chapter 4, showing the minimum square footage required and proposed square footage for each IMP.
- Preliminary designs for each IMP. The design sheets and accompanying drawings in Chapter 4 may be used or adapted for this purpose.

The following information is also required to assist the Environmental Affairs Department in understanding the basis of the design:

- A narrative overview of the design and how the design decisions optimize the site layout, use pervious surfaces, disperse runoff from impervious surfaces, and drain impervious surfaces to engineered IMPs (see Chapter 4).
- A narrative briefly describing each **drainage management area** (DMA), its drainage, and where drainage will be directed.
- A narrative briefly describing each IMP. Include any special characteristics or features distinct from the design sheets in Chapter 4.

References and Resources

- Chapter 4
- County of San Diego Low Impact Development Handbook
- Airport Master Plan
- Low Impact Development Manual (Prince George's County, Maryland, 1999).
- Bioretention Manual (Prince George's County, Maryland, rev. 2002)
- Site Planning for Urban Stream Protection (Schueler, 1995b).
- Low Impact Development Technical Guidance Manual for Puget Sound (Puget Sound Action Team, 2005)
- LID for Big Box Retailers (Low Impact Development Center, 2006)

Step 4. Specify Source Control BMPs

Some everyday activities – such as trash recycling/disposal and washing vehicles and equipment – generate pollutants that tend to find their way into storm drains. These pollutants can be minimized by applying **source control BMPs**.

Source control BMPs include **permanent**, structural features that must be incorporated into the project plans and **operational** BMPs, such as regular sweeping and “housekeeping,” that must be implemented by the site’s occupant or user. The maximum extent practicable standard typically requires both types of BMPs. In general, operational BMPs cannot be substituted for a feasible and effective permanent BMP.

Use the following procedure to specify source control BMPs for the project/site:

► **IDENTIFY POLLUTANT SOURCES**

Review the first column in the **Pollutant Sources/Source Control Checklist** (Appendix B). Check off the potential sources of pollutants that apply to the project/site.

► **NOTE LOCATIONS ON SUBMITTAL DRAWING**

Note the corresponding requirements listed in Column 2 of the Pollutant Sources/Source Control Checklist (Appendix B). Show the location of each pollutant source and each permanent source control BMP in the submittal drawing.

► **PREPARE A TABLE AND NARRATIVE**

Check off the corresponding requirements listed in Column 3 in the Pollutant Sources/Source Control Checklist (Appendix B). Now, create a table using the format in Table 3-1. In the left column, list each potential source on the site (from Appendix B, Column 1). In the middle column, list the corresponding **permanent, structural BMPs** (from Columns 2 and 3, Appendix B) used to prevent pollutants from entering runoff. Accompany this table with a narrative that explains any special features, materials, or methods of construction that will be used to implement these permanent, structural BMPs.

► **IDENTIFY OPERATIONAL SOURCE CONTROL BMPs**

Table 3-1. **FORMAT FOR TABLE OF PERMANENT AND OPERATIONAL SOURCE CONTROL MEASURES.**

<i>Potential source of runoff pollutants</i>	<i>Permanent source control BMPs</i>	<i>Operational source control BMPs</i>

To complete the table, refer once again to the Pollutant Sources/Source Control Checklist (Appendix B, Column 4). List in the right column of the table the operational BMPs that should be implemented as long as the anticipated activities continue at the site. The same BMPs may also be required as a condition of a use permit or other revocable discretionary approval for use of the site.

References and Resources

- Appendix B: Stormwater Pollutant Sources/Source Control Checklist
- RWQCB Order R9-2007-0001, Provision D.1.d.(5)
- *Start at the Source*, Section 6.7: Details, Outdoor Work Areas
- *California Stormwater Industrial/Commercial Best Management Practice Handbook*
- *Urban Runoff Quality Management* (WEF/ASCE, 1998) Chapter 6: Source Controls

Step 5: Stormwater Facility Maintenance

As required by Municipal Permit Provision D.1.c.(5), the Environmental Affairs Department will require submittal of proof of a mechanism under which ongoing long-term maintenance of stormwater treatment and flow-control facilities will be conducted. The Environmental Affairs Department may also require submittal of a detailed plan that sets forth a maintenance schedule for each of the treatment and flow-control facilities built on the site.

Details of these requirements, and instructions for preparing a detailed operation and maintenance plan, are in Chapter 5.

References and Resources

- *Chapter 5*
- Operation, Maintenance, and Management of Stormwater Management Systems (Watershed Management Institute, 1997)

Step 6: Complete the SUSMP Project Submittal

Environmental Affairs Department staff will provide specific instructions for the content and format of the SUSMP Project Submittal. The SUSMP Project Submittal should document the information gathered and decisions made in Steps 1-5. A clear, complete, well-organized Project Submittal will make it possible to confirm the design meets the minimum requirements of the Municipal Permit, the Authority's ordinances, and the Authority SUSMP.

► COORDINATION WITH SITE, ARCHITECTURAL, AND LANDSCAPING PLANS

Before completing the SUSMP Project Submittal, ensure the stormwater control design is fully coordinated with the site plan, grading plan, and landscaping plan being proposed for the site.

Information submitted and presentations to design review and/or planning committees and other decision-making bodies must incorporate relevant aspects of the stormwater design. In particular, ensure:

- Curb elevations, elevations, grade breaks, and other features of the drainage design are consistent with the delineation of DMAs.
- The top edge (overflow) of each bioretention facility is level all around its perimeter—this is particularly important in parking lot medians.
- The resulting grading and drainage design is consistent with the design for parking and circulation.

CHAPTER 3: THE PROJECT SUBMITTAL

- Bioretention facilities and other IMPs do not create conflicts with pedestrian access between parking and building entrances.
- Vaults and utility boxes can be accommodated outside bioretention facilities and will not be placed within bioretention facilities.
- The visual impact of stormwater facilities, including planter boxes at building foundations and any terracing or retaining walls required for the stormwater control design, is shown in renderings and other architectural drawings.
- Landscaping plans, including planting plans, show locations of bioretention facilities, and the plant requirements are consistent with the engineered soils and conditions in the bioretention facilities.
- Renderings and representation of street views incorporate any stormwater facilities located in street-side buffers and setbacks

► **CONSTRUCTION PLAN SUSMP CHECKLIST**

When construction plans are submitted for Environmental Affairs Department review and approval, Department staff will compare that submittal with the earlier SUSMP Project Submittal. Preparation and submittal of a Construction Plan SUSMP Checklist for the project, will facilitate comparisons and likely speed review of the project.

TABLE 3-2. FORMAT FOR CONSTRUCTION PLAN SUSMP CHECKLIST.

<i>SUSMP Page #</i>	<i>BMP Description</i>	<i>See Plan Sheet #s</i>

Here’s how:

1. Create a table similar to Table 3-2. Number and list each measure or BMP specified in the Project Submittal in Columns 1 and 2 of the table. Leave Column 3 blank. Incorporate the table into the Project Submittal.
2. When submitting construction plans, duplicate the table (by photocopy or electronically). Now fill in Column 3, identifying the plan sheets where the BMPs are shown. List all plan sheets on which the BMP appears. Submit the updated table with the construction plans.

Note that the updated table—or Construction Plan SUSMP Checklist—is **only a reference tool** to facilitate comparison of the construction plans to the Project Submittal. Environmental Affairs Department staff can advise applicants about the process required to propose changes to the approved Project Submittal.

► **CERTIFICATION**

The Authority requires that the Project Submittal be certified by an architect, landscape architect, or civil engineer licensed to practice in the State of California.

The certification should state: “The selection, sizing, and preliminary design of stormwater treatment and other control measures in this plan meet the requirements of Regional Water Quality Control Board Order R9-2007-0001 and subsequent amendments.”

► **SUSMP PROJECT SUBMITTAL OUTLINE AND CONTENTS**

The following outline and content list describes the information to present in a SUSMP Project Submittal. Check with Environmental Affairs Department staff regarding any requirements that may be specific to a particular project/project type/project site.

- I. Project Setting
 - A. Project Name, Location, Description
 - B. Existing site features and conditions
 - C. Opportunities and constraints for stormwater control
- II. Low Impact Development Design Strategies
 - A. Optimization of site layout
 - (1) Limitation of development envelope
 - (2) Preservation of natural drainage features
 - (3) Setbacks from creeks, wetlands, and riparian habitats
 - (4) Minimization of imperviousness
 - (5) Using drainage as a design element
 - B. Use of permeable pavements
 - C. Dispersal of runoff to pervious areas
 - D. Use of Integrated Management Practices
- III. Documentation of Drainage Design
 - A. Drainage Management Areas
 - (1) Tabulation
 - (2) Descriptions

CHAPTER 3: THE PROJECT SUBMITTAL

- B. Integrated Management Practices
 - (1) Tabulation and Sizing Calculations
 - (2) Descriptions
 - IV. Source Control Measures
 - A. Description of site activities and potential sources of pollutants
 - B. Table showing sources, permanent source controls, and operational source controls
 - V. Facility Maintenance Requirements
 - A. Ownership and responsibility for maintenance in perpetuity.
 - B. Summary of maintenance requirements for each stormwater facility.
 - VI. Construction Plan SUSMP Checklist
 - VII. Certifications
- Attachment: SUSMP Exhibit

► EXAMPLE PROJECT SUBMITTALS

Example Project Submittals may be available from the Environmental Affairs Department. Any particular submittal will reflect the unique character of that particular project and should meet the requirements identified in the Authority SUSMP. Environmental Affairs Department staff can assist in determining how specific requirements apply to a project.

Chapter 4 – LOW IMPACT DEVELOPMENT DESIGN GUIDE

This chapter provides guidance for designing and documenting the LID site drainage, stormwater treatment facilities, and flow-control facilities. Follow the Low Impact Development (LID) design in this *SUSMP* to achieve compliance with the stormwater treatment requirements as well as the LID requirements in the stormwater Municipal Permit. This will require careful documentation of:

- Pervious and impervious areas in the planned project.
- Drainage from each of these areas.
- Locations, sizes, and types of proposed treatment facilities.

The Project Submittal must include calculations showing the site drainage and proposed LID treatment facilities meet the criteria in this *SUSMP*.

This Low Impact Development Design Guide outlines how to:

- **Analyze the project** and identify and select options for implementing LID techniques to meet runoff treatment requirements—and flow-control requirements, if they apply.
- **Design and document drainage** for the whole site and document how that design meets this *SUSMP*'s stormwater treatment criteria.
- **Specify preliminary design details** and integrate the LID drainage design with the paving and landscaping design.

It is important to remember that not all LID techniques discussed in this chapter will be appropriate for projects at San Diego International Airport. Consult with Environmental Affairs Department staff first on any options being considering for the project. Alternatives to LID design are discussed in the final section of this chapter.

Analyze the Project for LID

Conceptually, there are four LID strategies for managing runoff from buildings and paving:

1. **Optimize the site layout** by preserving natural drainage features and designing buildings and circulation to minimize the amount of roofs and paving.

2. **Use pervious surfaces** such as turf, gravel, or pervious pavement—or use surfaces that retain rainfall, such as vegetated roofs. All drainage from these surfaces is considered to be “self-retained” (a detailed definition corresponding to this concept is on page 47). No further management of runoff is necessary. An emergency overflow should be provided for extreme events.
3. **Disperse runoff** from impervious surfaces on to adjacent pervious surfaces (e.g., direct a roof downspout to disperse runoff onto a lawn).
4. Drain impervious surfaces to engineered **Integrated Management Practices** (IMPs), such as bioretention facilities, planter boxes, cisterns, or dry wells. IMPs infiltrate runoff to groundwater and/or percolate runoff through engineered soil and allow it to drain away slowly. Depending on site conditions and local regulations, it may be possible to harvest and reuse rainwater in conjunction with IMPs.

A combination of two or more strategies may work best for the project. With forethought in design, the four strategies can provide multiple, complementary benefits to the development. Pervious surfaces reduce heat island effects and temperature extremes. Landscaping improves air quality, creates a better place to live or work, and upgrades value for rental or sale. Retaining natural hydrology helps preserve and enhance the natural character of the area. LID drainage design can also conserve water and reduce the need for drainage infrastructure.

Table 4-1 includes ideas for applying LID strategies to site conditions and types of development.

► **OPTIMIZE THE SITE LAYOUT**

To minimize stormwater-related impacts, apply the following design principles to the layout of newly developed and redeveloped sites.

Conserve natural areas, soils, and vegetation. Define the development envelope and protected areas, identifying areas that are most suitable for development and areas that should be left undisturbed. Use the following guideline to determine the least sensitive areas of the site, in order of increasing sensitivity:

1. Areas devoid of vegetation, including previously graded areas and agricultural fields.
2. Areas of non-native vegetation, disturbed habitats and eucalyptus woodlands where receiving waters are not present.
3. Areas of chamise or mixed chaparral, and non-native grasslands.
4. Areas containing coastal scrub communities.
5. All other upland communities.
6. Occupied habitat of sensitive species and all wetlands (as defined by the Authority).

Within each category, hillside areas should be considered more sensitive than flatter areas.

Table 4-1. IDEAS FOR RUNOFF MANAGEMENT

<i>Site Features and Design Objectives</i>	<i>Vegetated Roof</i>	<i>Self-retaining Areas</i>	<i>Pervious Pavement</i>	<i>Bioretention Facility</i>	<i>Flow-through Planter</i>	<i>Dry Well</i>	<i>Cistern or vault with bioretention</i>
Clayey native soils	✓			✓	✓		✓
Permeable native soils	✓		✓	✓	✓	✓	
Shallow groundwater	✓				✓		
Avoid saturating subsurface soils	✓		✓		✓		
Connect to roof downspouts		✓		✓	✓	✓	✓
Parking lots/islands and medians			✓	✓		✓	
Sites with extensive landscaping		✓	✓	✓			
Densely developed sites with limited space/landscape	✓		✓		✓	✓	✓
Fit IMPs into landscape and setback areas				✓			✓
Make drainage a design feature		✓		✓			✓
Convey as well as treat stormwater				✓			

Where possible, conform the site layout along natural landforms, avoid excessive grading and disturbance of vegetation and soils, and replicate the site’s natural drainage patterns. Set back development from creeks, wetlands, and riparian habitats. Preserve significant trees, especially native trees and shrubs, and identify locations for planting additional native or drought tolerant

trees and large shrubs. Concentrate development on portions of the site with less permeable soils, and preserve areas that can promote infiltration.

For all types of development, **limit overall coverage** of paving and roofs. Where allowed by local zoning and design standards—and provided public safety and a walkable environment are not compromised—this can be accomplished by designing compact, taller structures, narrower and shorter streets and sidewalks, smaller parking lots (fewer stalls, smaller stalls, and more efficient lanes), and indoor or underground parking. Examine site layout and circulation patterns and identify areas where landscaping can be substituted for pavement.

Detain and retain runoff throughout the site. On flatter sites, it typically works best to intersperse landscaped areas and IMPs among the buildings and paving. On hillside sites, drainage from upper areas may be collected in conventional catch basins and piped to landscaped areas and IMPs in lower areas.

Use drainage as a design element. Use depressed landscape areas, vegetated buffers, and bioretention areas as amenities and focal points within the site and landscape design. Bioretention areas can be almost any shape and should be located at low points. Bioretention areas shaped as swales can detain and treat low runoff flows and also convey higher flows.

► **USE PERVIOUS SURFACES**

Consider a vegetated roof. Although not yet widely used in California, vegetated or “green” roofs are growing in popularity. Potential benefits include longer roof life, lower heating and cooling costs, and better sound insulation, in addition to air quality and water quality benefits. For SUSMP compliance purposes, vegetated roofs are considered not to produce increased runoff or runoff pollutants (i.e., any runoff from a vegetated roof requires no further treatment or detention). For more information on vegetated roofs, see www.greenroofs.org.

Consider permeable pavements and surface treatments. Inventory paved areas on the preliminary site plan. Identify where permeable pavements, such as crushed aggregate, turf block, unit pavers, pervious concrete, or pervious asphalt could be substituted for impervious concrete or asphalt paving.

► **DISPERSE RUNOFF TO ADJACENT PERVIOUS AREAS**

Look for opportunities to direct runoff from impervious areas to adjacent landscaping. The design, including slopes and soils, must reflect a reasonable expectation that an inch of rainfall will soak into the soil and produce no runoff. For example, a lawn or garden depressed 3-4" below surrounding walkways or driveways provides a simple but functional landscape design element.

For sites subject to stormwater treatment requirements only, a 2:1 maximum ratio of impervious to pervious area is acceptable. Be sure soils will drain adequately.

Under some circumstances, it may be allowable to direct runoff from impervious areas to pervious pavement (for example, from roof downspouts to a parking lot paved with crushed aggregate or turf block). The pore volume of pavement and base course must be sufficient to

retain an inch of rainfall, including runoff from the tributary area. The slopes and soils must be compatible with infiltrating that volume without producing runoff.

► **DIRECT RUNOFF TO INTEGRATED MANAGEMENT PRACTICES**

As mentioned at the beginning of this chapter, some IMPs will have limited applicability at the Airport due to the unique features of an airport environment. Consult with Environmental Affairs Department staff for appropriate options. The Copermittees have developed design criteria for the following IMPs:

- **Bioretention facilities**, which can be configured as swales, free-form areas, or planters to integrate with the landscape design.
- **Flow-through planters**, which can be used near building foundations and other locations where infiltration to native soils is not desired.
- **Dry wells** and other infiltration facilities, which can be used only where soils are permeable.
- **Cisterns or vaults**, in combination with a bioretention facility.

The design sheets are featured near the end of this chapter.

It may be possible to create a site-specific design that uses cisterns to achieve stormwater flow control, stormwater treatment, and rainwater reuse for irrigation or indoor uses (**water harvesting**). Such a design could expand the multiple benefits of LID to include water conservation. Keep in mind:

- Facilities must meet criteria for capturing and treating the volume specified by Equation 4-8 below. This volume must be allowed to empty within 24 hours so runoff from additional storms, which may follow, is also captured and treated. Additional volume may be required if the system also stores runoff for longer periods for reuse.
- Storage of water for longer than 48 hours creates the potential for mosquito harborage. Cisterns must be designed to prevent entry by mosquitoes.
- Indoor uses of non-potable water may be restricted or prohibited. Check with Environmental Affairs Department staff.

Some references and resources for water harvesting appear at the end of this chapter.

Finding the right location for treatment facilities on the site involves a careful and creative integration of several factors:

- To make the most efficient use of the site and to maximize aesthetic value, **integrate IMPs with site landscaping**. Many local zoning codes may require landscape setbacks or buffers, or may specify that a minimum portion of the site be landscaped.

It may be possible to locate some or all of the site's treatment and flow-control facilities within this same area, or within utility easements or other non-buildable areas.

- Planter boxes and bioretention areas must be **level or nearly level** all the way around. Bioretention areas configured as swales may be gently sloped in the linear direction, but opposite sides must be at the same elevation.
- For effective, low-maintenance operation, **locate facilities so drainage into and out of the device is by gravity flow.** Pumped systems are feasible, but are expensive, require more maintenance, are prone to untimely failure, and can cause mosquito control problems. Most IMPs require 3 feet or more of head.
- If the property is being subdivided now or in the future, the facility should be in a **common, accessible area.** Even if the facility will serve only one site owner or operator, make sure the facility is located for ready access by inspectors from the Authority and local mosquito control agency.
- The facility must be accessible to equipment needed for its maintenance. **Access requirements for maintenance** will vary with the type of facility selected. Planter boxes and bioretention areas will typically need access for the same types of equipment used for landscape maintenance.

To complete the analysis, if required by the Authority, include in the SUSMP Project Submittal a brief **narrative** documenting the site layout and site design decisions that have been made. This will provide background and context for how the design meets the quantitative LID design criteria.

Develop and Document the Drainage Design

The **design documentation procedure** begins with careful delineation of pervious areas and impervious areas (including roofs) throughout the site. The procedure accounts for how runoff from each delineated area is managed. For areas draining to IMPs, the procedure ensures each IMP is appropriately sized.

The procedure results in a space-efficient, cost-efficient LID design for meeting SUSMP requirements on most commercial/industrial developments. The procedure arranges documentation of drainage design and IMP sizing in a consistent format for presentation and review.

This procedure is intended to facilitate, not substitute for, creative interplay among site design, landscape design, and drainage design. **Several iterations may be needed** to optimize the drainage design as well as aesthetics, circulation, and use of available area for the site.

Complete the needed calculations using only the project's site development plan.

► **STEP 1: DELINEATE DRAINAGE MANAGEMENT AREAS**

This is the key first step: divide the **entire project area** into individual, discrete Drainage Management Areas (DMAs). Typically, lines delineating DMAs follow grade breaks and roof ridge lines. The Exhibit, tables, text, and calculations in the Project Submittal will illustrate, describe, and account for runoff from each of these areas.

Use separate DMAs for each surface type (e.g., landscaping, pervious paving, or roofs). Each DMA must be assigned a single hydrologic soil group. Assign each DMA an identification number and determine its size in square feet.

► **STEP 2: CLASSIFY DMAS AND DETERMINE RUNOFF FACTORS**

Next, determine how drainage from each DMA will be handled. Each DMA will be one of the following four types:

1. Self-treating areas.
2. Self-retaining areas (also called “zero-discharge” areas).
3. Areas that drain to self-retaining areas.
4. Areas that drain to IMPs.

Self-treating areas are landscaped or turf areas that do not drain to IMPs, but rather drain directly off site or to the storm drain system. Examples include upslope undeveloped areas which are ditched and drained around a development and grassed slopes which drain off-site to a street or storm drain. In general, self-treating areas include no impervious areas, unless the impervious area is very small (5% or less) in relationship to the receiving pervious area and slopes are gentle enough to ensure runoff will be absorbed into the vegetation and soil. Criteria for self-treating areas are in the design sheet “Self Treating and Self-Retaining Areas” at the end of this chapter.

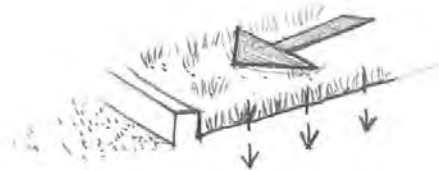


FIGURE4-1. Self-treating areas are entirely pervious and drain directly off-site or to the storm drain system.

Self-retaining areas are designed to retain the first one inch of rainfall without producing any runoff. The technique works best on flat, heavily landscaped sites. It may be used on mild slopes if there is a reasonable expectation that a one-inch rainfall event would produce no runoff.

To create self-retaining turf and landscape areas in flat areas or on terraced slopes, berm the area or depress the grade into a concave cross-section so that these areas will retain the first inch of rainfall. Specify slopes, if any, toward the center of the pervious area. Inlets of area drains, if any, should be set 3 inches above the low point to allow ponding.

Criteria for self-retaining areas are presented in the design sheet entitled “Self Treating and Self-Retaining Areas” found later in this chapter.

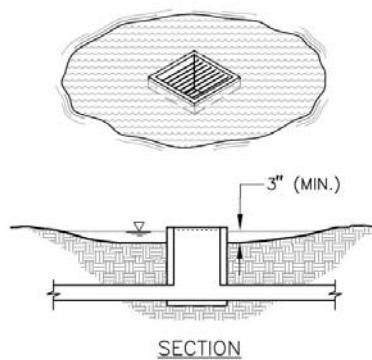


FIGURE 4-2. Self-retaining areas. Berm or depress the grade to retain at least an inch of rainfall and set inlets of any area drains at least 3 inches above low point to allow ponding.

Areas draining to self-retaining areas. Runoff from impervious or partially pervious areas can be managed by routing it to self-retaining pervious areas. For example, roof downspouts can be directed to lawns, and driveways can be sloped toward landscaped areas. The maximum ratio is 2 parts impervious area for every 1 part pervious area.

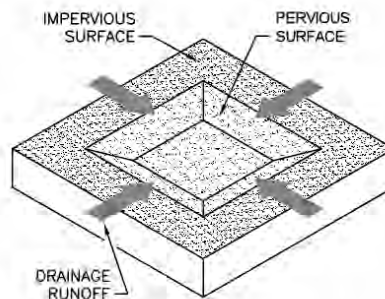


FIGURE 4-3. Relationship of impervious to pervious area for self-retaining areas. Ratio: $pervious \geq \frac{1}{2} impervious$

The drainage from the impervious area must be directed to and dispersed within the pervious area, and the entire area must be designed to retain an inch of rainfall without flowing off-site. For example, if the maximum ratio of 2 parts impervious area into 1 part pervious area is used, then the pervious area must absorb 3 inches of water over its surface before overflowing to an off-site drain.

A partially pervious area may be drained to a self-retaining area. For example, a driveway composed of unit pavers may drain to an adjacent lawn. In this case, the maximum ratios are:

$$(\text{Runoff factor}) \times (\text{tributary area}) \leq 2 \times (\text{self-retaining area}) \quad \text{Equation 4-1}$$

Use the runoff factors in Table 4-2.

TABLE 4-2. RUNOFF FACTORS FOR SURFACES DRAINING TO IMPS.

Surface	Factor
Roofs	1.0
Concrete	1.0
Pervious Concrete	0.1
Porous Asphalt	0.1
Grouted Unit Pavers	1.0
Solid Unit Pavers on granular base, min. 3/16 inch joint space	0.2
Crushed Aggregate	0.1
Turfblock	0.1
Amended, mulched soil	0.1
Landscape	0.1

Prolonged ponding is a potential problem at higher impervious/pervious ratios. In the design, ensure that the pervious area soils can handle the additional run-on and are sufficiently drained.

Under some circumstances, pervious pavement (e.g., crushed stone, pervious asphalt, or pervious concrete) can be self-retaining. Adjacent roofs or impervious pavement may drain on to the pervious pavement in the same maximum ratios as described above.

To design a pervious pavement to be a self-treating area, ensure:

- The gravel base course is a minimum of four or more inches deep.
- The base course is not to be underdrained.
- A qualified engineer has been consulted regarding infiltration rates, pavement stability, and suitability for the intended traffic.

Runoff from self-treating and self-retaining areas does not require any further treatment or flow control.

Areas draining to IMPs are multiplied by a sizing factor to calculate the required size of the IMP. On most densely developed sites—such as commercial and mixed-use developments—most DMAs will drain to IMPs.

More than one drainage area can drain to the same IMP. However, because the minimum IMP sizes are determined by ratio to drainage area size, a drainage area may not drain to more than one IMP. See Figures 4-4 and 4-5.

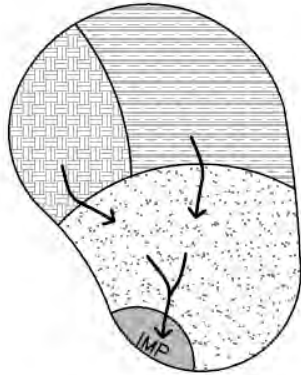


FIGURE 4-4. MORE THAN ONE Drainage Management Area can drain to a single IMP.

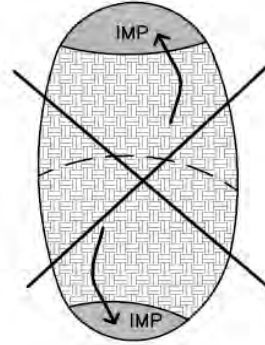


FIGURE 4-5. ONE DRAINAGE Management Area cannot drain to more than one IMP. Use a grade break to divide the DMA.

Where possible, design site drainage so **only impervious roofs and pavement** drain to IMPs. This yields a simpler, more efficient design and also helps protect IMPs from becoming clogged by sediment.

If it is necessary to include turf, landscaping, or pervious pavements within the area draining to an IMP, list each surface as a separate DMA. A runoff factor (similar to a “C” factor used in the rational method) is applied to account for the reduction in the quantity of runoff. For example, when a turf or landscaped drainage management area drains to an IMP, the resulting increment in IMP size is:

$$\Delta (\text{Area}) = (\text{pervious area}) \times (\text{runoff factor}) \times (\text{sizing factor}).$$

Use the runoff factors in Table 4-2.

► **STEP 3: TABULATE DRAINAGE MANAGEMENT AREAS**

- Tabulate self-treating areas in the format shown in Table 4-3.
- Tabulate self-retaining areas in the format shown in Table 4-4.
- Tabulate areas draining to self-retaining areas in the format shown in Table 4-5. Check to be sure the total product of (square feet of tributary area × runoff factor)

for all DMAs draining to a receiving self-retaining area is no greater than a 2:1 ratio to the square footage of the receiving self-retaining area itself.

- Compile a list of DMAs draining to IMPs. Proceed to Step 4 to check the sizing of the IMPs.

TABLE 4-3. FORMAT FOR TABULATING SELF-TREATING AREAS

<i>DMA Name</i>	<i>Area (square feet)</i>

TABLE 4-4. FORMAT FOR TABULATING SELF-RETAINING AREAS

<i>DMA Name</i>	<i>Area (square feet)</i>

TABLE 4-5. FORMAT FOR TABULATING AREAS DRAINING TO SELF-RETAINING AREAS

<i>DMA Name</i>	<i>Area (square feet)</i>	<i>Post-project surface type</i>	<i>Runoff factor</i>	<i>Receiving self-retaining DMA</i>	<i>Receiving self-retaining DMA Area (square feet)</i>

► STEP 4: SELECT AND LAY OUT IMPS ON SITE PLAN

As mentioned at the beginning of this chapter, some IMPs will have limited applicability at the Airport due to the unique features of an airport environment. Consult with Environmental Affairs Department staff for appropriate options from the list of IMPs in Table 6-6. Illustrations, designs, and design criteria for the IMPs are in the “IMP Design Details and Criteria” at the end of this chapter.

Once the IMPs have been laid out, calculate the square footage that has been set aside on the site plan for each IMP.

► **STEP 5: REVIEW SIZING FOR EACH IMP**

For each of the IMPs, use the appropriate sizing from Table 4-6.

TABLE 4-6. IMP SIZING FACTORS

Bioretention Facilities	Sizing Factor for Area = 0.04
Flow-through Planters	Sizing Factor for Area = 0.04
Dry Well or Infiltration Basin	See Step 6 to Calculate Min. Volume
Cistern or Vault with Bioretention	See Step 6 to Calculate Min. Volume of Cistern; then use 0.04 to calculate minimum size of bioretention area

► **STEP 6: CALCULATE MINIMUM AREA AND VOLUME OF EACH IMP**

The minimum area of bioretention facilities and flow-through planters is found by summing up the contributions of each tributary DMA and multiplying by the adjusted sizing factor for the IMP.

Equation 4-7

$$Min. IMP Area = \sum \left(\begin{matrix} DMA & DMA \\ Square & \times Runoff \\ Footage & Factor \end{matrix} \right) \times \left(\begin{matrix} IMP \\ Sizing \\ Factor \end{matrix} \right)$$

Use the format of Table 4-7 to present the calculations of the required minimum area and volumes for **bioretention areas** and **planter boxes**:

Table 4-7. FORMAT FOR PRESENTING CALCULATIONS OF MINIMUM IMP AREAS FOR BIORETENTION AREAS AND PLANTER BOXES.

DMA Name	DMA Area (square feet)	Post-project surface type	DMA Runoff factor	DMA Area × runoff factor	IMP Name		
					Type:		
					IMP Sizing factor	Minimum Area	Proposed Area
Total					0.04		IMP Area

To size **dry wells, infiltration basins, or infiltration trenches**, use the following procedure:

1. Use the County of San Diego's 85th Percentile Isopluvial Map to determine the minimum unit volume.
2. Determine the weighted runoff factor ("C" factor) for the area tributary to the facility. The factors in Table 4-2 may be used.
3. Multiply the weighted runoff factor times the tributary area times the minimum unit volume.

Equation 4-8

$$\text{Volume} = [\text{Tributary Area}] \times [\text{weighted runoff factor}] \times [\text{unit volume}]$$

4. Select a facility depth.
5. Determine the required facility area. Dry wells may be designed as an open vault or with rock fill. If rock fill is used, assume a porosity of 40%.
6. Ensure the facility can infiltrate the entire volume within 72 hours.

To size a **cistern or vault in series with a bioretention facility**:

1. Use Equation 4-8 to calculate the required cistern volume.
2. Design a discharge orifice for a drawdown time of 24 hours.
3. Determine the maximum discharge from the orifice.
4. The minimum area of the bioretention facility must treat this flow based on a percolation rate of 5" per hour through the engineered soil.

► **STEP 7: DETERMINE IF AVAILABLE SPACE FOR IMP IS ADEQUATE**

Sizing and configuring IMPs may be an iterative process. After computing the minimum IMP area using Steps 1 – 6, review the site plan to determine if the reserved IMP area is sufficient. If so, the planned IMPs will meet the SUSMP sizing requirements. If not, revise the plan accordingly. Revisions may include:

- Reducing the overall imperviousness of the project site.
- Changing the grading and drainage to redirect some runoff toward other IMPs which may have excess capacity.
- Making tributary landscaped DMAs self-treating or self-retaining.
- Expanding IMP surface area.

► STEP 8: COMPLETE THE SUMMARY REPORT

Present the IMP sizing calculations in tabular form, by adapting the format of Table 4-8, as appropriate. Coordinate the presentation of DMAs and calculation of minimum IMP sizes with the Project Submittal drawing (labeled to show delineation of DMAs and locations of IMPs). It is also helpful to incorporate a brief description of each DMA and each IMP.

Sum the total area of all DMAs and IMPs listed to prove is equal to the total project area. This step may include adjusting the square footage of some DMAs to account for area used for IMPs.

Table 4-8. FORMAT FOR PRESENTING SUMMARY CALCULATIONS OF IMP AREAS.

Project Name:
 Project Location:
 APN or Subdivision Number:
 Total Project Area (square feet):
 Mean Annual Precipitation at Project Site:

I. Self-treating areas:

<i>DMA Name</i>	<i>Area (square feet)</i>

II. Self-retaining areas:

<i>DMA Name</i>	<i>Area (square feet)</i>

III. Areas draining to self-retaining areas:

<i>DMA Name</i>	<i>Post-project surface type</i>	<i>Runoff factor</i>	<i>Area (square feet)</i>	<i>Receiving self-retaining DMA</i>	<i>Receiving self-retaining DMA Area (square feet)</i>

IV. Areas draining to IMPs (repeat for each IMP):

<i>DMA Name</i>	<i>DMA Area (square feet)</i>	<i>Post-project surface type</i>	<i>DMA Runoff factor</i>	<i>DMA Area × runoff factor</i>	<i>Soil Type:</i>	<i>IMP Name</i>
					<i>IMP Sizing factor</i>	<i>Minimum Area or Volume</i>
						<i>Proposed Area or Volume</i>
<i>Total</i>						
						<i>IMP Area</i>

Specify Preliminary Design Details

In the SUSMP Project Submittal, describe the IMPs in sufficient detail to demonstrate the area, volume, and other criteria of each can be met within the constraints of the site. As mentioned at the beginning of this chapter, some IMPs will have limited applicability at the Airport due to the unique features of an airport environment. Consult with Environmental Affairs Department staff for appropriate options.

Ensure these details are consistent with preliminary site plans, landscaping plans, and architectural plans submitted with the application for planning and zoning approvals.

Following are design sheets for:

- Self-treating and self-retaining areas
- Pervious pavements
- Bioretention facilities
- Flow-through planter
- Dry wells and infiltration basins
- Cistern with bioretention facility

These design sheets include recommended configurations and details, and example applications, for these IMPs. **The information in these design sheets must be adapted and applied to the conditions specific to the development project such as unstable slopes or the lack of available head. Not all IMPs are applicable to every project. Environmental Affairs Department staff have final review and approval authority over the project design.**

Proper functional design of the IMP is the responsibility of the applicant. Effective operation of the IMP throughout the project's lifetime will be the responsibility of the property owner.

Alternatives to Integrated LID Design

If the design of features and facilities described above is infeasible for the development site, consult with Environmental Affairs Department staff before preparing an alternative design for stormwater treatment and LID compliance.

For all alternative designs, the applicant must prepare a complete Project Submittal, including a drawing showing the entire site divided into discrete Drainage Management Areas, text and tables showing how drainage is routed from each DMA to a treatment facility, and calculations demonstrating the design achieves the applicable design criteria for each stormwater treatment facility. Alternative treatment facilities are limited to the circumstances and selection criteria identified in Chapter 2.

► **DESIGN OF ALTERNATIVE TREATMENT FACILITIES**

Here are criteria and design considerations for some alternative treatment facilities:

Sand Filters. To ensure effectiveness is not compromised by compacting or clogging of the filter surface, sand filters must be maintained frequently.

The following criteria apply to sand filters:

- Calculate the design flow using the rational method with an intensity of 0.2"/hour and the “C” factors for “treatment only” from Table 4-2.
- To determine the required filter surface area, divide the design flow by an allowable design surface loading rate of 5"/hour.
- The minimum depth of filter media is 18". The media should be washed sand, with gradation similar to that specified for fine aggregate in ASTM C-33.
- The entire filter area must be accessible for easy maintenance without the need to enter a confined space.

A typical filter design includes a gravel drain layer and a perforated pipe underdrain. Filter fabric may be used to prevent the filter media from entering the gravel layer.

The design should not include any permanent pool or other standing water. Instead of including a pretreatment basin, consider the following features in the area tributary to the filter to reduce the potential for filter clogging:

- Limit the size of the Drainage Management Area.
- Include only impervious areas in the DMA.
- Stabilize slopes and eliminate sources of sediment in the DMA.
- Provide screens for trash and leaves at storm drain inlets (if allowed by the Environmental Affairs Department).

For additional design considerations and details, see *Design of Stormwater Filtering Systems* by Richard A. Claytor and Thomas R. Schueler, The Center for Watershed Protection, 1996, and *California Stormwater BMP Handbooks* Fact Sheet TC-40, Media Filter.

Extended (“Dry”) Detention Basins. The required detention volume is based on the 85th percentile 24-hour storm depth. The steps to calculate the required detention volume are:

1. Use the County of San Diego's 85th Percentile Isopluvial Map to determine the unit basin volume.
2. Determine the weighted runoff factor (“C” factor) for the area tributary to the basin. The factors in Table 4-2 may be used.

3. Multiply the weighted runoff factor times the tributary area times the unit basin volume.

For maximum effectiveness the basin should not be sized substantially larger than this volume.

For design considerations and details, see the *California Stormwater Best Management Practice Handbooks*, Fact Sheet TC-22, “Extended Detention Basins.” The basin outlet should be designed for a 24-hour drawdown time.

As noted in Fact Sheet TC-22, “dry” detention basins may not be practicable for drainage areas less than 5 acres. The potential for mosquito harborage is a concern. In the design, do not create any areas that will hold standing water for time periods in excess of the maximum vector control detention time (96 hours for the County of San Diego).

“Wet” Detention Ponds and Constructed Wetlands. The required detention volume is determined as with a “dry” detention basin. Before proceeding with design, contact the local mosquito control agency to coordinate the design and plan ongoing inspection and maintenance of the facility for mosquito control. For design considerations and details, see the *California Stormwater Best Management Practices Handbooks*, Fact Sheet TC-20, “Wet Ponds,” and Fact Sheet TC-21, “Constructed Wetlands.”

Vegetated Swales. Design recommendations for conventional vegetated swales are in the *California Stormwater Best Management Practices Handbooks*. The conventional swale design uses available on-site soils and does not include an underdrain system. Where soils are clayey, there is little infiltration. Treatment occurs as runoff flows through grass or other vegetation before exiting at the downstream end. Recommended detention times are on the order of 10 minutes.

Conventional vegetated swales may be used to meet Municipal Permit treatment requirements and LID requirements. The following should be incorporated in the design:

- Determine the weighted runoff factor (“C” factor) for the area tributary to the swale. The factors in Table 4-2 may be used.
- Calculate the design flow by multiplying the weighted runoff factor times the tributary area times either (1) 0.2 inches of rainfall per hour, or (2) twice the 85th percentile hourly rainfall intensity.
- When sizing the swale, use a value of 0.25 for Manning’s “n”.
- Ensure that all flow enters the swale near its highest point and that no flow short-circuits treatment by entering the swale along its length.
- The swale should be a minimum 100 feet in length.
- Longitudinal slopes should not exceed 2.5%; on flatter slopes, incorporate measures to avoid prolonged surface ponding.

Consider using linear-shaped bioretention areas in place of conventional vegetated swales because:

- Conventional swale design has resulted in standing water and associated nuisances.
- Conventional swales often don't obtain even the design residence time because of the length required and because proper design requires runoff enter the swale at the upstream end rather than at various locations along its length, and
- Bioretention areas provide a more flexible drainage design, more effective practicable treatment, and more effective flow control within the same footprint.

► TREATMENT FACILITIES FOR SPECIAL CIRCUMSTANCES

Higher-rate surface filters and vault-based proprietary filters can only be used in the circumstances described in Chapter 2 and when sand filters, extended “dry” detention basins, and “wet” detention ponds or constructed wetlands have been found infeasible.

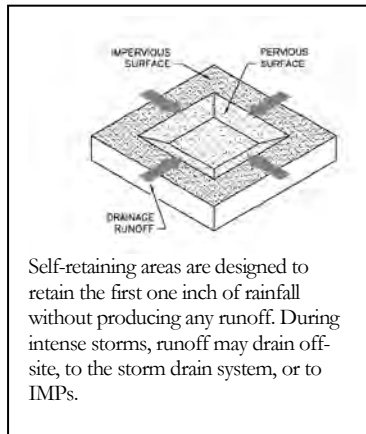
For surface filters, the grading and drainage design should minimize the area draining to each unit and maximize the number of discrete drainage areas and units. Proprietary facilities should be installed consistent with the manufacturer's instructions.

References and Resources:

- RWQCB Order R9-2007-0001 (Stormwater Municipal Permit)
- Low Impact Development Center
- County of San Diego Low Impact Development Handbook
- California Best Management Practices Handbooks
- Design of Stormwater Filtering Systems (Claytor and Scheuler, 1996)
- American Rainwater Catchment Systems Association
- Water Conservation Alliance of Southern Arizona
- Rainwater Harvesting for Drylands and Beyond
- The Texas Manual on Rainwater Harvesting
- Managing Wet Weather With Green Infrastructure: Municipal Handbook, Rainwater Harvesting Policies (Low Impact Development Center, 2008)

Self-Treating and Self-Retaining Areas

► CRITERIA



LID design seeks to manage runoff from roofs and paving so effects on water quality and hydrology are minimized. Runoff from landscaping, however, does not need to be managed the same way.

Runoff from landscaping can be managed by creating self-treating and self-retaining areas.

Self-treating areas are natural, landscaped, or turf areas that drain directly off site or to the storm drain system. Examples include upslope undeveloped areas that are ditched and drained around a development and grassed slopes that drain offsite to a street or storm drain. Self-treating areas may not drain on to adjacent paved areas.

Where a landscaped area is upslope from or surrounded by paved areas, a **self-retaining area** (also called a zero-discharge area) may be created. Self-retaining areas are designed to retain the first one inch of rainfall without producing any runoff. The technique works best on flat, heavily landscaped sites. It may be used on mild slopes if there is a reasonable expectation that the first inch of rainfall would produce no runoff.

To create self-retaining turf and landscape areas in flat areas or on terraced slopes, berm the area or depress the grade into a concave cross-section so that these areas will retain the first inch of rainfall. Inlets of area drains, if any, should be set 3 inches above the low point to allow ponding.

Areas draining to self retaining areas. Drainage from roofs and paving can be directed to self-retaining areas and allowed to infiltrate into the soil. The maximum allowable ratio is 2 parts impervious: 1 part pervious.

The self-retaining area must be bermed or depressed to retain an inch of rainfall including the flow from the tributary impervious area.

Best Uses

- Heavily landscaped sites

Advantages

- No maintenance verification requirement
- Complements site landscaping

Limitations

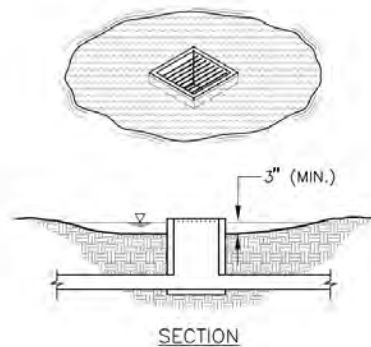
- Requires substantial square footage
- Grading requirements must be coordinated with landscape design

► **DETAILS**

Drainage from self-treating areas must flow to off-site streets or storm drains without flowing on to paved areas.

Pavement within a self-treating area cannot exceed 5% of the total area.

In self-retaining areas, overflows and area drain inlets should be set high enough to ensure ponding over the entire surface of the self-retaining area.



Set overflows and area drain inlets high enough to ensure ponding (3" deep) over the surface of the self-retaining area.

Self-retaining areas should be designed to promote even distribution of ponded runoff over the area.

Leave enough reveal (from pavement down to landscaped surface) to accommodate buildup of turf or mulch.

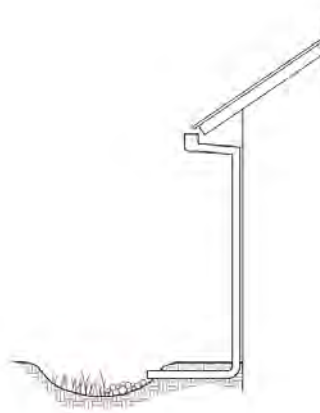
► **APPLICATIONS**

Lawn or landscaped areas adjacent to streets can be considered self-treating areas.

Self-retaining areas can be created by depressing lawn and landscape below surrounding sidewalks and plazas.

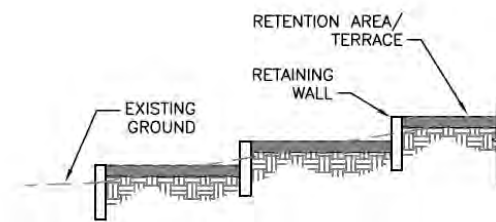
Runoff from walkways or driveways in parks and park-like areas can sheet-flow to self-retaining areas.

Roof leaders can be connected to self-retaining areas by piping beneath plazas and walkways. If necessary, a “bubble-up” can be used.



Connecting a roof leader to a self-retaining area. The head from the eave height makes it possible to route roof drainage some distance away from the building.

Self-retaining areas can be created by terracing mild slopes. The elevation difference promotes subsurface drainage.



Mild slopes can be terraced to create self-retaining areas.

► **DESIGN CHECKLIST FOR SELF-TREATING AREAS**

- The self-treating area is at least 95% lawn or landscaping (not more than 5% impervious).
- Re-graded or re-landscaped areas have amended soils, vegetation, and irrigation as may be required to maintain soil stability and permeability.
- Runoff from the self-treating area does not enter an IMP or another drainage management area, but goes directly to the storm drain system.

► **DESIGN CHECKLIST FOR SELF-RETAINING AREAS**

- Area is bermed all the way around or graded concave.
- Slopes do not exceed 4%.
- Entire area is lawn, landscaping, or pervious pavement (see criteria in Chapter 4).
- Area has amended soils, vegetation, and irrigation as may be required to maintain soil stability and permeability.
- Any area drain inlets are at least 3 inches above surrounding grade.

► **DESIGN CHECKLIST FOR AREAS DRAINING TO SELF-RETAINING AREAS**

- Ratio of tributary impervious area to self-retaining area is not greater than 2:1.
- Roof leaders collect runoff and route it to the self-retaining area.
- Paved areas are sloped so drainage is routed to the self-retaining area.
- Inlets are designed to protect against erosion and distribute runoff across the area.

Pervious Pavements

► CRITERIA

Impervious roadways, driveways, and parking lots account for much of the hydrologic impact of land development. In contrast, pervious pavements allow rainfall to collect in a gravel or sand base course and infiltrate into native soil.

Pervious pavements are designed to transmit rainfall through the surface to storage in a base course. For example, a 4-inch-deep base course provides approximately 1.6 inches of storage. Runoff stored in the base course infiltrates to native soils over time. Except in the case of solid pavers, the surface course provides additional storage.

Areas with the following pervious pavements may be regarded as “self-treating” and require no additional treatment or flow control if they drain off-site (not to an IMP).

- Pervious concrete
- Porous asphalt
- Crushed aggregate (gravel)
- Open pavers with grass or plantings
- Open pavers with gravel
- Artificial turf

Areas with these pervious pavements can also be **self-retaining areas** and may receive runoff from impervious areas if they are bermed or depressed to retain the first one inch of rainfall, including runoff from the tributary impervious area.

Solid unit pavers—such as bricks, stone blocks, or precast concrete shapes—are considered to reduce runoff compared to impervious pavement, when the unit pavers are set in sand or gravel with gaps between the pavers. Joints must be filled with an open-graded aggregate free of fines.

When draining pervious pavements to an IMP, use the runoff factors in Table 4-2.

Best Uses

- Areas with permeable native soils
- Low-traffic areas
- Where aesthetic quality can justify higher cost

Advantages

- No maintenance verification requirement
- Variety of surface treatments can complement landscape design

Limitations

- Initial cost
- Placement requires specially trained crews
- Geotechnical concerns, especially in clay soils
- Concerns about pavement strength and surface integrity
- Some municipalities do not allow in public right of way

► DETAILS

Permeable pavements can be used in clay soils; however, special design considerations, including an increased depth of base course, typically apply and will increase the cost of this option. Geotechnical fabric between the base course and underlying clay soil is recommended.

Pavement strength and durability typically determines the required depth of base course. If underdrains are used, the outlet elevation must be a minimum of 3 inches above the bottom elevation of the base course.

Pervious concrete and porous asphalt must be installed by crews with special training and tools. Industry associations maintain lists of qualified contractors.

Parking lots with crushed aggregate or unit pavers may require signs or bollards to organize parking.

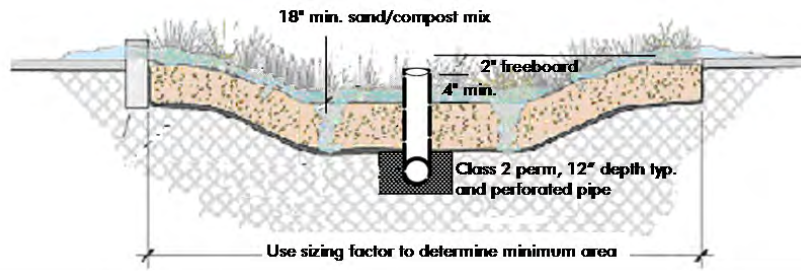
► DESIGN CHECKLIST FOR PERVIOUS PAVEMENTS

- No erodible areas drain on to pavement.
- Subgrade is uniform. Compaction is minimal.
- Reservoir base course is of open-graded crushed stone. Base depth is adequate to retain rainfall and support design loads.
- If a subdrain is provided, outlet elevation is a minimum of 3 inches above bottom of base course.
- Subgrade is uniform and slopes are not so steep that subgrade is prone to erosion.
- Rigid edge is provided to retain granular pavements and unit pavers.
- Solid unit pavers are installed with open gaps filled with open-graded aggregate free of fines.
- Permeable pavements are installed by industry-certified professionals according to vendor's recommendations.
- Selection and location of pavements incorporates Americans with Disabilities Act requirements, site aesthetics, and uses.

Resources

- Southern California Concrete Producers www.concreteresources.net.
- California Asphalt Pavement Association
<http://www.californiapavements.org/stormwater.html>
- Interlocking Concrete Pavement Institute
<http://www.icpi.org/>
- *Start at the Source Design Manual for Water Quality Protection*, pp. 47-53. www.basmaa.org
- *Porous Pavements*, by Bruce K. Ferguson. 2005. ISBN 0-8493-2670-2.

Bioretention Facilities



Bioretention facility configured for treatment-only requirements. Bioretention facilities can be rectangular, linear, or nearly any shape.

Bioretention detains runoff in a surface reservoir, filters it through plant roots and a biologically active soil mix, and then infiltrates it into the ground. Where native soils are less permeable, an underdrain conveys treated runoff to storm drain or surface drainage.

Bioretention facilities can be configured in nearly any shape. When configured as linear **swales**, they can convey high flows while percolating and treating lower flows.

Bioretention facilities can be configured as in-ground or above-ground planter boxes, with the bottom open to allow infiltration to native soils underneath. If infiltration cannot be allowed, use the sizing factors and criteria for the Flow-Through Planter.

► CRITERIA

For development projects subject only to runoff treatment requirements, the following criteria apply:

Parameter	Criterion
Soil mix depth	18 inches minimum
Soil mix minimum percolation rate	5 inches per hour minimum sustained (10 inches per hour initial rate recommended)
Soil mix surface area	0.04 times tributary impervious area (or equivalent)

Best Uses

- Commercial areas
- Residential subdivisions
- Industrial developments
- Roadways
- Parking lots
- Fit in setbacks, medians, and other landscaped areas

Advantages

- Can be any shape
- Low maintenance
- Can be landscaped

Limitations

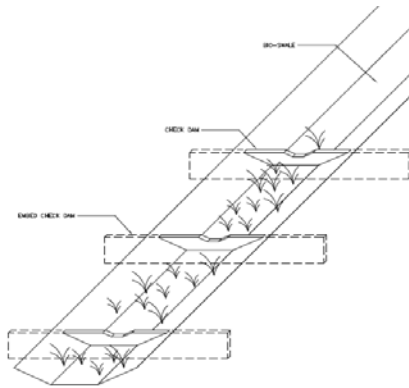
- Require 4% of tributary impervious square footage
- Typically requires 3-4 feet of head
- Irrigation typically required

CHAPTER 4: LID DESIGN GUIDE

Parameter	Criterion
Surface reservoir depth	6 inches minimum; may be sloped to 4 inches where adjoining walkways.
Underdrain	Required in Group “C” and “D” soils. Perforated pipe embedded in gravel (“Class 2 permeable” recommended), connected to storm drain or other accepted discharge point.

► DETAILS

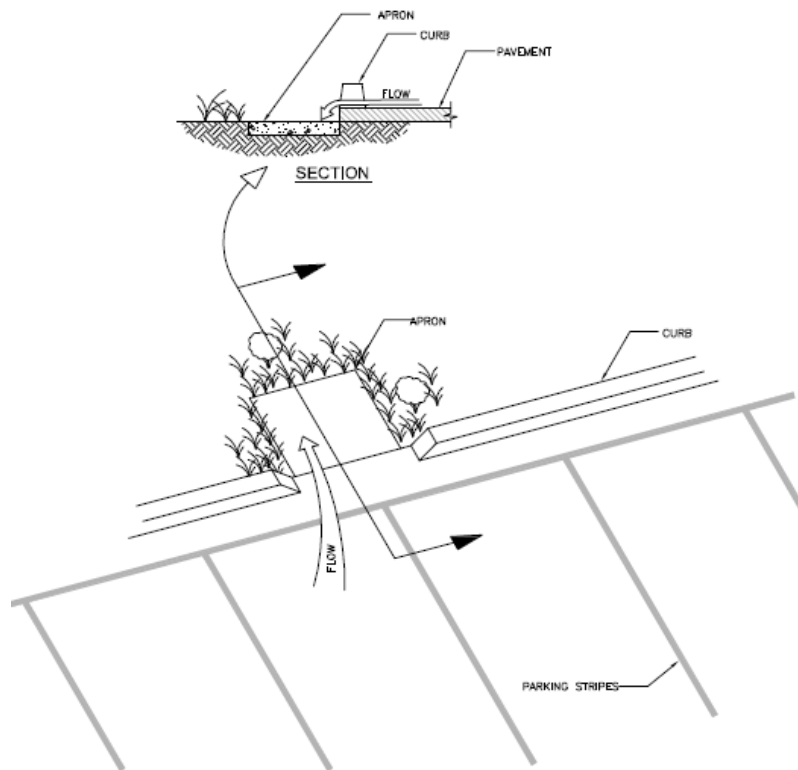
Plan. On the surface, a bioretention facility should be one level, shallow basin—or a series of basins. As runoff enters each basin, it should flood and fill throughout before runoff overflows to the outlet or to the next downstream basin. This will help prevent movement of surface mulch and soil mix.



Use check dams for linear bioretention facilities (swales) on a slope.

In a linear swale, check dams should be placed so that the lip of each dam is at least as high as the toe of the next upstream dam. A similar principle applies to bioretention facilities built as terraced roadway shoulders.

Inlets. Paved areas draining to the facility should be graded, and inlets should be placed, so that runoff remains as sheet flow or as dispersed as possible. Curb cuts should be wide (12" is recommended) to avoid clogging with leaves or debris. Allow for a minimum reveal of 4"-6" between the inlet and soil mix elevations to ensure turf or mulch buildup does not block the inlet. In addition, place an apron of stone or concrete, a foot square or larger, inside each inlet to prevent vegetation from growing up and blocking the inlet.



Recommended design details for bioretention facility inlets (see text).

Where runoff is collected in pipes or gutters and conveyed to the facility, protect the landscaping from high-velocity flows with energy-dissipating rocks. In larger installations, provide cobble-lined channels to better distribute flows throughout the facility.

Upturned pipe outlets can be used to dissipate energy when runoff is piped from roofs and upgradient paved areas.

Soil mix. The required soil mix is similar to a loamy sand. It must maintain a minimum percolation rate of 5" per hour throughout the life of the facility, and it must be suitable for maintaining plant life. Typically, on-site soils will not be suitable due to clay content.

Storage and drainage layer. "Class 2 permeable," Caltrans specification 68-1.025, is recommended. Open-graded crushed rock, washed, may be used, but requires 4"-6" washed pea gravel be substituted at the top of the crushed rock gravel layers. **Do not use filter fabric** to separate the soil mix from the gravel drainage layer or the gravel drainage layer from the native soil.

Underdrains. No underdrain is required where native soils beneath the facility are Hydrologic Soil Group A or B. For treatment-only facilities where native soils are Group C or D, a perforated pipe must be bedded in the gravel layer and must terminate at a storm drain or other approved discharge point.

Outlets. In treatment-only facilities, outlets must be set high enough to ensure the surface reservoir fills and the entire surface area of soil mix is flooded before the outlet elevation is reached. In swales, this can be achieved with appropriately placed check dams.

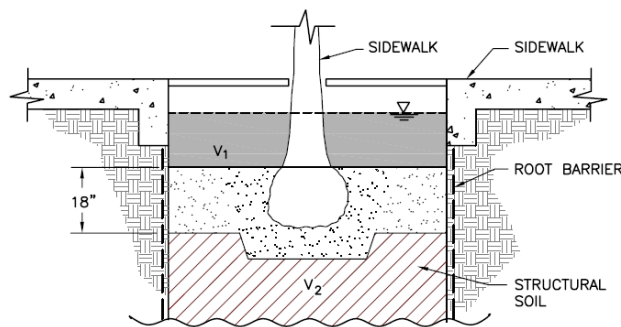
The outlet should be designed to exclude floating mulch and debris.

Vaults, utility boxes and light standards. It is best to locate utilities outside the bioretention facility—in adjacent walkways or in a separate area set aside for this purpose. If utility structures are to be placed within the facility, the locations should be anticipated and adjustments made to ensure the minimum bioretention surface area and volumes are achieved. Leaving the final locations to each individual utility can produce a haphazard, unaesthetic appearance and make the bioretention facility more difficult to maintain.

Emergency overflow. The site grading plan should anticipate extreme events and potential clogging of the overflow and route emergency overflows safely.

Trees. Bioretention areas can accommodate small or large trees. There is no need to subtract the area taken up by roots from the effective area of the facility. Extensive tree roots maintain soil permeability and help retain runoff. Normal maintenance of a bioretention facility should not affect tree lifespan.

The bioretention facility can be integrated with a tree pit of the required depth and filled with structural soil. If a root barrier is used, it can be located to allow tree roots to spread throughout the bioretention facility while protecting adjacent pavement. Locations and planting elevations should be selected to avoid blocking the facility's inlets and outlets.



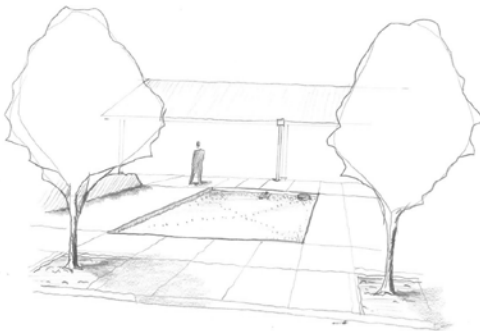
Bioretention facility configured as a tree well.
The root barrier is optional.

► **APPLICATIONS**

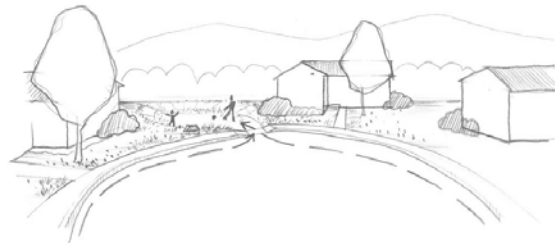
Multi-purpose landscaped areas. Bioretention facilities are easily adapted to serve multiple purposes. The loamy sand soil mix will support turf or a plant palette suitable to the location and a well-drained soil.

Example landscape treatments:

- Lawn with sloped transition to adjacent landscaping.
- Swale in setback area
- Swale in parking median
- Lawn with hardscaped edge treatment
- Decorative garden with formal or informal plantings
- Traffic island with low-maintenance landscaping
- Raised planter with seating
- Bioretention on a terraced slope



Bioretention facility configured as a recessed decorative lawn with hardscaped edge.



Bioretention facility configured and planted as a lawn/ play area.

Design Checklist for Bioretention

- Volume or depth of surface reservoir meets or exceeds minimum.
- 18" depth "loamy sand" soil mix with minimum long-term percolation rate of 5"/hour.
- Area of soil mix meets or exceeds minimum.
- Perforated pipe underdrain bedded in "Class 2 perm" with connection and sufficient head to storm drain or discharge point (except in "A" or "B" soils).
- No filter fabric.
- Underdrain has a clean-out port consisting of a vertical, rigid, non-perforated PVC pipe, with a minimum diameter of 6 inches and a watertight cap.
- Location and footprint of facility are shown on site plan and landscaping plan.
- Bioretention area is designed as a basin (level edges) or a series of basins, and grading plan is consistent with these elevations. If facility is designed as a swale, check dams are set so the lip of each dam is at least as high as the toe of the next upstream dam.
- Inlets are 12" wide, have 4"-6" reveal and an apron or other provision to prevent blockage when vegetation grows in, and energy dissipation as needed.
- Overflow connected to a downstream storm drain or approved discharge point.
- Emergency spillage will be safely conveyed overland.
- Plantings are suitable to the climate and a well-drained soil.
- Irrigation system with connection to water supply.
- Vaults, utility boxes, and light standards are located outside the minimum soil mix surface area.
- When excavating, avoid smearing of the soils on bottom and side slopes. Minimize compaction of native soils and "rip" soils if clayey and/or compacted. Protect the area from construction site runoff.

Flow-through Planter



Portland 2004 Stormwater Manual

Flow-through planters treat and detain runoff without allowing seepage into the underlying soil. They can be used next to buildings and on slopes where stability might be affected by adding soil moisture.

Flow-through planters typically receive runoff via downspouts leading from the roofs of adjacent buildings. However, they can also be set in-ground and receive sheet flow from adjacent paved areas.

Pollutants are removed as runoff passes through the soil layer and is collected in an underlying layer of gravel or drain rock. A perforated-pipe underdrain is typically connected to a storm drain or other discharge point. An overflow inlet conveys flows which exceed the capacity of the planter.

► CRITERIA

Treatment only. For development projects subject only to runoff treatment requirements, the following criteria apply:

Parameter	Criterion
Soil mix depth	18 inches minimum
Soil mix minimum percolation rate	5 inches per hour minimum sustained (10 inches per hour initial rate recommended)

Best Uses

- Management of roof runoff
- Next to buildings
- Dense urban areas
- Where infiltration is not desired

Advantages

- Can be used next to structures
- Versatile
- Can be any shape
- Low maintenance

Limitations

- Can be used for flow-control only on sites with “C” and “D” soils
- Requires underdrain
- Requires 3-4 feet of head

Parameter	Criterion
Soil mix surface area	0.04 times tributary impervious area (or equivalent)
Surface reservoir depth	6" minimum; may be sloped to 4" where adjoining walkways.
Underdrain	Typically used. Perforated pipe embedded in gravel ("Class 2 permeable" recommended), connected to storm drain or other accepted discharge point.

► **DETAILS**

Configuration. The planter must be level. To avoid standing water in the subsurface layer, set the perforated pipe underdrain and orifice as nearly flush with the planter bottom as possible.

Inlets. Protect plantings from high-velocity flows by adding rocks or other energy-dissipating structures at downspouts and other inlets.

Soil mix. The required soil mix is similar to a loamy sand. It must maintain a minimum percolation rate of 5" per hour throughout the life of the facility, and it must be suitable for maintaining plant life. Typically, on-site soils will not be suitable due to clay content.

Gravel storage and drainage layer. "Class 2 permeable," Caltrans specification 68-1.025, is recommended. Open-graded crushed rock, washed, may be used, but requires 4"-6" of washed pea gravel be substituted at the top of the crushed rock layer. **Do not use filter fabric** to separate the soil mix from the gravel drainage layer.

Emergency overflow. The planter design and installation should anticipate extreme events and potential clogging of the overflow and route emergency overflows safely.

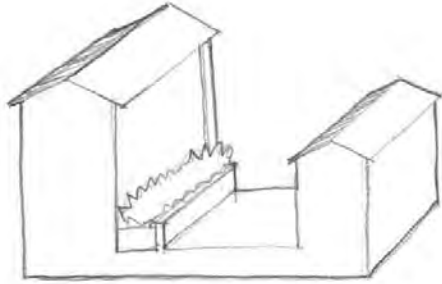
► **APPLICATIONS**

Adjacent to buildings. Flow-through planters may be located adjacent to buildings, where the planter vegetation can soften the visual effect of the building wall. A setback with a raised planter box may be appropriate even in some neo-traditional pedestrian-oriented urban streetscapes.

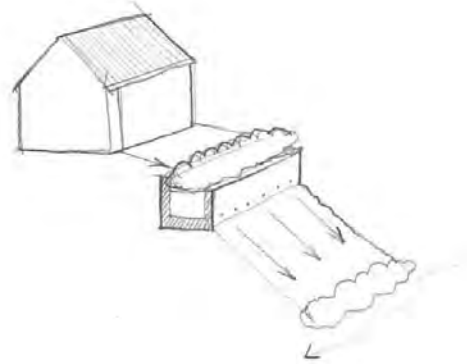
At plaza level. Flow-through planters have been successfully incorporated into podium-style developments, with the planters placed on the plaza level and receiving runoff from the tower roofs above. Runoff from the plaza level is typically managed separately by additional flow-through planters or bioretention facilities located at street level.

Steep slopes. Flow-through planters provide a means to detain and treat runoff on slopes that cannot accept infiltration from a bioretention facility. The planter can be built into the slope similar to a retaining wall. The design should consider the need to access the planter for periodic

maintenance. Flows from the planter underdrain and overflow must be directed in accordance with local requirements. It is sometimes possible to disperse these flows to the downgradient hillside.



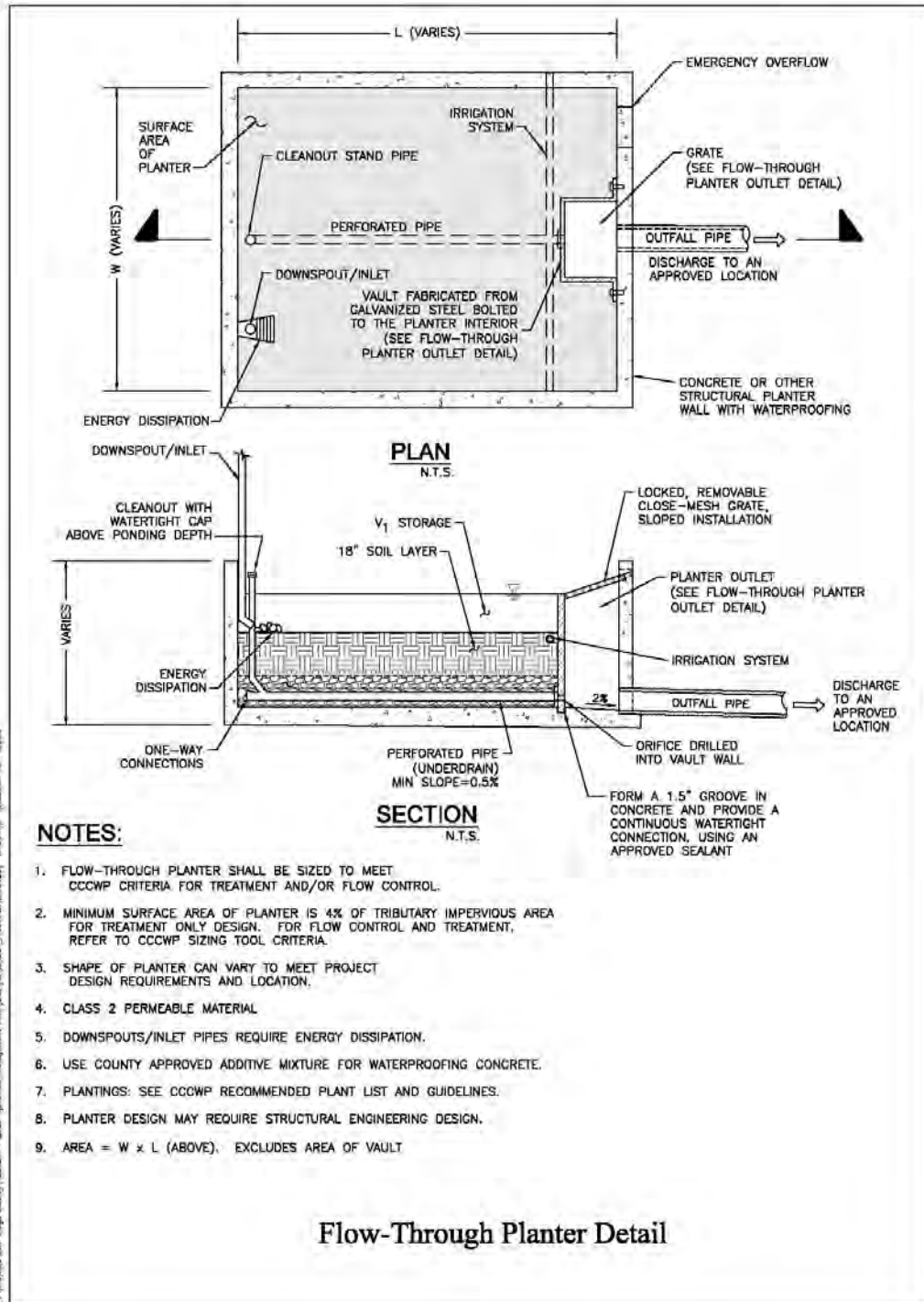
Flow-through planter on the plaza level of a podium-style development.

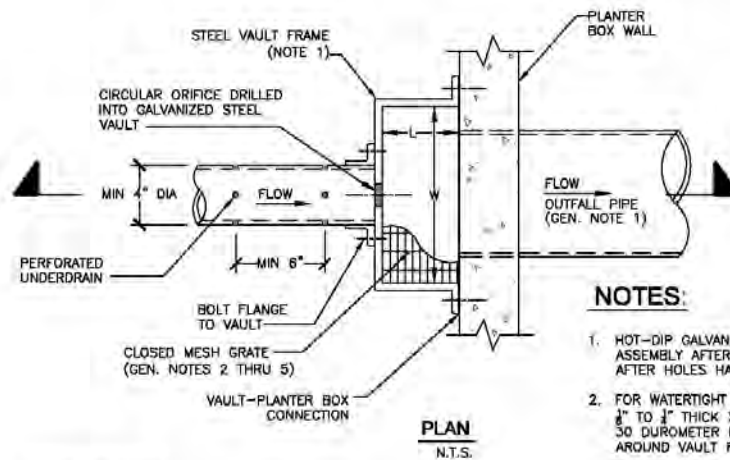


Flow-through planter built into a hillside. Flows from the underdrain and overflow must be directed in accordance with local requirements.

Design Checklist for Flow-through Planter

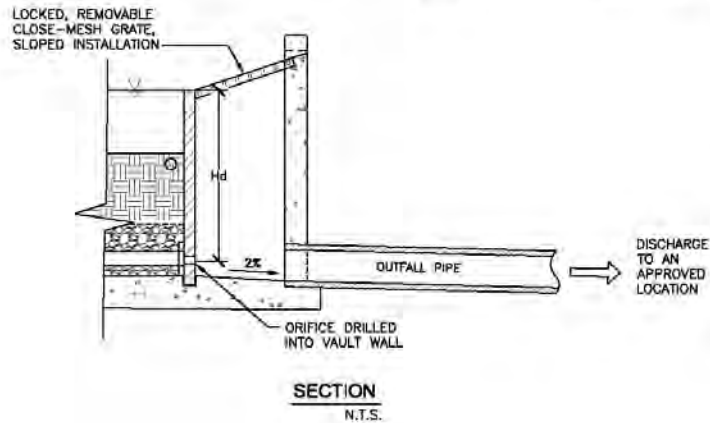
- Reservoir depth is 4-6" minimum.
- 18" depth "loamy sand" soil mix with minimum long-term infiltration rate of 5"/hour.
- Area of soil mix meets or exceeds minimum.
- "Class 2 perm" drainage layer.
- No filter fabric.
- Perforated pipe underdrain with outlet located flush or nearly flush with planter bottom. Connection with sufficient head to storm drain or discharge point.
- Underdrain has a clean-out port consisting of a vertical, rigid, non-perforated PVC pipe, with a minimum diameter of 6 inches and a watertight cap.
- Overflow connected to a downstream storm drain or approved discharge point.
- Location and footprint of facility are shown on site plan and landscaping plan.
- Planter is set level.
- Emergency spillage will be safely conveyed overland.
- Plantings are suitable to the climate and a well-drained soil.
- Irrigation system with connection to water supply.





NOTES:

1. HOT-DIP GALVANIZE ENTIRE FRAME ASSEMBLY AFTER FABRICATION AND AFTER HOLES HAVE BEEN DRILLED.
2. FOR WATERTIGHT CONNECTION, INSTALL $\frac{1}{8}$ " TO $\frac{1}{4}$ " THICK X 2" WIDE CONTINUOUS 30 DUROMETER NEOPRENE GASKET, ALL AROUND VAULT FRAME.



GENERAL OUTLET DETAIL NOTES:

1. OUTFALL PIPE SHALL BE SIZED TO CONVEY DESIGN STORM PER CCCWP DESIGN CRITERIA.
2. GRATE SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE AND PROVIDED WITH HINGED AND LOCKABLE OR BOLTABLE ACCESS PANELS.
3. GRATE SHALL BE STAINLESS STEEL, ALUMINUM OR STEEL. STEEL GRATES SHALL BE HOT DIP GALVANIZED AND MAY BE HOT POWDER PAINTED AFTER GALVANIZING.
4. GRATE SHALL BE DESIGNED SUCH THAT THE DIAGONAL DIMENSION OF EACH OPENING IS SMALLER THAN THE DIAMETER OF THE OUTFALL PIPE.
5. STRUCTURAL DESIGN OF GRATE SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF GRATE.

Flow-Through Planter Outlet Detail

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Dry Wells and Infiltration Basins

The typical dry well is a prefabricated structure, such as an open-bottomed vault or box, placed in an excavation or boring. The vault may be empty (for maximum space efficiency) or filled with rock.

An infiltration basin has the same functional components—a volume to store runoff and sufficient area to infiltrate that volume into the native soil—but is open rather than covered.

► CRITERIA

Dry wells and infiltration basins must be designed with the minimum volume calculated by Equation 4-8 using a unit volume based on the County of San Diego’s 85th Percentile Isopluvial Map.

Consult with an Authority engineer and the Environmental Affairs Department regarding the need to verify soil permeability and other site conditions are suitable for dry wells and infiltration basins. Some proposed criteria are on pages 5-12 of Caltrans’ 2004 BMP Retrofit Pilot Study Final Report (CTSW-RT-01-050).

The infiltration rate and infiltrative area must be sufficient to drain a full facility within 72 hours.

► DETAILS

Dry wells should be sited to allow for the potential future need for removal and replacement.

In locations where native soils are coarser than a medium sand, the area directly beneath the facility should be over-excavated by two feet and backfilled with sand as a groundwater protection measure.

Design Checklist for Dry Well

- Volume and infiltrative area meet or exceed minimum.
- Overflow connected to a downstream storm drain or approved discharge point.
- Emergency spillage will be safely conveyed overland.
- Depth from bottom of the facility to seasonally high groundwater elevation is ≥ 10 feet*.
- Areas tributary to the facility do not include automotive repair shops; car washes; fleet storage areas (Bus, truck, etc.); nurseries, or other uses that may present an exceptional threat to groundwater quality.
- Underlying soils are in Hydrologic Soil Group A or B. Infiltration rate is sufficient to ensure a full basin will drain completely within 72 hours. Soil infiltration rate has been confirmed.
- Set back from structures 10' or as recommended by structural or geotechnical engineer.

* References to 10 feet of separation between bottom of facility and seasonally high groundwater elevation are standard Copermittee language. See page 28 for applicability.

Best Uses

- Alternative to bioretention in areas with permeable soils

Advantages

- Compact footprint
- Can be installed in paved areas

Limitations

- Can be used only on sites with “A” and “B” soils
- Requires minimum of 10' from bottom of facility to seasonal high groundwater*
- Not suitable for drainage from some industrial areas or arterial roads
- Must be maintained to prevent clogging.

Cistern with Bioretention Facility

A cistern in series with a bioretention facility can meet treatment requirements where space is limited. In this configuration, the cistern is equipped with a flow-control orifice and the bioretention facility is sized to treat a trickle outflow from the cistern.

► CRITERIA

Cistern. The cistern must detain the volume calculated by Equation 4-8 and must include an orifice or other device designed for a 24-hour drawdown time.

Bioretention facility. See the design sheet for bioretention facilities. The area of the bioretention facility must be sized to treat the maximum discharge flow, assuming a percolation rate of 5" per hour through the engineered soil.

Use with sand filter. A cistern in series with a sand filter can meet treatment requirements. See the discussion of treatment facility selection in Chapter 2 and the design guidance for sand filters in Chapter 4.

► DETAILS

Flow-control orifice. The cistern must be equipped with an orifice plate or other device to limit flow to the bioretention area.

Preventing mosquito harborage. Cisterns should be designed to drain completely, leaving no standing water. Drains should be located flush with the bottom of the cistern. Alternatively—or in addition—all entry and exit points, should be provided with traps or sealed or screened to prevent mosquito entry. Note mosquitoes can enter through openings $\frac{1}{16}$ " or larger and will fly for many feet through pipes as small as $\frac{1}{4}$ ".

Exclude debris. Provide leaf guards and/or screens to prevent debris from accumulating in the cistern.

Ensure access for maintenance. Design the cistern to allow for cleanout. Avoid creating the need for maintenance workers to enter a confined space. Ensure the outlet orifice can be easily accessed for cleaning and maintenance.

Best Uses

- In series with a bioretention facility to meet treatment requirement in limited space.
- Management of roof runoff
- Dense urban areas

Advantages

- Storage volume can be in any configuration

Limitations

- Somewhat complex to design, build, and operate
- Requires head for both cistern and bioretention facility

► APPLICATIONS

Shallow ponding on a flat roof. The “cistern” storage volume can be designed in any configuration, including storing rainfall on the roof where it falls and draining it away slowly. See the County of San Diego’s 85th percentile isopluvial diagrams for required average depths.

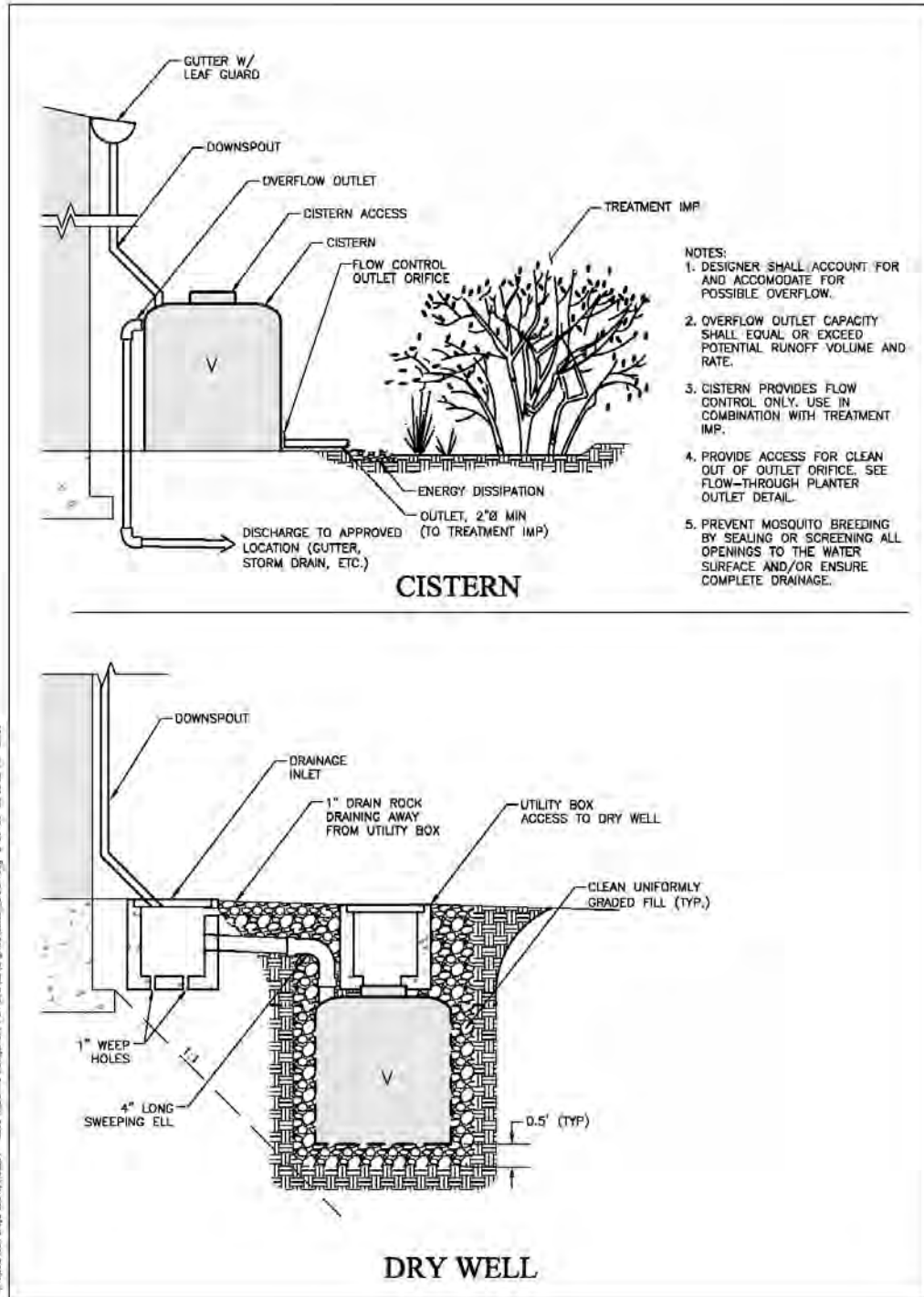
Cistern attached to a building and draining to a planter. This arrangement allows a planter box to be constructed with a smaller area.

Vault with pumped discharge to bioretention facility. In this arrangement, runoff from a parking lot and/or building roofs can be captured and detained underground and then pumped to a bioretention facility on the surface. Alternatively, treatment can be accomplished with a sand filter. See the discussion of selection of stormwater treatment facilities in Chapter 2.

Water harvesting or graywater reuse. It may be possible to create a site-specific design that uses cisterns to achieve stormwater flow control, stormwater treatment, and rainwater reuse for irrigation or indoor uses (**water harvesting**). Facilities must meet criteria for capturing and treating the volume specified by Equation 4-8. This volume must be allowed to empty within 24 hours so runoff from additional storms, which may follow, is also captured and treated. Additional volume may be required if the system also stores runoff for longer periods for reuse. Indoor uses of non-potable water may be restricted or prohibited. Check with Environmental Affairs Department staff.

Design Checklist for Cistern

- Volume meets or exceeds minimum.
- Outlet with orifice or other flow-control device restricts flow and is designed to provide a 24-hour drawdown time.
- Outlet is piped to a bioretention facility designed to treat the maximum discharge from the cistern orifice.
- Cistern is designed to drain completely and/or sealed to prevent mosquito harborage.
- Design provides for exclusion of debris and accessibility for maintenance.
- Overflow connected to a downstream storm drain or approved discharge point.
- Emergency spillage will be safely conveyed overland.



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Chapter 5 – OPERATION & MAINTENANCE OF STORMWATER FACILITIES

The stormwater Municipal Permit requires that the Authority verify all treatment and flow-control facilities are adequately maintained. Facilities installed as part of the project will be verified for effectiveness and proper performance. The Authority will also verify the ongoing function of stormwater management features that are not treatment or flow control facilities, such as permeable pavements and limitations on impervious area. This chapter describes how to prepare a customized Stormwater Maintenance Plan for the treatment BMPs on the project site.

For projects within the Authority jurisdiction, storm water BMP maintenance will be provided by the Authority for capital projects (i.e., public entity maintenance) and will be provided by individual tenants for tenant projects (i.e., through lease provisions). As part of project review for both capital and tenant priority projects that include interim or permanent structural BMPs, the Authority will verify that appropriate mechanisms are in-place. Maintenance requirements identified in below are required by the Municipal Permit and the Model SUSMP.

Maintenance Mechanisms

The maintenance mechanisms below apply to Authority projects:

1. Public entity maintenance: The Authority will provide storm water BMP maintenance for its capital projects. Funding will be provided on an on-going basis through the inclusion of maintenance costs in annual operating budgets for any departments having BMP maintenance responsibility.
1. Lease provisions: The Authority will assure storm water BMP maintenance, repair and replacement of tenant projects through conditions in tenant leases.
2. Other Mechanisms: On a case-by-case basis, the Authority may consider other mechanisms for treatment BMP maintenance such as inclusion of maintenance conditions in a use permit; or alternative mechanisms, subject to Environmental Affairs approval.

Verification Mechanisms

For discretionary projects, storm water BMP maintenance requirements shall be incorporated into the project plan approval conditions, and shall be consistent with permits issued by resource agencies, before decision-maker approval of discretionary permits. For projects requiring ministerial approvals, storm water BMP maintenance requirements will be incorporated into the lease conditions or conditions of approval before the issuance of the approval.

Sample conditions included in Project Plan Approval Letters for tenant projects are provided in Attachment D.

For capital projects requiring structural treatment BMPs, the Authority will establish a method of storm water BMP maintenance prior to the commencement of construction.

In all instances, the project proponent shall provide proof of execution of an Authority-approved method of maintenance repair and replacement before the issuance of construction approvals.

Maintenance Requirements

1. Operation & Maintenance (O&M) Plan – The Authority will require that a copy of a satisfactory Operation & Maintenance (O&M) plan, prepared by the tenant/project proponent is included with the USWMP prior to construction. The O&M Plan must describe the designated responsible party to manage the storm water BMP(s), any necessary employee training and duties, operating schedule, maintenance frequency, specific maintenance activities, copies of resource agency permits, and any other necessary activities. At a minimum, the O&M Plan shall require the inspection and servicing of all structural BMPs on an annual basis. The tenant shall document all maintenance requirements and shall retain records for at least 5 years. These documents shall be made available to the Authority for inspection upon request at any time. O&M Plans will also be prepared for capital projects that include structural BMPs.
2. Access Easement/Agreement: The Authority maintains rights to access tenant properties as part of lease provisions. These rights extend to any access required related to structural BMPs.

Maintenance Plans

The staged process for the operation and maintenance of stormwater facilities is detailed below:

Stage 1: General Maintenance Requirements

Include in the Project Submittal a general description of anticipated facility maintenance requirements. This will help ensure that:

- Ongoing costs of maintenance have been considered in the facility selection and design.
- Site and landscaping plans provide for access for inspections and by maintenance equipment.
- Landscaping plans incorporate irrigation requirements for facility plantings.
- Initial maintenance and replacement of facility plantings is incorporated into landscaping contracts and guarantees.

Fact sheets available on the Project Clean Water website describe general maintenance requirements for the types of stormwater facilities featured in the LID Design Guide (see Chapter 4). This information can be used to specify general maintenance requirements in the Project Submittal.

Maintenance fact sheets for conventional stormwater facilities are available in the California Stormwater BMP Handbooks.

Stage 2: Detailed Maintenance Plan

Prepare a detailed maintenance plan and submit it as required by the Authority. The Authority may require a detailed maintenance plan be included with the initial Project Submittal; or may wish that the detailed maintenance plan incorporate solutions to any problems or changes that occurred during project construction.

The detailed maintenance plan should be kept on-site for use by maintenance personnel and during site inspections. It is also recommended that a copy of the initial Project Submittal be kept onsite as a reference.

► THE DETAILED MAINTENANCE PLAN: STEP BY STEP

The following step-by-step guidance will help in the preparation of the detailed maintenance plan.

Preparation of the plan will require familiarity with the stormwater facilities as they have been or will be constructed and a fair amount of “thinking through” plans for their operation and maintenance.

CHAPTER 5: OPERATION & MAINTENANCE OF STORMWATER FACILITIES

► STEP 1: DESIGNATE RESPONSIBLE INDIVIDUALS

To begin creating the detailed maintenance plan, designate and identify:

- The individual who will have direct responsibility for the maintenance of stormwater controls. This individual should be the designated contact with Authority inspectors and should sign self-inspection reports and any correspondence with the Authority regarding verification inspections.
- Employees or contractors who will report to the designated contact and are responsible for carrying out BMP operation and maintenance.
- The corporate officer authorized to negotiate and execute any contracts that might be necessary for future changes to operation and maintenance or to implement remedial measures if problems occur.
- The designated respondent to problems, such as clogged drains or broken irrigation mains, that would require immediate response should they occur during off-hours.

Updated contact information must be provided to the Authority immediately whenever a lease is transferred and whenever designated individuals or contractors change.

Draw or sketch an **organization chart** to show the relationships of authority and responsibility between the individuals responsible for maintenance. This need not be elaborate, particularly for smaller organizations.

Describe how **funding for BMP operation and maintenance** will be assured, including sources of funds, budget category for expenditures, process for establishing the annual maintenance budget, and process for obtaining authority should unexpected expenditures for major corrective maintenance be required.

Describe how the organization will accommodate initial **training** of staff or contractors regarding the purpose, mode of operation, and maintenance requirements for the stormwater facilities on the site. Also, describe how the organization will ensure ongoing training as needed and in response to staff changes.

► STEP 2: SUMMARIZE DRAINAGE AND BMPS

Incorporate the following information from the Project Submittal into the maintenance plan:

- Figures delineating and designating pervious and impervious areas.
- Figures showing locations of stormwater facilities on the site.
- Tables of pervious and impervious areas served by each facility.

Review the Project Submittal narrative, if any, that describes each facility and its tributary drainage area and update the text to incorporate any changes that may have occurred during plan review, permit reviews, or construction. Incorporate the updated text into the maintenance plan.

► **STEP 3: DOCUMENT FACILITIES “AS BUILT”**

Include the following information from final construction drawings:

- Plans, elevations, and details of all facilities. Annotate if necessary with designations used in the initial Project Submittal.
- Design information or calculations submitted in the detailed design phase (i.e., not included in the initial Project Submittal.)
- Specifications of construction for facilities, including sand or soil, compaction, pipe materials and bedding.

In the maintenance plan, note field changes to design drawings, including changes to any of the following:

- Location and layouts of inflow piping, flow splitter boxes, and piping to off-site discharge
- Depths and layering of soil, sand, or gravel
- Placement of filter fabric or geotextiles
- Changes or substitutions in soil or other materials.
- Natural soils encountered (e.g., sand or clay lenses)

► **STEP 4: PREPARE MAINTENANCE PLANS FOR EACH FACILITY**

Prepare a maintenance plan, schedule, and inspection checklists (routine, annual, and after major storms) for each facility. Plans and schedules for two or more similar facilities on the same site may be combined.

Use the following resources to prepare the customized maintenance plan, schedule, and checklists.

- Specific information noted in Steps 2 and 3, above.
- Other input from the facility designer, Authority staff, or other sources.
- Operation and Maintenance Fact Sheets (available on the Project Clean Water website).

Note any particular characteristics or circumstances that could require attention in the future, and include any troubleshooting advice.

Also include manufacturer’s data, operating manuals, and maintenance requirements for any:

- Pumps or other mechanical equipment.
- Proprietary devices used as BMPs.

**CHAPTER 5: OPERATION & MAINTENANCE
OF STORMWATER FACILITIES**

Manufacturers' publications should be referenced in the text (including models and serial numbers where available). Copies of the manufacturers' publications should be included as an attachment in the back of the maintenance plan or as a separate document.

► **STEP 5: COMPILE MAINTENANCE PLAN**

The following general outline is provided as an example. Check with the Environmental Affairs Department for specific requirements.

- I. Inspection and Maintenance Log
- II. Updates, Revisions and Errata
- III. Introduction
 - A. Narrative overview describing the site; drainage areas, routing, and discharge points; and treatment facilities.
- IV. Responsibility for Maintenance
 - A. General
 - (1) Name and contact information for responsible individual(s).
 - (2) Organization chart or charts showing organization of the maintenance function and location within the overall organization.
 - (3) Reference to Operation and Maintenance Agreement (if any). A copy of the agreement should be attached.
 - (4) Maintenance Funding
 - (1) Sources of funds for maintenance
 - (2) Budget category or line item
 - (3) Description of procedure and process for ensuring adequate funding for maintenance
 - B. Staff Training Program
 - C. Records
 - D. Safety
- V. Summary of Drainage Areas and Stormwater Facilities
 - A. Drainage Areas
 - (1) Drawings showing pervious and impervious areas (from initial Project Submittal).
 - (2) Designation and description of each drainage area and how flow is routed to the corresponding facility.

- B. Treatment and Flow-Control Facilities
 - (1) Drawings showing location and type of each facility
 - (2) General description of each facility (Consider a table if more than two facilities)
 - (1) Area drained and routing of discharge.
 - (2) Facility type and size
- VI. Facility Documentation
 - A. “As-built” drawings of each facility (design drawings in the draft Plan)
 - B. Manufacturer’s data, manuals, and maintenance requirements for pumps, mechanical or electrical equipment, and proprietary facilities (include a “placeholder” in the draft plan for information not yet available).
 - C. Specific operation and maintenance concerns and troubleshooting
- VII. Maintenance Schedule or Matrix
 - A. Maintenance Schedule for each facility with specific requirements for:
 - (1) Routine inspection and maintenance
 - (2) Annual inspection and maintenance
 - (3) Inspection and maintenance after major storms
 - B. Service Agreement Information

Assemble and make copies of the maintenance plan. One copy must be submitted to the Environmental Affairs Department, and at least one copy kept on-site. Here are some suggestions for formatting the maintenance plan:

- Format plans to 8½" x 11" to facilitate duplication, filing, and handling.
- Include the revision date in the footer on each page.
- Scan graphics and incorporate with text into a single electronic file. Keep an electronic backed-up file in case the hard copy is lost or damaged.

► **STEP 6: UPDATES**

The maintenance plan will be **a living document**.

The maintenance plan should be updated when operation and maintenance personnel change; mechanical equipment may be replaced, or additional maintenance procedures are added.

Updates may be transmitted to the Environmental Affairs Department at any time. However, at a minimum, updates to the maintenance plan must accompany the annual inspection report.

Stage 3: Interim Maintenance

Applicants will typically be required to warranty stormwater facilities against lack of performance due to flaws in design or construction. The warranty may need to be secured by a bond or other financial instrument.

Stage 4: Transfer Responsibility

As part of the detailed maintenance plan, note the expected date when responsibility for operation and maintenance will be transferred. Notify the Authority when this transfer of responsibility takes place.

Stage 5: Operation & Maintenance Verification

The Authority implements an operation and maintenance verification program, including periodic site inspections.

Contact the Environmental Affairs Department staff to determine the frequency of inspections, whether self-inspections are allowed, and applicable fees, if any.

References and Resources

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- *Stormwater Management Manual* (Portland, 2004). Chapter 3.
- *California Storm Water Best Management Practice Handbooks* (CASQA, 2003).
- *Best Management Practices Guide* (Public Telecommunications Center for Hampton Roads, 2002).
- Operation, Maintenance, and Management of Stormwater Management Systems (Watershed Management Institute, 1997)

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APPENDIX A—GLOSSARY

- Best Management Practice (BMP)** Any procedure or device designed to minimize the quantity of pollutants that enter the storm drain system.
- California Association of Stormwater Quality Agencies (CASQA)** Publisher of the California Stormwater Best Management Practices Handbooks, available at www.cabmphandbooks.com. Successor to the Storm Water Quality Task Force (SWQTF).
- California BMP Method** A method for determining the required volume of stormwater treatment facilities. Described in Section 5.5.1 of the California Stormwater Best Management Practice Manual (New Development) (CASQA, 2003).
- Conditions of Approval (COAs)** Requirements a jurisdiction may adopt for a project in connection with a discretionary action (e.g., adoption of an EIR or negative declaration or issuance of a use permit). COAs may include features to be incorporated into the final plans for the project and may also specify uses, activities, and operational measures that must be observed over the life of the project.
- Continuous Simulation Modeling** A method of hydrological analysis in which a set of rainfall data (typically hourly for 30 years or more) is used as input, and runoff rates are calculated on the same time step. The output is then analyzed statistically for the purposes of comparing runoff patterns under different conditions (for example, pre- and post-development-project).
- Copermittees** See **Dischargers**.
- Detention** The practice of holding stormwater runoff in ponds, vaults, within berms, or in depressed areas and letting it discharge slowly to the storm drain system. See definitions of **infiltration** and **retention**.
- Direct Discharge** Connection of project site runoff to an exempt receiving water body, which could include an exempt river reach, reservoir or lagoon. To qualify as a direct discharge, the discharge elevation from the project site outfall must be below the elevations detailed in the HMP Applicability section of this Model SUSMP.
- Direct Infiltration** Infiltration via methods or devices, such as infiltration facilities or infiltration trenches, designed to bypass unsaturated surface soils and transmit runoff directly to groundwater.
- Directly Connected Impervious Area** Any impervious surface which drains into a catch basin, area drain, or other conveyance structure without first allowing flow across pervious areas (e.g. lawns).
- Dischargers** The agencies named in the **stormwater NPDES permit** (see definition): the County of San Diego; the Cities of Carlsbad, El Cajon, La Mesa, Poway, Solana Beach, Chula Vista, Encinitas, Lemon Grove, San Diego, Vista, Coronado, Escondido, National City, San Marcos, Del Mar, Imperial Beach, Oceanside, and Santee; the San Diego Unified Port District, and the San Diego County Regional Airport Authority.
- Drainage Management Areas** Areas delineated on a map of the development site showing how drainage is detained, dispersed, or directed to **Integrated Management Practices**. There are four types of Drainage Management Areas, and specific criteria apply to each type of area. See Chapter 4.

Drawdown time	The time required for a stormwater detention or infiltration facility to drain and return to the dry-weather condition. For detention facilities, drawdown time is a function of basin volume and outlet orifice size. For infiltration facilities, drawdown time is a function of basin volume and infiltration rate.
Environmentally Sensitive Areas	Areas that include but are not limited to all Clean Water Act Section 303(d) impaired water bodies; areas designated as Areas of Special Biological Significance by the State Water Resources Control Board (Water Quality Control Plan for the San Diego Basin (1994) and amendments); water bodies designated with the RARE beneficial use by the State Water Resources Control Board (Water Quality Control Plan for the San Diego Basin (1994) and amendments); areas designated as preserves or their equivalent under the Multi Species Conservation Program within the Cities and County of San Diego; and any other equivalent environmentally sensitive areas which have been identified by the Copermittees.
Flow Control	Control of runoff rates and durations as required by the Hydromodification Management Plan.
Head	In hydraulics, energy represented as a difference in elevation. In slow-flowing open systems, the difference in water surface elevation, e.g., between an inlet and outlet.
Higher-Rate Biofilter	A biofilter with a design surface loading rate higher than the 5 inches per hour rate specified in this document for bioretention facilities and planter boxes.
Hydrograph	Runoff flow rate plotted as a function of time.
Hydromodification Management Plan (HMP)	A Plan implemented by the dischargers so that post-project runoff shall not exceed estimated pre-project rates and/or durations, where increased runoff would result in increased potential for erosion or other adverse impacts to beneficial uses. Also see definition for flow control .
Hydrologic Soil Group	Classification of soils by the Natural Resources Conservation Service (NRCS) into A, B, C, and D groups according to infiltration capacity.
Impervious surface	Any material that prevents or substantially reduces infiltration of water into the soil. See discussion of imperviousness in Chapter Two.
Infeasible	As applied to best management practices, impossible to implement because of technical constraints specific to the site.
Infiltration	Seepage of runoff into soils underlying the site. See definition of retention.
Infiltration Device	Any structure, such as a dry well, that is designed to infiltrate stormwater into the subsurface and, as designed, bypasses the natural groundwater protection afforded by surface or near-surface soil. See definition for direct infiltration.
Integrated Management Practice (IMP)	A facility (BMP) that provides small-scale treatment, retention, and/or detention and is integrated into site layout, landscaping and drainage design. See Low Impact Development.

Integrated Pest Management (IPM)	An approach to pest management that relies on information about the life cycles of pests and their interaction with the environment. Pest control methods are applied with the most economical means and with the least possible hazard to people, property, and the environment.
Jurisdictional Urban Runoff Management Plan (JURMP)	A written description of the specific jurisdictional urban runoff management measures and programs that each Copermittee implements to comply with the stormwater Municipal Permit and ensure pollutant discharges are reduced to the MEP and do not cause or contribute to a violation of water quality standards. See Stormwater Pollution Prevention Program.
Lead Agency	The public agency that has the principal responsibility for carrying out or approving a project. (CEQA Guidelines §15367).
Low Impact Development	An integrated site design methodology that uses small-scale detention and retention (Integrated Management Practices, or IMPs) to mimic pre-existing site hydrological conditions.
Maximum Extent Practicable (MEP)	Standard, established by the 1987 amendments to the Clean Water Act, for the implementation of municipal stormwater pollution prevention programs (see definition). According to the Act, municipal stormwater NPDES Permits “shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.”
Municipal Permit	As used in this document, NPDES Permit No. CAS0108758 reissued in January 2007 by the California Regional Water Quality Control Board for the San Diego Region (RWQCB) as RWQCB Order No. R9-2007-0001, and any future modifications to or reissuances of which requires, supports, or justifies this SUSMP document.
National Pollutant Discharge Elimination System (NPDES)	As part of the 1972 Clean Water Act, Congress established the NPDES Permitting system to regulate the discharge of pollutants from municipal sanitary sewers and industries. The NPDES was expanded in 1987 to incorporate permits for stormwater discharges as well.
Numeric Criteria	Sizing requirements for stormwater treatment facilities established in Provision D.1.d.(6)(c) of the Municipal Permit.
Operation and Maintenance (O&M)	Refers to requirements in the Municipal Permit to inspect treatment BMPs and implement preventative and corrective maintenance in perpetuity. See Chapter 5.
Parking Lot	A land area or facility for the temporary parking or storage of motor vehicles used personally, for business, or for commerce.
Permeable Pavements	Pavements for roadways, sidewalks, or plazas that are designed to infiltrate a portion of rainfall, including pervious concrete, pervious asphalt, unit-pavers-on-sand, and crushed gravel.

Priority Development Project	A project subject to SUSMP requirements. Defined in Stormwater Municipal Permit Provision D.1.d.(1). See Chapter 1.
Project Area	The entire project area comprises all areas to be altered or developed by the project, plus any additional areas that drain on to areas to be altered or developed.
Project Submittal	Documents submitted to a jurisdiction in connection with an application for development approval and demonstrating compliance with Stormwater NPDES Permit requirements for the project. Specific requirements vary from jurisdiction to jurisdiction.
Proprietary	A proprietary device is one marketed under legal right of the manufacturer.
Redevelopment	<p>The creation, addition, and or replacement of impervious surface on an already developed site. Examples include the expansion of a building footprint, road widening, the addition to or replacement of a structure, and creation or addition of impervious surfaces.</p> <p>Replacement of impervious surfaces includes any activity that is not part of a routine maintenance activity where impervious material(s) are removed, exposing underlying soil during construction. Redevelopment does not include trenching and resurfacing associated with utility work; resurfacing and reconfiguring surface parking lots and existing roadways; new sidewalk construction, pedestrian ramps, or bikelane on existing roads; and routine replacement of damaged pavement, such as pothole repair.</p>
Rational Method	A method of calculating runoff flows based on rainfall intensity, tributary area, and a factor representing the proportion of rainfall that runs off.
Regional (or Watershed) Stormwater Treatment Facility	A facility that treats runoff from more than one project or parcel.
Regional Water Quality Control Board (RWQCB)	California RWQCBs are responsible for implementing pollution control provisions of the Clean Water Act and California Water Code within their jurisdiction. There are nine California RWQCBs.
Retention	The practice of holding stormwater in ponds or basins, or within berms or depressed areas, and allowing it to slowly infiltrate into underlying soils. Some portion will evaporate. See definitions for infiltration and detention.
Self-retaining area	An area designed to retain runoff. Self-retaining areas may include graded depressions with landscaping or pervious pavements and may also include tributary impervious areas up to a 2:1 impervious-to-pervious ratio.
Self-treating area	A natural, landscaped, or turf area drains directly off site or to the public storm drain system.
Source Control BMP (both structural and non-structural)	Land use or site planning practices, or structures that aim to prevent urban runoff pollution by reducing the potential for contamination at the source of pollution. Source control BMPs minimize the contact between pollutants and urban runoff. Examples include roof structures over trash or material storage areas, and berms around fuel dispensing areas.

Source Control	Land use or site planning practices, or structural or nonstructural measures that aim to prevent urban runoff pollution by reducing the potential for contamination at the source of pollution. Source control BMPs minimize the contact between pollutants and urban runoff.
Standard Industrial Classification (SIC)	A Federal government system for classifying industries by 4-digit code. It is being supplanted by the North American Industrial Classification System but SIC codes are still referenced by the RWQCB in identifying development sites subject to regulation under the Municipal Permit. Information and an SIC search function are available at http://www.bls.gov/bls/NAICS.htm
Stormwater NPDES Permit	A permit issued by a Regional Water Quality Control Board (see definition) to local government agencies (Dischargers) placing provisions on allowable discharges of municipal stormwater to waters of the state.
Storm Water Pollution Prevention Plan (SWPPP)	A plan providing for temporary measures to control sediment and other pollutants during construction as required by the statewide stormwater NPDES Permit for construction activities.
Stormwater Pollution Prevention Program	A comprehensive program of activities designed to minimize the quantity of pollutants entering storm drains. See Jurisdictional Urban Runoff Management Plan.
Standard Urban Stormwater Mitigation Plan (SUSMP)	Refers to various documents prepared in connection with implementation of the Municipal Permit mandate to control pollutants from new development and redevelopment. Each discharger will adapt the Model SUSMP to create a local SUSMP for their respective jurisdiction. Applicants for development project approvals will use the local SUSMP to prepare a submittal for each Priority Development Project they propose.
Treatment	Removal of pollutants from runoff, typically by filtration or settling.
Water Board	See Regional Water Quality Control Board .
Water Quality Volume (WQV)	For stormwater treatment facilities that depend on detention to work, the volume of water that must be detained to achieve maximum extent practicable pollutant removal. This volume of water must be detained for a specified drawdown time.

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APPENDIX B

How to use this worksheet (also see instructions on pages 34-35 of the *Countywide Model SUSMP*):

1. Review Column 1 and identify which of these potential sources of stormwater pollutants apply to the site. Check each box that applies.
2. Review Column 2 and incorporate all of the corresponding applicable BMPs in the Project-Specific SUSMP drawings.
3. Review Columns 3 and 4 and incorporate all of the corresponding applicable permanent controls and operational BMPs in a table in the Project-Specific SUSMP. Use the format shown in Table 3-1 on page 35 of the *Countywide Model SUSMP*. Describe the specific BMPs in an accompanying narrative, and explain any special conditions or situations that required omitting BMPs or substituting alternatives.

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN THE STORMWATER CONTROL PLAN SHOULD INCLUDE THESE SOURCE CONTROL BMPs		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on SUSMP Drawings	3 Permanent Controls—List in SUSMP Table and Narrative	4 Operational BMPs—Include in SUSMP Table and Narrative
<input type="checkbox"/> A. On-site storm drain inlets	<input type="checkbox"/> Locations of inlets.	<input type="checkbox"/> Mark all inlets with the words “No Dumping! Flows to Bay” or similar.	<input type="checkbox"/> Maintain and periodically repaint or replace inlet markings. <input type="checkbox"/> Provide stormwater pollution prevention information to new site owners, lessees, or operators. <input type="checkbox"/> See applicable operational BMPs in Fact Sheet SC-44, “Drainage System Maintenance,” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com <input type="checkbox"/> Include the following in lease agreements: “Tenant shall not allow anyone to discharge anything to storm drains or to store or deposit materials so as to create a potential discharge to storm drains.”
<input type="checkbox"/> B. Interior floor drains and elevator shaft sump pumps		<input type="checkbox"/> State that interior floor drains and elevator shaft sump pumps will be plumbed to sanitary sewer.	<input type="checkbox"/> Inspect and maintain drains to prevent blockages and overflow.

APPENDIX B

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN THE STORMWATER CONTROL PLAN SHOULD INCLUDE THESE SOURCE CONTROL BMPs		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on SUSMP Drawings	3 Permanent Controls—List in SUSMP Table and Narrative	4 Operational BMPs—Include in SUSMP Table and Narrative
<input type="checkbox"/> C. Interior parking garages		<input type="checkbox"/> State that parking garage floor drains will be plumbed to the sanitary sewer.	<input type="checkbox"/> Inspect and maintain drains to prevent blockages and overflow.
<input type="checkbox"/> D1. Need for future indoor & structural pest control		<input type="checkbox"/> Note building design features that discourage entry of pests.	<input type="checkbox"/> Provide Integrated Pest Management information to owners, lessees, and operators.
<input type="checkbox"/> D2. Landscape/ Outdoor Pesticide Use	<input type="checkbox"/> Show locations of native trees or areas of shrubs and ground cover to be undisturbed and retained. <input type="checkbox"/> Show self-retaining landscape areas, if any. <input type="checkbox"/> Show stormwater treatment facilities.	State that final landscape plans will accomplish all of the following. <input type="checkbox"/> Preserve existing native trees, shrubs, and ground cover to the maximum extent possible. <input type="checkbox"/> Design landscaping to minimize irrigation and runoff, to promote surface infiltration where appropriate, and to minimize the use of fertilizers and pesticides that can contribute to stormwater pollution. <input type="checkbox"/> Where landscaped areas are used to retain or detain stormwater, specify plants that are tolerant of saturated soil conditions. <input type="checkbox"/> Consider using pest-resistant plants, especially adjacent to hardscape. <input type="checkbox"/> To insure successful establishment, select plants appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency, and plant interactions.	<input type="checkbox"/> Maintain landscaping using minimum or no pesticides. <input type="checkbox"/> See applicable operational BMPs in Fact Sheet SC-41, “Building and Grounds Maintenance,” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com <input type="checkbox"/> Provide IPM information to new owners, lessees and operators.

APPENDIX B

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN THE STORMWATER CONTROL PLAN SHOULD INCLUDE THESE SOURCE CONTROL BMPs		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on SUSMP Drawings	3 Permanent Controls—List in SUSMP Table and Narrative	4 Operational BMPs—Include in SUSMP Table and Narrative
<input type="checkbox"/> E. Pools, spas, ponds, decorative fountains, and other water features.	<input type="checkbox"/> Show location of water feature and a sanitary sewer cleanout in an accessible area within 10 feet.	<input type="checkbox"/> If the local jurisdiction requires pools to be plumbed to the sanitary sewer, place a note on the plans and state in the narrative that this connection will be made according to local requirements.	<input type="checkbox"/> See applicable operational BMPs in Fact Sheet SC-72, “Fountain and Pool Maintenance,” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com
<input type="checkbox"/> F. Food service	<input type="checkbox"/> For restaurants, grocery stores, and other food service operations, show location (indoors or in a covered area outdoors) of a floor sink or other area for cleaning floor mats, containers, and equipment. <input type="checkbox"/> On the drawing, show a note that this drain will be connected to a grease interceptor before discharging to the sanitary sewer.	<input type="checkbox"/> Describe the location and features of the designated cleaning area. <input type="checkbox"/> Describe the items to be cleaned in this facility and how it has been sized to insure that the largest items can be accommodated.	<input type="checkbox"/>

APPENDIX B

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN THE STORMWATER CONTROL PLAN SHOULD INCLUDE THESE SOURCE CONTROL BMPs		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on SUSMP Drawings	3 Permanent Controls—List in SUSMP Table and Narrative	4 Operational BMPs—Include in SUSMP Table and Narrative
<input type="checkbox"/> G. Refuse areas	<input type="checkbox"/> Show where site refuse and recycled materials will be handled and stored for pickup. See local jurisdictional requirements for sizes and other details of refuse areas. <input type="checkbox"/> If dumpsters or other receptacles are outdoors, show how the designated area will be covered, graded, and paved to prevent runoff and show locations of berms to prevent runoff from the area. <input type="checkbox"/> Any drains from dumpsters, compactors, and tallow bin areas shall be connected to a grease removal device before discharge to sanitary sewer.	<input type="checkbox"/> State how site refuse will be handled and provide supporting detail to what is shown on plans. <input type="checkbox"/> State that signs will be posted on or near dumpsters with the words “Do not dump hazardous materials here” or similar.	<input type="checkbox"/> State how the following will be implemented: Provide adequate number of receptacles. Inspect receptacles regularly; repair or replace leaky receptacles. Keep receptacles covered. Prohibit/prevent dumping of liquid or hazardous wastes. Post “no hazardous materials” signs. Inspect and pick up litter daily and clean up spills immediately. Keep spill control materials available on-site. See Fact Sheet SC-34, “Waste Handling and Disposal” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com
<input type="checkbox"/> H. Industrial processes.	<input type="checkbox"/> Show process area.	<input type="checkbox"/> If industrial processes are to be located on site, state: “All process activities to be performed indoors. No processes to drain to exterior or to storm drain system.”	<input type="checkbox"/> See Fact Sheet SC-10, “Non-Stormwater Discharges” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

APPENDIX B

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN THE STORMWATER CONTROL PLAN SHOULD INCLUDE THESE SOURCE CONTROL BMPs		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on SUSMP Drawings	3 Permanent Controls—List in SUSMP Table and Narrative	4 Operational BMPs—Include in SUSMP Table and Narrative
<input type="checkbox"/> I. Outdoor storage of equipment or materials. (See rows J and K for source control measures for vehicle cleaning, repair, and maintenance.)	<input type="checkbox"/> Show any outdoor storage areas, including how materials will be covered. Show how areas will be graded and bermed to prevent run-on or run-off from area. <input type="checkbox"/> Storage of non-hazardous liquids shall be covered by a roof and/or drain to the sanitary sewer system, and be contained by berms, dikes, liners, or vaults. <input type="checkbox"/> Storage of hazardous materials and wastes must be in compliance with the local hazardous materials ordinance and a Hazardous Materials Management Plan for the site.	<input type="checkbox"/> Include a detailed description of materials to be stored, storage areas, and structural features to prevent pollutants from entering storm drains. Where appropriate, reference documentation of compliance with the requirements of local Hazardous Materials Programs for: <ul style="list-style-type: none"> ▪ Hazardous Waste Generation ▪ Hazardous Materials Release Response and Inventory ▪ California Accidental Release (CalARP) ▪ Aboveground Storage Tank ▪ Uniform Fire Code Article 80 Section 103(b) & (c) 1991 ▪ Underground Storage Tank 	<input type="checkbox"/> See the Fact Sheets SC-31, “Outdoor Liquid Container Storage” and SC-33, “Outdoor Storage of Raw Materials ” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

APPENDIX B

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN THE STORMWATER CONTROL PLAN SHOULD INCLUDE THESE SOURCE CONTROL BMPs		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on SUSMP Drawings	3 Permanent Controls—List in SUSMP Table and Narrative	4 Operational BMPs—Include in SUSMP Table and Narrative
<input type="checkbox"/> J. Vehicle and Equipment Cleaning	<input type="checkbox"/> Show on drawings as appropriate: (1) Commercial/industrial facilities having vehicle /equipment cleaning needs shall either provide a covered, bermed area for washing activities or discourage vehicle/equipment washing by removing hose bibs and installing signs prohibiting such uses. (2) Multi-dwelling complexes shall have a paved, bermed, and covered car wash area (unless car washing is prohibited on-site and hoses are provided with an automatic shut-off to discourage such use). (3) Washing areas for cars, vehicles, and equipment shall be paved, designed to prevent run-on to or runoff from the area, and plumbed to drain to the sanitary sewer. (4) Commercial car wash facilities shall be designed such that no runoff from the facility is discharged to the storm drain system. Wastewater from the facility shall discharge to the sanitary sewer, or a wastewater reclamation system shall be installed.	<input type="checkbox"/> If a car wash area is not provided, describe measures taken to discourage on-site car washing and explain how these will be enforced.	Describe operational measures to implement the following (if applicable): <input type="checkbox"/> Washwater from vehicle and equipment washing operations shall not be discharged to the storm drain system. <input type="checkbox"/> Car dealerships and similar may rinse cars with water only. <input type="checkbox"/> See Fact Sheet SC-21, “Vehicle and Equipment Cleaning,” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

APPENDIX B

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN THE STORMWATER CONTROL PLAN SHOULD INCLUDE THESE SOURCE CONTROL BMPs		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on SUSMP Drawings	3 Permanent Controls—List in SUSMP Table and Narrative	4 Operational BMPs—Include in SUSMP Table and Narrative
<input type="checkbox"/> K. Vehicle/Equipment Repair and Maintenance	<input type="checkbox"/> Accommodate all vehicle equipment repair and maintenance indoors. Or designate an outdoor work area and design the area to prevent run-on and runoff of stormwater. <input type="checkbox"/> Show secondary containment for exterior work areas where motor oil, brake fluid, gasoline, diesel fuel, radiator fluid, acid-containing batteries or other hazardous materials or hazardous wastes are used or stored. Drains shall not be installed within the secondary containment areas. <input type="checkbox"/> Add a note on the plans that states either (1) there are no floor drains, or (2) floor drains are connected to wastewater pretreatment systems prior to discharge to the sanitary sewer and an industrial waste discharge permit will be obtained.	<input type="checkbox"/> State that no vehicle repair or maintenance will be done outdoors, or else describe the required features of the outdoor work area. <input type="checkbox"/> State that there are no floor drains or if there are floor drains, note the agency from which an industrial waste discharge permit will be obtained and that the design meets that agency's requirements. <input type="checkbox"/> State that there are no tanks, containers or sinks to be used for parts cleaning or rinsing or, if there are, note the agency from which an industrial waste discharge permit will be obtained and that the design meets that agency's requirements.	<p>In the SUSMP report, note that all of the following restrictions apply to use the site:</p> <input type="checkbox"/> No person shall dispose of, nor permit the disposal, directly or indirectly of vehicle fluids, hazardous materials, or rinsewater from parts cleaning into storm drains. No vehicle fluid removal shall be performed outside a building, nor on asphalt or ground surfaces, whether inside or outside a building, except in such a manner as to ensure that any spilled fluid will be in an area of secondary containment. Leaking vehicle fluids shall be contained or drained from the vehicle immediately. <input type="checkbox"/> No person shall leave unattended drip parts or other open containers containing vehicle fluid, unless such containers are in use or in an area of secondary containment.

APPENDIX B

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN THE STORMWATER CONTROL PLAN SHOULD INCLUDE THESE SOURCE CONTROL BMPs		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on SUSMP Drawings	3 Permanent Controls—List in SUSMP Table and Narrative	4 Operational BMPs—Include in SUSMP Table and Narrative
<input type="checkbox"/> L. Fuel Dispensing Areas	<input type="checkbox"/> Fueling areas ¹ shall have impermeable floors (i.e., portland cement concrete or equivalent smooth impervious surface) that are: a) graded at the minimum slope necessary to prevent ponding; and b) separated from the rest of the site by a grade break that prevents run-on of stormwater to the maximum extent practicable. <input type="checkbox"/> Fueling areas shall be covered by a canopy that extends a minimum of ten feet in each direction from each pump. [Alternative: The fueling area must be covered and the cover's minimum dimensions must be equal to or greater than the area within the grade break or fuel dispensing area ¹ .] The canopy [or cover] shall not drain onto the fueling area.		<input type="checkbox"/> The property owner shall dry sweep the fueling area routinely. <input type="checkbox"/> See the Business Guide Sheet, "Automotive Service—Service Stations" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

¹ The fueling area shall be defined as the area extending a minimum of 6.5 feet from the corner of each fuel dispenser or the length at which the hose and nozzle assembly may be operated plus a minimum of one foot, whichever is greater.

APPENDIX B

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN THE STORMWATER CONTROL PLAN SHOULD INCLUDE THESE SOURCE CONTROL BMPs		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on SUSMP Drawings	3 Permanent Controls—List in SUSMP Table and Narrative	4 Operational BMPs—Include in SUSMP Table and Narrative
<input type="checkbox"/> M. Loading Docks	<input type="checkbox"/> Show a preliminary design for the loading dock area, including roofing and drainage. Loading docks shall be covered and/or graded to minimize run-on to and runoff from the loading area. Roof downspouts shall be positioned to direct stormwater away from the loading area. Water from loading dock areas should be drained to the sanitary sewer where feasible. Direct connections to storm drains from depressed loading docks are prohibited. <input type="checkbox"/> Loading dock areas draining directly to the sanitary sewer shall be equipped with a spill control valve or equivalent device, which shall be kept closed during periods of operation. <input type="checkbox"/> Provide a roof overhang over the loading area or install door skirts (cowling) at each bay that enclose the end of the trailer.		<input type="checkbox"/> Move loaded and unloaded items indoors as soon as possible. <input type="checkbox"/> See Fact Sheet SC-30, “Outdoor Loading and Unloading,” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com
<input type="checkbox"/> N. Fire Sprinkler Test Water		<input type="checkbox"/> Provide a means to drain fire sprinkler test water to the sanitary sewer.	<input type="checkbox"/> See the note in Fact Sheet SC-41, “Building and Grounds Maintenance,” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

APPENDIX B

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN THE STORMWATER CONTROL PLAN SHOULD INCLUDE THESE SOURCE CONTROL BMPs		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on SUSMP Drawings	3 Permanent Controls—List in SUSMP Table and Narrative	4 Operational BMPs—Include in SUSMP Table and Narrative
<p>O. Miscellaneous Drain or Wash Water</p> <ul style="list-style-type: none"> <input type="checkbox"/> Boiler drain lines <input type="checkbox"/> Condensate drain lines <input type="checkbox"/> Rooftop equipment <input type="checkbox"/> Drainage sumps <input type="checkbox"/> Roofing, gutters, and trim. 		<ul style="list-style-type: none"> <input type="checkbox"/> Boiler drain lines shall be directly or indirectly connected to the sanitary sewer system and may not discharge to the storm drain system. <input type="checkbox"/> Condensate drain lines may discharge to landscaped areas if the flow is small enough that runoff will not occur. Condensate drain lines may not discharge to the storm drain system. <input type="checkbox"/> Rooftop mounted equipment with potential to produce pollutants shall be roofed and/or have secondary containment. <input type="checkbox"/> Any drainage sumps on-site shall feature a sediment sump to reduce the quantity of sediment in pumped water. <input type="checkbox"/> Avoid roofing, gutters, and trim made of copper or other unprotected metals that may leach into runoff. 	
<ul style="list-style-type: none"> <input type="checkbox"/> P. Plazas, sidewalks, and parking lots. 			<ul style="list-style-type: none"> <input type="checkbox"/> Plazas, sidewalks, and parking lots shall be swept regularly to prevent the accumulation of litter and debris. Debris from pressure washing shall be collected to prevent entry into the storm drain system. Washwater containing any cleaning agent or degreaser shall be collected and discharged to the sanitary sewer and not discharged to a storm drain.

Appendix C

Information on SIC Codes

U.S. Department of Labor Occupational Safety & Health Administration (www.osha.gov)

SIC DESCRIPTION FOR *5013*

Division F: Wholesale Trade

Major Group 50: Wholesale Trade-durable Goods

Industry Group 501: Motor Vehicles and Motor Vehicle Parts

5013 Motor Vehicle Supplies and New Parts

Establishments primarily engaged in the wholesale distribution of motor vehicle supplies, accessories, tools, and equipment; and new motor vehicle parts.

- Automobile engine testing equipment electrical-wholesale
- Automobile glass-wholesale
- Automobile service station equipment-wholesale
- Automotive accessories-wholesale
- Automotive engines, new-wholesale
- Automotive parts, new-wholesale
- Automotive stampings-wholesale
- Automotive supplies-wholesale
- Batteries, automotive-wholesale
- Engine electrical equipment, automotive-wholesale
- Garage service equipment-wholesale
- Hardware, automotive-wholesale
- Motorcycle parts-wholesale
- Pumps, measuring and dispensing: gasoline and oil-wholesale
- Seat belts, automotive-wholesale
- Seat covers, automotive-wholesale

- Service station equipment, automobile-wholesale
- Testing equipment, electrical: automotive-wholesale
- Tools and equipment, automotive-wholesale
- Wheels, motor vehicle: new-wholesale

SIC DESCRIPTION FOR *5014*

Division F: Wholesale Trade

Major Group 75: Automotive Repair, Services, And Parking

5014 Tires and Tubes

Establishments primarily engaged in the wholesale distribution of tires and tubes for passenger and commercial vehicles.

- Repair materials, tire and tube-wholesale
- Tires, used-wholesale
- Tires and tubes, new-wholesale
- Tires, used-wholesale

SIC DESCRIPTION FOR *5541*

Division G: Retail Trade

Major Group 55: Automotive Dealers and Gasoline Service Stations

Industry Group 554: Gasoline Service Stations

5541 Gasoline Service Stations

Gasoline service stations primarily engaged in selling gasoline and lubricating oils. These establishments frequently sell other merchandise, such as tires, batteries, and other automobile parts, or perform minor repair work. Gasoline stations combined with other activities, such as grocery stores, convenience stores, or carwashes, are classified according to the primary activity.

- Automobile service stations-retail
- Filling stations, gasoline-retail
- Gasoline and oil-retail
- Marine service stations-retail
- Service stations, gasoline-retail
- Truck stops-retail

SIC DESCRIPTION FOR 5812

Division G: Retail Trade

Major Group 58: Eating And Drinking Places

Industry Group 581: Eating And Drinking Places

5812 Eating Places

Establishments primarily engaged in the retail sale of prepared food and drinks for on-premise or immediate consumption. Caterers and industrial and institutional food service establishments are also included in this industry.

- Automats (eating places)
- Beaneries
- Box lunch stands
- Buffets (eating places)
- Cafes
- Cafeterias
- Carry-out restaurants
- Caterers
- Coffee shops
- Commissary restaurants
- Concession stands, prepared food (e.g., in airports and sports arenas)
- Contract feeding
- Dairy bars
- Diners (eating places)
- Dining rooms
- Dinner theaters
- Drive-in restaurants
- Fast food restaurants
- Food bars
- Food service, institutional

- Frozen custard stands
- Grills (eating places)
- Hamburger stands
- Hot dog (frankfurter) stands
- Ice cream stands
- Industrial feeding
- Lunch bars
- Lunch counters
- Luncheonettes
- Lunchrooms
- Oyster bars
- Pizza parlors
- Pizzerias
- Refreshment stands
- Restaurants
- Restaurants, carry-out
- Restaurants, fast food
- Sandwich bars or shops
- Snack shops
- Soda fountains
- Soft drink stands
- Submarine sandwich shops
- Tea rooms
- Theaters, dinner

SIC DESCRIPTION FOR 7532

Division I: Services

Major Group 75: Automotive Repair, Services, and Parking

Industry Group 753: Automotive Repair Shops

7532 Top, Body, and Upholstery Repair Shops and Paint Shops

Establishments primarily engaged in the repair of automotive tops, bodies, and interiors, or automotive painting and refinishing. Also included in this industry are establishments primarily engaged in customizing automobiles, trucks, and vans except on a factory basis. Establishments primarily engaged in customizing automobiles, trucks, and vans on a factory basis are classified in Manufacturing, Industry Group 371.

- Antique and classic automobile restoration
- Automotive body shops
- Automotive interior shops
- Automotive paint shops
- Automotive tops (canvas or plastic), installation, repair, or sales and
- Automotive trim shops
- Bump shops (automotive repair)
- Collision shops, automotive
- Customizing automobiles, trucks or vans: except on a factory basis
- Upholstery repair, automotive
- Van conversions, except on a factory basis

SIC DESCRIPTION FOR 7533

Division I: Services

Major Group 75: Automotive Repair, Services, and Parking

Industry Group 753: Automotive Repair Shops

7533 Automotive Exhaust System Repair Shops

Establishments primarily engaged in the installation, repair, or sale and installation of automotive exhaust systems. The sale of mufflers, tail pipes, and catalytic converters is considered to be incidental to the installation of these products.

- Catalytic converters, automotive: installation, repair, or sales and
- Exhaust system services, automotive
- Mufflers, automotive: installation, repair, or sales and installation

SIC DESCRIPTION FOR 7534

Division I: Services

Major Group 75: Automotive Repair, Services, And Parking

Industry Group 753: Automotive Repair Shops

7534 Tire Retreading and Repair Shops

Establishments primarily engaged in repairing and retreading automotive tires. Establishments classified here may either retread customers' tires or retread tires for sale or exchange to the user or the trade.

- Rebuilding and retreading tires for the trade
- Retreading tires
- Tire recapping
- Tire repair shops
- Tire studding and restudding
- Vulcanizing tires and tubes

SIC DESCRIPTION FOR 7536

Division I: Services

Major Group 75: Automotive Repair, Services, And Parking

Industry Group 753: Automotive Repair Shops

7536 Automotive Glass Replacement Shops

Establishments primarily engaged in the installation, repair, or sales and installation of automotive glass. The sale of the glass is considered incidental to the replacement.

- Glass replacement and repair, automotive

SIC DESCRIPTION FOR 7537

Division I: Services

Major Group 75: Automotive Repair, Services, And Parking

Industry Group 753: Automotive Repair Shops

7537 Automotive Transmission Repair Shops

Establishments primarily engaged in the installation, repair, or sales and installation of automotive transmissions. The sale of transmissions and related parts is considered incidental to the installation or repair of these products.

- Automatic transmission repair, automotive
- Transmission repair, automotive
- Transmission, automotive: installation, repair, or sale and installation

SIC DESCRIPTION FOR 7538

Division I: Services

Major Group 75: Automotive Repair, Services, And Parking

Industry Group 753: Automotive Repair Shops

7538 General Automotive Repair Shops

Establishments primarily engaged in general automotive repair. Establishments primarily engaged in industrial truck repair are classified in Industry 7699.

- Automotive repair shops, general
- Diesel engine repair, automotive
- Engine repair, automotive
- Engine repair, truck: except industrial
- Garages, general automotive repair and service
- Motor repair, automotive
- Truck engine repair, except industrial

SIC DESCRIPTION FOR 7539

Division I: Services

Major Group 75: Automotive Repair, Services, And Parking

Industry Group 753: Automotive Repair Shops

7539 Automotive Repair Shops, Not Elsewhere Classified

Establishments primarily engaged in specialized automotive repair, not elsewhere classified, such as fuel service (carburetor repair), brake relining, front-end and wheel alignment, and radiator repair. Establishments primarily engaged in automotive welding are classified in Industry 7692.

- Air-conditioner repair, automotive
- Automotive springs, rebuilding and repair
- Axle straightening, automotive

- Brake linings, sale and installation
- Brake repairing, automotive
- Carburetor repair
- Electrical service, automotive (battery and ignition repair)
- Frame repair shops, automotive
- Front end repair, automotive
- Fuel system conversion, automotive
- Fuel system repair, automotive
- Generator and starter repair, automotive
- Radiator repair shops, automotive
- Wheel alignment, automotive

Appendix D

Example Tenant Condition of Approval

The following statement can be added as a condition of approval for all tenant projects:

“The San Diego County Regional Airport Authority and San Diego International Airport is regulated under Regional Water Quality Control Board Order No. 2001-01, National Pollutant Discharge Elimination System (NPDES) Permit No. CAS0108758, Waste Discharge Requirements for Discharges of Urban Runoff from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds of the County of San Diego, the Incorporated Cities of San Diego County, and the San Diego Unified Port District (Municipal Permit), as adopted, amended, and/or modified. The Municipal Permit prohibits any activities that could degrade storm water quality. Post-construction / operational use of this project site must comply with the Municipal Permit and Authority direction related to permitted activities including the requirements found in the Authority’s Storm Water Management Plan (SWMP).

No discharges of any material or waste, including potable water, wash water, dust, soil, trash and debris, may contaminate storm water or enter the storm water conveyance system. Any such material that inadvertently contaminates storm water or enters the storm water conveyance system as part of site operations must be removed immediately. All unauthorized discharges to the storm water conveyance system or the Bay or the ocean must be reported immediately to the Environmental Affairs, in order to address any regulatory permit requirements regarding spill notifications.

Best management practices (BMPs) must be implemented by the Tenant to control the potential release of any materials or wastes being handled or stored on-site which could enter the storm water conveyance system due to wind or storm water runoff.

In addition, this project is subject to the Authority’s Standard Urban Storm Water Mitigation Plan (SUSMP) process. As such, approval of the project by the Authority is necessarily conditioned upon submission by the project proponent of a project specific Urban Storm Water Mitigation Plan (USWMP) that meets Authority requirements. Project approval requires full implementation of all USWMP structural and non-structural BMPs throughout the life of the project. The implementation and maintenance of the USWMP BMPs constitute regulatory obligations for the lessee, and failure to comply with the Municipal Permit, the SWMP, or the Authority approved USWMP, including the specific BMPs contained therein, may be considered a default under the lease.”

End of Document.

APPENDIX D
STORMWATER MONITORING PROGRAMS

Appendix D - Stormwater Monitoring Programs



APPENDIX D-1: INDUSTRIAL MONITORING IMPLEMENTATION PLAN

1.0 INTRODUCTION

Section XI of State Water Resources Control Board (State Water Board) Order No. 2014-0057-DWQ (the Industrial Permit) requires wet weather monitoring and assessment of storm water runoff. The major monitoring objectives, as outlined in the Industrial Permit Fact Sheet, are to:

- 1) Demonstrate compliance with the Industrial Permit, per the monitoring implementation plan requirements.
- 2) Aid in the implementation of the Storm Water Pollution Prevention Plan (SWPPP) outlined in Section 7.0 of this Storm Water Management Plan (SWMP).
- 3) Measure the effectiveness of best management practices (BMPs) in reducing or preventing pollutants in storm water discharges and authorized non-storm water discharges.

The Industrial Permit (State Water Board Order No. 2014-0057-DWQ, April 1, 2014) will take effect on July 1, 2015. This document leads to modifications in the industrial wet weather monitoring program requirements, including the following:

- Number of events – The number of qualifying storm events (QSEs) required annually will increase from two to four. The Authority previously sampled the first storm event during the wet season (October 1 through May 30), and a second event, to be sampled at any time during the wet season. The new permit requires that samples be collected for two QSEs in the first half of the reporting year (July 1 through December 31) and two QSEs in the second half of the reporting year (January 1 through June 30).
- Timing of events – The previous permit required that samples be collected within the first hour of discharge; the new permit extends this time frame to the first four hours of discharge, or the first four hours of facility operation if the QSE occurs outside of facility operating hours and within the previous 12-hour period.
- Definition of a QSE – The new permit specifies that a qualifying storm event is one that produces discharge from at least one drainage area and is preceded by 48 hours with no discharge from any drainage area.
- Visual observation requirements – The new permit requires storm water discharge visual observations only during sampling, rather than requiring observations for one storm event per month during the wet season, as the previous permit required.
- Analytical parameters – The new permit requires permittees to consider Clean Water Act Section 303(d)-listed (303(d)-list) impairments, total maximum daily loads (TMDLs), October 2012 Ocean Plan modifications, and 40 Code of Federal Regulations (CFR) Subchapter N Effluent Limitation Guidelines (ELGs) when selecting analytical parameters, where applicable.
- Exceedance response – The new permit defines two types of numeric action level exceedances (annual and instantaneous maximum), and requires permittees to develop Exceedance Response Actions (ERAs) for numeric action level (NAL) exceedances.

2.0 SAMPLING LOCATION SELECTION

Sixteen sampling locations, and one alternative location, have been identified at SAN, pursuant to the Industrial Permit. These locations are shown on the SWMP site map (Figure 3) and in Table D1-1.

2.1 MONITORING LOCATIONS

Table D1-1. Sampling Locations for Compliance Monitoring

Sampling Location ID ⁵	Drainage Basin	Sampling Method	Location Description
C-B03-1c	3 ⁴	Grab ¹	Sheet flow at storm drain inlet, over zipper line in oval
C-B03-2	3	Grab ¹	Sheet flow at storm drain inlet
C-B05-4	5	Grab ¹	Sheet flow at storm drain inlet near generator area
C-B06-5a	6	Grab ¹	Inlet pipe in manhole downstream of Central Receiving and Distribution Center (CRDC) BMPs
C-B07-6	7	Grab ¹	Inlet pipe in manhole west of Aircraft Services International Group (ASIG)/American oil-water separator (OWS)
C-B07-7a	7	Grab ²	Sheet flow downstream of maintenance/cargo area
C-B08-8	8	Grab ³	Sheet flow from the loading area of Terminal 1
C-B12-9a	12	Grab ³	Inlet pipe at storm drain inlet near Terminal 2 West
C-B01-11 ⁷	1	Grab ¹	Drainage basin is currently under construction. Sampling location will be re-evaluated once construction is complete.
C-B03-12	3	Grab ¹	Sheet flow at trench drain near Landmark
C-B05-13	5	Grab ¹	Sheet flow at storm drain inlet near DHL
C-B06-14	6	Grab ²	Inlet pipe in manhole near FedEx loading area and material storage
C-B06-15	6	Grab ¹	Sheet flow at storm drain near Airport Rescue and Fire-Fighting Facility (ARFF)
C-B06-16 ⁸	6	Grab ²	Inlet pipe at trench drain near Commuter Terminal
C-B06-17	6	Grab ¹	Sheet flow from taxiway
C-B15-18	15	Grab ¹	Sheet flow at trench drain near Terminal 2 West
<i>Alternate Sampling Location</i>			
C-B08-19 ⁶	8	Grab ¹	Sheet flow from runway area

Notes:

- Grab sample will be collected manually.
- Grab sample will be collected using automated sampling equipment.
- Grab sample will be collected using automated sampling equipment. If paired watershed sampling is occurring during the same storm event the equipment will be set to collect a composite. Manual grab sampling is difficult because of the high volume of traffic in the area.
- Drainage basin has changed from 1 to 3 at this site because of the decommissioning of part of the storm drain line in Taxiway C, linking the site to Outfall 1. It now drains to Outfall 3 and is located in a runway oval.
- Sampling locations C-B05-3 and C-B09-10b are no longer being sampled for compliance purposes because these sites are non-industrial (i.e., parking lots).
- Alternate sampling location for runway. If site C-B03-1c is inaccessible for safety reasons, site C-B08-19 will be sampled instead.
- Sampling will only begin once construction is complete.
- Sampling at this location will only be performed if industrial activities occur in this area. Commuter Terminal is being shut down (will not be operational from July 1, 2015) and outdoor activities are yet to be decided.

Currently, Basins 1, 3, 5, 6, 7, 8, 12, and 15 contain industrial activities; because of their volume of flow and types of the activities, these basins are most likely to have illicit discharges and/or illicit connections. Industrial Permit storm water monitoring and visual observation sites are located in these eight drainage areas. In Basins 3, 5, 6, 7, and 8, several locations will be monitored because a single sampling location could not represent all industrial activities in the basins.

A portion of Basin 4 was developed into a parking area as a component of the improvements at the former Teledyne Ryan Aeronautics site. The eastern portion of this basin consists of perimeter road, public transportation, and Least Turn nesting habitat. The small portion of taxiway area contained within this drainage basin is considered inaccessible for sampling because of safety hazards within the blast fence area. Taxiway and ramp activities will alternatively be captured within Basins 3, 5, 6, 8, 12, and 15.

Basins 9, 10, 11, 13, and 14 are not exposed to industrial activities, and therefore runoff is not required to be collected within these drainage basins, pursuant to Section XI.C.6.c of the Industrial Permit.

Basin 2 contains portions of the perimeter road and is not exposed to industrial activities. Runoff is not required to be collected within this drainage basin, pursuant to Section XI.C.6.c of the Industrial Permit.

Detailed descriptions of the drainage basins and associated activities are included in Section 1.4. Sampling locations were selected as far downstream as possible to capture multiple areas with industrial activities within a given drainage basin. Where sampling locations are tidally influenced or access is restricted (e.g., when they are over the zipper line demarcating the edge of the taxiway area surrounding the runway), sheet flow runoff will be collected. Effluent from newly installed treatment control best management practices (BMPs) has been targeted for sampling to reflect the anticipated potential pollutant removal benefit of the BMPs.

2.2 ALTERNATIVE DISCHARGE LOCATIONS

Section XI.C.3 of the Industrial Permit allows Copermittees to choose alternative discharge locations for discharge points if the discharge location is either affected by storm water run-on from surrounding areas that cannot be controlled, or difficult to observe or sample. Sampling of the runway poses both safety and security concerns, as most of the runway discharges at points within the boundaries of aircraft taxiway, takeoff, and landing areas. Downstream storm drain lines cannot be sampled because these underground drains are tidally influenced and therefore their flows are not representative of storm water runoff. Storm water samples representative of runway industrial activities will be collected at site C-B03-1c, as sheet flow runoff is discharged from the eastern end of the runway, near where aircraft generally land. If sampling at this location is not possible because of the high volume of aircraft traffic or limited availability of Authority personnel, site C-B08-19 will be sampled instead. This same exception will be applied to the taxiway activities within Basin 4. Only a small portion of this drainage basin is exposed to aircraft taxiway areas. Sampling of the taxiway within this drainage basin would require field crew access inside of the blast fence area where aircraft take off and land. Sampling within this area poses safety hazards and security concerns for the Authority. Taxiway activities will be captured within Basin 3 at site C-B03-2, which is located adjacent to Basin 4, and will capture the same taxiway activities.

3.0 REPRESENTATIVE SAMPLING REDUCTION JUSTIFICATION

Pursuant to Section XI.C.4 of the Industrial Permit, if the industrial activities, BMPs, and physical characteristics within a drainage area are found to be “substantially similar,” the Authority may collect samples from a reduced number of sampling locations within that drainage basin. There are numerous storm drain inlets throughout SAN for drainage during storm events. If a downstream location representative of all industrial activities cannot be feasibly sampled within a particular drainage basin with multiple storm drain inlets, substantially similar industrial activities will be represented by one sampling point within that basin.

Representative sampling reduction monitoring locations have been chosen to sample industrial activities within the following drainage basins.

Basin 1: This drainage basin is composed of two adjacent drainage areas. The industrial activities in the southern-most drainage area include aircraft taxiway and runway areas. However, sampling within this area poses safety hazards and security concerns for the Authority, as explained in Section 2.2 of this Appendix; therefore this area will not be sampled, per Section XI.C.3.a.ii of the Industrial Permit. The northern-most section of this drainage basin encompasses a small portion of fixed-base operations (FBO) parking lot and some aircraft taxiway areas. Two infiltration trenches were implemented within this drainage basin to treat runoff from paved parking lot and taxiway surfaces. However, no suitable effluent monitoring location exists so the effluent to these trenches cannot be monitored. Paved surfaces within this drainage basin are composed of concrete on the surface with an Econo-crete base and cement treated soil. Although a sampling location (C-B01-11) has been identified in this area, the drainage basin is currently under construction, so the sampling location will not be monitored immediately and will be re-evaluated once construction is complete. This sampling location was chosen to capture discharges from taxiway areas. Runway activities (aircraft takeoff and landing) will be captured at the Alternative Discharge Location, site C-B03-1c (or site C-B08-19), as discussed in Section 2.2 of this Appendix.

Basin 6: FedEx, ARFF, Bradford’s Central Receiving and Distribution Center (CRDC), Allied Aviation, and the Authority all operate within this drainage basin. Fuel storage and operations include the Aircraft Fuel Storage Facility (FSF), Remote Fueling Facility (RFF), two 1-million gallon aboveground storage tanks (ASTs) for jet fuel, and gasoline and diesel underground storage tanks (USTs). Authority equipment and materials storage is located at the northern end of the drainage basin. The Commuter Terminal ramp area is located on the southern end of the drainage basin on the opposite side of the runway, though this terminal is no longer operating as a ramp area, since flights will not be arriving or departing there. The Terminal now contains offices only. Sampling locations have been chosen to capture the various industrial activities within these areas. However, the aircraft taxiway drains to many different storm drain inlets. Therefore, site C-B06-17 is located downstream from operations on the northern end of the drainage basin; this site was chosen to represent taxiway runoff discharges from multiple discharge points within this drainage basin.

Treatment Control BMPs (TCBMPs) in this drainage basin include permeable pavement in the employee and long-term parking lots near the Commuter Terminal, one OWS near the FSF, two OWS units downstream of Northside taxiway runoff discharge points, one OWS at the RFF, and one OWS on the Commuter Terminal ramp. The effluent pipes draining from some of the OWSs are tidally influenced and therefore cannot be sampled. Bio-Clean Trench Drain Filters are located near CRDC to filter pollutants associated with the loading and unloading activities in the area, and sampling location C-B06-5a samples the effluent from these BMPs. All other activities and physical characteristics are considered substantially similar for the taxiway storm drain inlets within this drainage basin, so as stated above, C-B06-17 will sample representative runoff from these areas. Paved surfaces are composed of 16-inch thick concrete on top of an aggregate base.

Basin 8: Terminal 1 industrial activities are contained within this drainage basin, and discharge to multiple storm drain inlets. The ramp and apron areas for Terminal 1 and Terminal 2 East are composed of 16 inches of concrete on top of 12 inches of aggregate base and 4 inches of permeable pavement, constructed during the 1992 East Terminal Apron Rehabilitation project. The pavement materials and coverage is comparable for all ramp and terminal discharge points within Basins 8 and 12.

Industrial activities include:

- Aircraft taxiing, loading, fueling, deicing (Gates 1 through 9, away from storm drains and only as needed), and minor maintenance
- Waste storage
- Materials storage and handling
- Vehicle fueling, washing, and minor maintenance

Sampling will occur at the trench drain that collects runoff from Terminal Gates 7 through 9 and 13 (C-B08-8). These gates are occupied primarily by Southwest and Alaska Airlines. All industrial activities discussed above occur within the area where runoff will be sampled.

Basin 12: Terminal 2 East and the eastern half of Terminal 2 West are located within the boundaries of this drainage basin. Industrial activities include:

- Aircraft taxiing, loading, fueling, and minor maintenance
- Waste storage
- Materials storage and handling
- Vehicle fueling and minor maintenance

Paved surface materials are similar to those in Basin 8. Sampling will occur within a manhole at the storm drain inlet pipe (C-B12-9a). Runoff from Terminal 2 ramp area gates will be collected at this sampling location, and will represent all industrial activities of Terminal 2.

Basin 15: Terminal 2 West and the Remain Over Night (RON) aircraft parking area are located within this new drainage basin developed as part of the Green Build expansion of Terminal 2. Operations within the RON include aircraft overnight parking and fueling. These industrial activities also take place near the Terminal 2 West location. A high-rate media filter and 1.75 acres of permeable artificial turf were constructed on the far western end of the drainage basin. The artificial turf effluent is tidally influenced and cannot be sampled. A single sampling location (C-B15-18) was chosen at the trench drain downstream of Terminal 2 West location and aircraft operational areas to capture ramp and overnight parking activities.

4.0 SAMPLING VISUAL OBSERVATIONS

Visual observations will be recorded at each monitoring location during all wet weather sampling events at the time of sampling. Observations of floating or suspended materials, oil and grease, discolorations, turbidity, odors, trash and debris, and source(s) of any discharged pollutants will be recorded, as applicable. If visual observations are not recorded for any monitoring location or sampling event, an explanation will be provided in the Industrial Permit Annual Report. Observers will record the following information during storm water monitoring events:

- Date and time
- Name of observer
- Locations observed
- Description of any observed pollutants
- Probable source of the observed pollutant, if applicable
- Applicable response actions or Storm Water Pollution Prevention Plan (SWPPP) revisions necessary

Bypass from volume or flow-based TCBMPs will be sampled when feasible during storm events where visual observations or monitoring occur, unless the bypass is predetermined to be tidally influenced; in this case, samples would not be representative of storm water runoff.

If a discharge location is not observed during a sampling event, the observer will record the unobserved discharge locations or that there was no discharge from the discharge location.

4.1 DRY WEATHER VISUAL OBSERVATIONS

The Authority performs monthly visual observations of each drainage basin during dry weather periods in daylight, during scheduled facility operating hours. Monthly visual observations are conducted to identify and evaluate:

- 1) The presence or indications of prior, current, or potential unauthorized non-storm water discharges (NSWDs) and their sources
- 2) Authorized NSWDs, sources, and associated BMPs to ensure that BMPs reduce or eliminate contact of authorized NSWDs with pollutants, reduce their flow or volume, reflect best available technology (BAT)/best conventional technology (BCT), and do not cause or contribute to an exceedance of any water quality standards
- 3) Outdoor industrial equipment and storage areas, outdoor industrial activity areas, BMPs, and all other potential sources of industrial pollutants

If pollutants are observed during monthly visual observations, their probable source will be recorded in the Authority's Web-based database, along with any corrective actions taken or SWPPP revisions necessary. If observations reveal that BMPs are not sufficient to address the associated pollutant, the implemented BMP(s) will be reconsidered and revised as necessary to address the deficiency.

The Authority will provide an explanation in the Industrial Permit Annual Report for any incomplete monthly visual observations.

4.2 VISUAL OBSERVATION RESPONSE PROCEDURES

If irregularities in storm water color, clarity, or odor are observed during wet weather sampling (i.e., suspended materials, oil and grease, discolorations, turbidity, odors, trash and debris, etc.) or NSWDS are observed during dry weather visual observations, efforts will be made to identify the source of the pollutants. Field teams will then investigate the area surrounding the sample location to identify potential pollutant sources. If no source is observed in the immediate area, the investigation will continue upstream of the sample location. If observers are unable to identify potential sources, the lack of potential sources will be noted on the field sheet. If the source is identified, the field team will record the source on the field sheet and report the location of the pollutant and source to the Environmental Affairs Department (EAD). The EAD will then notify the responsible party and require, through verbal or written communication, that corrective actions be taken to reduce or prevent the pollutants from contacting storm water discharge, or to mitigate or eliminate the NSWDS. The observation and corresponding corrective action will be recorded in the Authority's Web-based database. The responsible party will then be required to record in the database when and how the issue has been corrected. A follow-up investigation will be performed if the issue has not been corrected. If the source of the observed pollutant is an unauthorized discharge, immediate action will be taken to stop or control active prohibited discharges, spills, or obvious illicit discharges.

5.0 SAMPLING AND ANALYSIS

5.1 FIELD TEAMS

Visual observations and storm water sampling will be conducted by EAD staff or a contractor for EAD. Staff will follow all procedures specified in this Monitoring Implementation Plan.

5.2 SAMPLING FREQUENCY

As required by Section XI.B.2 of the Industrial Permit, the Authority will sample two QSEs during the first half of the reporting year (July 1 through December 31) and two QSEs during the second half (January 1 through June 30). If no NAL exceedances are identified for four consecutive QSEs, and the Authority is in full compliance with the new permit, the Authority may reduce sampling frequency from four samples within each reporting year to two samples within each reporting year.

The Regional Water Board has the discretion to reject the Sampling Frequency Reduction Certification if enforcement actions have been implemented. If the conditions above are met, the certification will be entered into Storm Water Multiple Application Report Tracking System (SMARTS) and the monitoring plan will be revised to collect and analyze samples from one QSE within the first half of the reporting year and one QSE within the second half of the reporting year.

If at any point an NAL exceedance occurs, monitoring of four QSEs per year will resume and the certification will be removed from SMARTS.

5.2.1 PARAMETERS FOR ANALYSIS

Historical Exceedances

Based on data collected from the previous eight seasons, copper and zinc (total and dissolved) are the primary Pollutants of Concern (POCs) because they had the highest exceedance frequencies of benchmark values evaluated in the 2014 Site Audit at SAN and in annual reporting. Benchmark values were derived from the NALs established in the Industrial Permit. The remaining benchmark values were derived from water quality criteria of the California Toxics Rule (Saltwater and Freshwater Consumption of Aquatic Organisms), United States Environmental Protection Agency (USEPA) Multi-Sector General Permit (MSGP) 2008 Factsheet, and USEPA Recommended Ambient Water Quality Criteria (Saltwater and Freshwater Aquatic Life Protection). Three benchmarks, those for ethylene glycol, Methylene Blue Active Substances (MBAS), and specific conductance, were not listed in the USEPA MSGP, and were derived from various other sources.

During the 2014-2015 wet weather season, median concentrations of eight analytes exceeded benchmark values (in order of descending benchmark exceedance frequency): zinc (total and dissolved), copper (total and dissolved), Chemical Oxygen Demand (COD), total coliform, fecal coliform, and *Enterococcus*. Polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), organochlorine pesticides, total petroleum hydrocarbons (TPHs), glycols, oil and grease, MBAs, and total and dissolved arsenic, cadmium, chromium, trivalent chromium, hexavalent chromium, mercury, nickel, and silver did not exceed benchmark values (Amec Foster Wheeler, 2015b). Additionally, ethylene glycol was not detected in samples from the previous four consecutive monitoring seasons (2011-2012, 2012-2013, 2013-2014, and 2014-2015); therefore the Authority has elected to analyze this parameter only for site C-B08-8, which is the area of Terminal 1 where deicing fluid is used and stored.

Industrial Permit Required Parameters

The 2014 Site Audit identified parameters that correspond with analyses that must be performed per Section XI.B.6. of the Industrial Permit, i.e., total suspended solids (TSS), oil and grease, pH, and additional pollutants identified by the Authority within SAN's operational area that serve as indicators of all industrial pollutants that are likely to be present in storm water discharges. Industrial Permit Section XI.B.6 parameters may be modified for future sampling in accordance with any updated SWPPP pollutant source assessments.

Per Table 1 of the Industrial Permit, analysis of additional parameters is required for SAN drainage areas in accordance with the Air Transportation standard industrial classification (SIC) code. These parameters are NH₃, biological oxygen demand (BOD), and chemical oxygen demand (COD). Where deicing activities are performed and more than 100,000 gallons of glycol-based deicing chemicals and/or 100 tons or more of urea are used on an average annual basis, ethylene glycol will also be sampled. However, an average of only 770 gallons are used annually at SAN. Despite this, as a precaution, SAN intends to sample for ethylene glycol.

40 Code of Federal Regulations, Section I, Subchapter N established Effluent Limitation Guidelines (ELGs) and additional monitoring requirements for existing sources. Subchapter N, Part 449 specifies the standards and ELGs for existing airports conducting airfield pavement deicing activities and additional requirements for new airports conducting aircraft deicing and/or airfield pavement deicing. SAN is an existing airport, as defined under 40 CFR Parts 122.2 and 122.29, and does not perform airfield pavement deicing activities. Therefore, SAN does not meet the threshold for compliance with Subchapter N. Ethylene glycol will continue to be monitored where deicing activities occur, i.e., site C-B08-8.

Pollutants of concern (POCs) that have been previously identified in storm water discharges from SAN are copper (total and dissolved), zinc (total and dissolved), total aluminum, total iron, total lead, and ethylene glycol. Total hardness will be analyzed to calculate toxicity benchmarks for metals. MBAS, which are indicators of surfactants, were also selected because of the aircraft and vehicle washing activities at SAN. TPH, an indicator of petroleum hydrocarbons, was selected because of the fueling and maintenance operations at SAN. TPH has historically been non-detect at most monitoring locations; however, it will continue to be analyzed because of the frequency of fueling activities at SAN.

Additional parameters associated with pollutants identified as contributing to 303(d)-listed impairments in receiving waterbodies must also be analyzed. Table D1-2 provides the POCs and discharging outfalls for 303(d)-listed receiving waterbodies.

Additional Parameters

Based on a review of 303(d)-listed water body impairments, Regional Water Board investigative actions, and the potential pollutants, pollutant sources, and scope of operations within each drainage basin, the Authority has elected to analyze additional parameters that have been named or implicated in association with water quality impairments of receiving waterbodies.

Table D1-2. 303(d)-Listed Receiving Water Bodies¹

Receiving Waterbody	Pollutant of Concern	Discharging Outfalls
San Diego Bay	Polychlorinated Biphenyls (PCBs)	All
San Diego Bay Shoreline, Downtown Anchorage	Benthic Community Effects, Sediment Toxicity ²	1, 2, 3, 4
San Diego Bay Shoreline, at Harbor Island (East Basin)	Copper ³	5, 6, 7
San Diego Bay Shoreline, at Harbor Island (West Basin)	Copper ³	8, 9, 10, 11
San Diego Bay Shoreline, at Spanish Landing	Total Coliform ³	8, 9, 10, 11

Notes:

1. Section 303(d) of the Clean Water Act, which lists waters not attaining water quality standards.
2. Benthic community effects and sediment toxicity have been linked to PCBs, polycyclic aromatic hydrocarbons (PAHs), and chlordane in preliminary investigations of the proposed Downtown Anchorage total maximum daily load (TMDL) (Regional Water Board, 2005).
3. These parameters are required to be sampled under the Industrial Permit.

Additionally, the Regional Water Board has issued Investigative Order (IO) No. R9-2014-007, which pertains to the Laurel-Hawthorne Embayment, an area of San Diego Bay that encompasses the Downtown Anchorage. This IO highlights outfalls discharging from Basins 1 through 6 as potential sources of pollutants, including PCBs, PAHs, chlordane (a pesticide), and heavy metals (cadmium, copper, lead, mercury, and zinc). The Authority will analyze samples from these (if the basin is a potential pollutant source) and other drainage basins, as applicable, for these additional parameters.

Industrial Compliance Sampling Analyses Selected

Based on a review of the POCs identified in the site audit, analytes named in the Industrial Permit, and pollutants specified in IOs and the 303(d) list, the parameters in Table D1-3 will be analyzed.

Table D1-3. Sampled Parameters at Industrial Compliance Sites

Parameter	Drainage Basin
Oil and Grease (O&G) pH Temperature Specific Conductance (SC) Total Suspended Solids (TSS) Methylene Blue Active Substances (MBAS) Total Petroleum Hydrocarbon (TPH) Biological Oxygen Demand (BOD) Chemical Oxygen Demand (COD) Ammonia (NH3) Total Hardness Polychlorinated Biphenyls (PCBs) Total metals (aluminum, cadmium, chromium III, chromium VI, copper, iron, lead, nickel and zinc) Dissolved metals (cadmium, chromium III, chromium VI, copper, lead, nickel and zinc) Polycyclic Aromatic Hydrocarbons (PAHs)	All
Total Coliform Fecal Coliform <i>Enterococcus</i>	3 (FBO only), 6 (cargo and shipping/receiving areas only), 8, 12, and 15
Ethylene Glycol ¹	8 (C-B08-8 only)
Chlordane	1, 3, 5, 6, and 8 (C-B08-8 only)
Total and Dissolved Arsenic	5, 6 (cargo and ARFF only), 7 (C-B07-7a only), 8 (C-B08-8 only), 12, and 15

Notes:

1. Ethylene glycol will be sampled at site C-B08-8 only. The drainage area for this site includes the Southwest and Seaport operational areas, where ethylene glycol may be used for deicing.

5.3 CALIBRATION PROCEDURES

Prior to every field testing event for temperature, pH and any other required field analyses, field staff must calibrate instruments according to manufacturer’s specifications, as follows:

- 1) Switch the unit on by pressing the On/Off button.
- 2) Ensure that the device is set to dual display.
- 3) Dip the electrode 2-3 centimeters into pH standard buffer solution.

- 4) Press the CAL button to enter calibration mode. The device will display the Cal indicator. The upper display will show the measured reading based on the last calibration, and the lower display will show the pH standard buffer solution.
- 5) Wait 2 minutes for the tester reading to stabilize. Once the reading has stabilized, press the HOLD/ENT button to confirm the first calibration point. The upper display will be calibrated to the pH standard buffer solution and the lower display will toggle between readings of the next pH standard buffer solution. The calibration mode allows up to three calibration points (for example, pH 4, 7 and 10) to be performed before returning to the measurement mode automatically.
- 6) Repeat with other buffers if necessary. Rinse the electrode in tap water before dipping into the next buffer.
- 7) It is possible to skip the remaining two calibration points by exiting to the measurement mode by pressing the CAL button.

5.4 SAMPLING AND ANALYSIS PROCEDURES

Monitoring instruments and equipment (including a facility operator's own field instruments for measuring pH, temperature, and electroconductivity) will be calibrated and maintained in accordance with manufacturers' specifications. Field instrument calibration procedures and calibration intervals are provided in Section 5.3 of this Appendix. Sampling and sample preservation will be in accordance with methods identified in the Industrial Permit, Attachment H, as well as with the requirements of the Municipal Permit. Monitoring and analysis must be conducted according to methods and procedures identified under 40 CFR Part 136. Sampling and laboratory procedures unspecified in the Industrial Permit or Municipal Permit will be conducted in accordance with the Quality Assurance Management Plan (QAMP) for the State of California's Surface Water Ambient Monitoring Program (SWAMP), or updated versions of SWAMP water quality analysis procedures, such as SWAMP 2013 Quality Assurance Program Plan (QAPrP). Laboratory analyses will be conducted at a laboratory certified for such analyses by the California Department of Health Services. Laboratory analysis methods and associated data quality objectives (DQOs) will follow those listed in Table D1-5 unless a comparable method is available. Table D1-5 shows the DQOs, including the analytical methods and corresponding method detection limits used to detect pollutants in storm water discharges. DQOs are derived from 40 CFR Part 136, where available, or SWAMP. Reporting limits specified in the monitoring program are below (and often well below) the NALs (annual and instantaneous). NALs applicable to SAN and required under the Industrial Permit are shown in Table D1-4.

Table D1-4. Industrial Permit NALs

Parameter	Annual NAL	Instantaneous Maximum NAL	Units
pH	N/A	6.0<math>\diamond>9.0	pH units
TSS	100	400	mg/L
O&G	15	25	mg/L
Zinc	0.26	N/A	mg/L
Copper	0.0332	N/A	mg/L
Lead	0.262	N/A	mg/L
COD	120	N/A	mg/L
Aluminum ¹	0.75	N/A	mg/L
Iron ¹	1.0	N/A	mg/L
Ammonia (as N)	2.14	N/A	mg/L
Arsenic ¹	0.15	N/A	mg/L
Cadmium ¹	0.0053	N/A	mg/L
Nickel ¹	1.02	N/A	mg/L
Mercury ¹	0.0014	N/A	mg/L
Silver ¹	0.0183	N/A	mg/L
BOD	30	N/A	mg/L

On an annual basis, exceedances of these benchmarks will be identified and an appropriate exceedance response action (ERA) will be performed. The results will also be used to assess attainment of Water Quality Improvement Plan (WQIP) goals, as required by the Municipal Permit, and will be comparable with methods used by other San Diego Bay Copermittees.

When collecting grab samples for wet weather monitoring (and any dry weather monitoring the Authority is required to perform or identifies a need for), Attachment H of the Industrial Permit and the procedures below will be followed:

- 1) Prepare previously cleaned bottles with pre-printed labels from the Authority’s Web-based monitoring and tracking database. Labels will identify the sampling parameters required for collection and testing at each site.
- 2) Put on clean, nitrile gloves and prepare sample collection devices, if necessary. If collecting samples for metals and/or mercury, wear polyethylene gloves as the outer layer.
- 3) Remove the required sample containers from the cooler (see Table D1-5 for appropriate containers to use) and fill out the remaining information on the label with a waterproof pen: date, time, and sampler’s initials.

- 4) If samples are not collected directly into the sample container (for instance, when a bucket or pump is used to collect the sample), rinse the sample collection device three times with water discharging from the sample location before collecting the sample. Use disposable sampling equipment (e.g., bucket liners) at each sample location. Also, rinse sample containers that DO NOT contain a preservative three times prior to sample collection.
- 5) Collect representative samples at a point below the surface of the flow (at about half of the water's depth) and midway across the flow as close as possible. Avoid stagnant pools near the edge of flowing water unless the purpose is to sample a stagnant pool.
- 6) If entering the water is necessary for sampling, enter the flow downstream of the sampling location, disturbing as little of the bottom material as possible. Always collect the sample upstream of your position so that the sample will not be contaminated by you or materials on the bottom of the channel that you may have disturbed.
- 7) Measure water quality parameters (listed in Section 5.2.1 of this Appendix) at the time of field screening using the appropriate portable meters, field test kits, and the clear, plastic containers used for making observations. Measure pH within 15 minutes of sample collection time for applicable sample locations. Ensure that portable field meters are calibrated appropriately per manufacturers' recommendations, as described in Section 5.3 above. Record all observations and field screening results in the Web-based database for SAN, and describe any unusual or noteworthy conditions or results in detail in the "Notes" section of the form.

Recording field parameters:

1. Rinse the field meter thoroughly in sample water.
 2. Submerge the field meter in the sample collection device.
 3. Allow the values to stabilize for at least one minute.
 4. Keep the field meter submerged in the sample water while recording the field parameters to the nearest 0.1 unit.
- 8) Fill sample containers to be sent to the laboratory to the shoulder unless directed otherwise by the laboratory. Bottles should be rinsed with ambient water before collecting the sample. Do not touch the inside of the sample container or cap or put anything into the sample containers before collecting water samples, as this may contaminate the sample.
 - 9) Some of the sample containers may contain a small amount of acid as a preservative. To prevent any possible harm to sampling personnel, open these containers with the cap turned away from the face and do not inhale the vapor. When filling the containers, be careful not to spill any acid; if some of the acid does get on the skin, rinse it off thoroughly.
 - 10) Cap each container tightly and place it into a cooler. The cooler must have a sufficient amount of ice to maintain a temperature of 4 °C during transport. If samples need to be stored for an extended period prior to delivery to the laboratory, it may be necessary to renew the ice every 24 hours.
 - 11) Complete the pre-filled Chain of Custody (COC) form for each set of samples with the appropriate date and time that each sample was collected. Record the initials of the person(s) who collected the sample. An example COC is included in Appendix G.
 - 12) Transport samples to the laboratory within 48 hours, unless otherwise specified by the laboratory. Sign the COC once the samples are relinquished, and obtain the initials of the laboratory representative who receives the samples.

- 13) Dispose of all spent reagents, reacted samples, and rinse solutions in the appropriate waste containers. Upon return to the office, decant wastes into the sewer system.

5.5 QUALIFIED COMBINED SAMPLES

The Industrial Permit, Section XI.C.5, allows samples of equal volume from no more than four discharge locations to be combined for laboratory analysis if the industrial activities, BMPs, and physical characteristics of the locations where the samples were taken are substantially similar. The Authority must receive previous approval from the Regional Water Board and document such a determination in the annual industrial storm water report. If combining samples, samplers will label sample bottles to instruct the laboratory on which samples to combine. Samples must always be combined by the laboratory and not by the sampler.

6.0 ASSESSMENTS

Assessments required under the Industrial Permit include comparisons between monitoring data and NALs. These assessments are discussed in detail in Section 7.0 of this SWMP.

7.0 QA/QC

This section addresses Quality Assurance and Quality Control (QA/QC) activities associated with both field sampling and laboratory analyses.

Field QC samples are collected and used to evaluate potential contamination and sampling error introduced into a sample prior to its submittal to the analytical laboratory. Laboratory QC activities provide information needed to assess potential laboratory contamination, and analytical precision and accuracy.

Water quality sampling QA/QC will comply with requirements of 40 CFR Part 136 and the State of California's SWAMP QAPrP. This will provide greater comparability of data among Municipal Permit Copermittees, when results are used to compare to water quality goals required under the Municipal Permit.

Field and Laboratory DQOs for all parameters sampled under both Industrial Permit and Municipal Permit monitoring programs are summarized in Table D1-5.

Table D1-5. Data Quality Objectives

Analyte	Container ¹	Preservative ²	Holding Time	Analytical Method	Reporting Limits ³	Accuracy	Precision	
							Matrix Spike	Relative Percent Difference
Specific Conductance	Glass or polyethylene	≤6°C, filter if hold time >24 hours	28 days	EPA 120.1	0.1 µmhos/cm	±0.5%	--	--
pH (lab)	Glass or polyethylene	None	15 minutes	EPA 150.1	± 0.01 units	--	--	--
pH (field)	In field (electrode)	None	15 minutes	Field meter	±0.5 units or 10%	--	--	--
Temperature	In field	None	15 minutes	Field meter	± 0.1°C	±0.15	--	--
Dissolved Oxygen (DO)	In field	None	15 minutes	Field meter	.01 mg/L	±0.2	±10%	±10%
Turbidity	In field	None	48 hours	Field meter	.5 NTU	1% up to 100 NTU; 3% from 100-400 NTU; 5% 400-3000 NTU	±10%	±10%
Total Suspended Solids (TSS)	Glass	≤6°C	7 days	SM 2540-D	.5 mg/L	75-125%	±20%	±20%
Total Dissolved Solids	Polyethylene	≤6°C, dark	7 days at 4°C, dark	EPA 160.1	10 mg/L	75-125%	±20%	±20%
Ethylene Glycol	Glass or polyethylene	≤6°C, HCl to pH<2	7 days to extract, 14 days to analyze	EPA 8015.1	1 mg/L	75-125%	±25%	±25%
Total Hardness	Glass or polyethylene	≤6°C, dark or ≤6°C and HNO ₃ or H ₂ SO ₄ to pH<2	6 months at ≤6°C, dark	SM2340C	.4 mg/L	0.15	±20%	±25%
Biological Oxygen Demand (BOD)	Glass or polyethylene	≤6°C	48 hours	SM 5210 B	2 mg/L	80-120%	±25%	±25%
Chemical Oxygen Demand (COD)	Glass or polyethylene	≤6°C, H ₂ SO ₄ to pH<2	28 days	SM 5220C	.1 mg/L	65-135%	±20%	±20%

Table D1-5. Data Quality Objectives (continued)

Analyte	Container ¹	Preservative ²	Holding Time	Analytical Method	Reporting Limits ³	Accuracy	Precision	
							Matrix Spike	Relative Percent Difference
Total Organic Carbon	Glass	≤6°C; acidify to pH<2 with HCl, H ₃ PO ₄ , or H ₂ SO ₄ within 24 hours	28 days	EPA 415.1	0.6 mg/L	80-120%	±25%	±25%
Dissolved Organic Carbon	Glass	≤6°C ; filter and preserve to pH<2 within 48 hours of collection	28 days	EPA 415.3	0.6 mg/L	80-120%	±25%	±25%
Oil and Grease (O&G)	Glass with Teflon-liner inside the cap, rinsed with hexane or methylene chloride	≤6°C, HNO ₃ or H ₂ SO ₄ to pH<2	28 days	EPA 1664A	1.4 mg/L	40-140%	±25%	±25%
Total Petroleum Hydrocarbons (TPH):	Glass with Teflon-liner inside the cap (jet fuel, diesel, and motor oil)	≤6°C	7 days to extract, 40 days to analyze (diesel, jet fuel, and motor oil)					
Jet Fuel				EPA 8015B	0.05 mg/L	45-130%	±20%	±20%
Diesel				EPA 8015B	0.05 mg/L	45-130%	±20%	±20%
Motor Oil				EPA 8015B	0.05 mg/L	45-130%	±20%	±20%
Polychlorinated Biphenyls (PCBs)	Glass with Teflon-liner inside the cap	≤6°C	1 year until extractions, 1 year after extractions	If PM >5%: Water, EPA 608	.002 µg/L	80-120%	± 30%	± 20%
				Solids, EPA 8082			± 30%	± 20%
				If PM <5%: Water, EPA 608			± 30%	± 20%
Polycyclic Aromatic Hydrocarbons (PAHs)	Glass with Teflon-liner inside the cap	≤6°C, dark, 0.008% Na ₂ S ₂ O ₃ if residual chlorine may be present	7 days to extract, 40 days to analyze	EPA 8310	10 µg/L	70-130%	±50%	±25%
Chlordane	Glass	≤6°C, pH 5-9	7 days to extract, 40 days to analyze	EPA 608	0.05 µg/L	70-130%	±50%	±25%
Sulfate	Polyethylene	Cool to ≤6°C	28 days	EPA 375.1	1.0 mg/L	80-120%	±25%	±25%

Table D1-5. Data Quality Objectives (continued)

Analyte	Container ¹	Preservative ²	Holding Time	Analytical Method	Reporting Limits ³	Accuracy	Precision	
							Matrix Spike	Relative Percent Difference
Metals (Total and Dissolved): ⁴	Polyethalene, pre-cleaned using HNO ₃	≤6°C, HNO ₃ to pH<2	Filter for dissolved fraction and preserve within 48 hours; 6 months to analyze					
Aluminum (Al)				EPA 200.8	.3 µg/L	80-120%	±20%	±20%
Arsenic (As)				EPA 200.8	.3 µg/L	80-120%	±20%	±20%
Cadmium (Cd)				EPA 200.8	.01 µg/L	80-120%	±20%	±20%
Chromium III (Cr III)				EPA 200.8	10 µg/L	80-120%	±20%	±20%
Chromium VI (Cr VI) ⁵				EPA 218.6	2 µg/L	80-120%	±20%	±20%
Copper (Cu)				EPA 200.8	0.01 µg/L	80-120%	±20%	±20%
Iron (Fe)				EPA 200.7	20 µg/L	80-120%	±20%	±20%
Lead (Pb)				EPA 200.8	.01 µg/L	80-120%	±20%	±20%
Nickel (Ni)				EPA 200.8	.02 µg/L	80-120%	±20%	±20%
Selenium (Se)				EPA 200.8	0.3 µg/L	80-120%	±20%	±20%
Thallium (Tl)				EPA 200.7	0.3 µg/L	80-120%	±20%	±20%
Silver (Ag)				EPA 200.8	.02 µg/L	80-120%	±20%	±20%
Zinc (Zn)				EPA 200.8	.1 µg/L	80-120%	±20%	±20%
Nitrate + Nitrite	Polyethalene	≤6°C, dark; H ₂ SO ₄ to pH<2	48 hours at 4°C, dark	SM-4500-NO3-E	0.1 mg/L	80-120%	<25%	<25%
Total Kjeldahl Nitrogen	Polyethalene	≤6°C, dark	28 days at 4°C, dark	EPA 351.3	0.5 mg/L	80-120%	<25%	<25%
Phosphorous	Polyethalene	≤6°C; H ₂ SO ₄ to pH<2	28 days	SM 4500-P	0.1 mg/L	80-120%	<25%	<25%
Orthophosphate	Polyethalene	≤6°C, dark	48 hours at 4°C, dark	SM 4500-P	0.01 mg/L	80-120%	<25%	<25%

Table D1-5. Data Quality Objectives (continued)

Analyte	Container ¹	Preservative ²	Holding Time	Analytical Method	Reporting Limits ³	Accuracy	Precision	
							Matrix Spike	Relative Percent Difference
Mercury (Hg) (Total and Dissolved) ⁴	Glass or teflon, pre-cleaned using HNO ₃	≤6°C, acidify in lab within 48 hrs with pre-tested HCL to 0.5%	48 hours to preserve, 90 days to analyze	EPA 245.1	0.0007 mg/L	75-125%	±25%	±25%
Methylene Blue Active Substances (MBAS)	Glass or polyethylene	≤6°C	48 hours	ASTM D2330-02	0.05 mg/L	80-120%	±20%	±20%
Ammonia-N (NH ₃ -N)	Glass or polyethylene	≤6°C, H ₂ SO ₄ to pH<2	28 days	SM 4500-NH3	0.1 mg/L	80-120%	±20%	±20%
Particle Size Distribution	Glass with tetrafluoroethylene	≤6°C, analyze at room temperature	As soon as possible	SM 2560D	0.1 µm	80-120%	NA	5% of sample
Total Coliform	Sterile plastic	≤6°C, dark; , Na ₂ S ₂ O ₃	6 hours	SM 9221 B	2 MPN/100mL	--	--	--
Fecal Coliform	Sterile plastic	≤6°C, dark; , Na ₂ S ₂ O ₃	6 hours	SM 9221 E	2 MPN/100mL	--	--	--
<i>Enterococcus</i>	Sterile plastic	≤6°C, dark; , Na ₂ S ₂ O ₃	6 hours	SM 9230 C	1 colonies /100 mL	--	--	--

Notes: Analytical test methods may only be substituted with an equivalent method approved in 40 CFR Part 136.

1. Container volume size to be determined by the laboratory.
2. Analytes with the same preservative can be combined into a single container, if the same laboratory is performing the analyses. Samples volumes to be determined by laboratory.
3. Reporting Limits are derived from SWAMP Quality Assurance Program Plan (2008), but may be adjusted according to lab and project-specific requirements.
4. Dissolved analytes will be filtered in the laboratory prior to acidification.
5. Acidification alters the form of the analyte. Minimum of 500 mL of sample water should be submitted in a separate bottle for analysis.

µg/L = micrograms per liter; °C = degrees Celsius; EPA = U.S. Environmental Protection Agency; H₂SO₄ = sulfuric acid; HCl = hydrochloric acid; Na₂S₂O₃ = sodium thiosulfate; mg/L = milligrams per liter; PM = particulate material; SM = Standard Method; TBD = to be determined prior to final document submission

Completeness objective for all analytes is 90%.

7.1 FIELD QUALITY ASSURANCE/QUALITY CONTROL

Field QA/QC will consist of sample tracking and handling, and the collection of equipment, travel, bottle and field blanks, and field duplicates.

7.2 SAMPLING TRACKING AND HANDLING

Samples will be kept properly chilled and will be transferred to the analytical laboratory within the holding times specified in Table D1-5. To properly track and handle the samples, COC procedures and documentation will accompany the samples from initial collection to final extraction and analysis. To ensure quality data results, the analytical laboratory must provide confirmation of each analytical test to be conducted (including reporting limits, analytical methods, and costs) before analyses are conducted.

7.3 EQUIPMENT BLANKS

Equipment blanks will be collected for automated sampling equipment exclusively. The purpose of the equipment blank is to test the cleanliness of all sample tubing and sample collection devices prior to sample collection. One equipment blank per automated sampling device will be collected and analyzed prior to each sampling season, or if equipment is replaced or contaminated in some way. Bottle blanks are provided by the laboratory for 19-liter bottles after every sampling event, prior to returning cleaned bottles.

7.4 FIELD BLANKS

Field blanks are used to determine whether contamination has been introduced during field sampling. One field blank will be collected for five percent of field samples collected annually. Field blanks will be prepared by pouring laboratory-grade blank water into sampling containers in the field during the sampling period. Blank water is supplied by the laboratory and certified to be free of contaminants. For grab samples, identical equipment used to collect the grab samples will be rinsed with blank water before the blank water is poured into the sample containers.

7.5 TRAVEL BLANKS

Travel blanks are used to demonstrate that no contamination occurs during sample bottle preparation and sample handling. One travel blank will be prepared for volatile organic analysis (VOA) samples (one 40-milliliter [mL] vial per transportation cooler) for each sample event. Blank water specifically prepared for VOAs will be supplied by the laboratory, and prepared in advance by the field team. Vials will remain unopened during sampling and handling prior to receipt by the laboratory.

7.6 FIELD DUPLICATES

Field duplicates are used to assess variability attributable to sample collection, handling, shipment, and storage, and/or laboratory handling and analysis. As with field blanks, one field duplicate will be collected for every ten field samples. Duplicate samples will be labeled separately and will be submitted "blind" to the laboratory. Duplicate analyses results will be evaluated by calculating the relative percent difference (RPD) between the two sets of results and will be a measure of the reproducibility (precision) of the measured results.

Procedures for collecting the additional sample volume for the duplicate field samples will simulate the normal sampling protocols, except that they require collecting twice as much sample volume. Duplicate grab samples will be collected by filling two grab samples bottles at the same time (simultaneously) or in rapid sequence.

7.7 LABORATORY QUALITY ASSURANCE/QUALITY CONTROL

Laboratory QA/QC includes the following:

- Employing analytical chemists trained in the procedures to be followed
- Adhering to documented procedures, USEPA methods, SWAMP methods, written standard operating procedures (SOPs), and other approved methods (e.g., Standard Methods for the Examination of Water and Wastewater)
- Routine checking and regular maintenance of analytical laboratory equipment and instrumentation
- Conducting laboratory check samples (see below)
- Properly labeling and dating all sample containers and chemicals
- Employing applicable QAPP, SOPs, analytical method manuals, and safety plans
- Completely documenting sample tracking, analysis, and reporting
- Following additional internal QA/QC procedures outlined in the laboratory Quality Assurance Manual

Laboratory Check Samples

Laboratory check samples will include the use of laboratory duplicates, method blanks (MBs), matrix spike and matrix spike duplicates (MS/MSDs), and laboratory control spikes (LCSs). Certified Reference Materials (CRMs) should be used by the laboratory in QC analyses when comparing samples to a known concentration. If no CRM exists, reference values may be used. Where reference values are not available, a laboratory control sample must be prepared and analyzed as a last resort for assessing accuracy. These laboratory QA/QC activities are discussed below and their applicability to each analyte is summarized in Table D1-5.

Laboratory Duplicates

Laboratory duplicate samples will be generated by the laboratory. As with field duplicates, duplicate analyses results evaluate the relative percent difference (RPD) between the two sets of results, and is a measure of the reproducibility (precision) of the measured results.

Method Blanks

Method blanks will be run by the laboratory to determine the level of contamination associated with laboratory reagents and equipment. One method blank must be prepared and analyzed for each analytical batch. A method blank is a sample of a known matrix that has been subjected to the same complete analytical procedure as the field samples to determine if contamination has been introduced into the samples during processing. The results of the method blank will be checked against reporting limits for analytes. Method blank results should be less than the reporting limits for each analyte.

Equipment Blanks

Laboratory equipment blanks are completed by the laboratory after sample processing has been completed for each sampling event. Blank water is pumped through laboratory processing filter, tube, and bottles, then collected, preserved, and analyzed for contaminants. Analytical results are provided to the monitoring program QC personnel to confirm that the laboratory equipment and materials are free of contamination.

Matrix Spikes and Matrix Spike Duplicates

MS and MSD samples are required for ten percent of samples. Samples will be analyzed for their analytes and then are spiked with a known amount of analyte(s). The results of the analysis of the spiked sample are compared to the unspiked sample results and the "percent recovery" of each spiked analyte is calculated. The MS/MSD results and the calculated RPD allow evaluation of the accuracy and precision of the laboratory analytical method and matrix interferences.

Laboratory Control Spikes

The LCS contains a known (spiked) amount of the analyte(s) of interest in a clean matrix and assesses the matrix effects on spike recoveries. High or low recoveries of the analytes in an MS may be caused by interferences from the sample. The LCS assesses these possible matrix effects because the known (clean) matrix is free from matrix interference.

7.8 CORRECTIVE ACTION

Corrective action is taken when an analytical result is considered to be anomalous. Reasons include exceeding RPD ranges and/or problems with spike recoveries or blanks. If the issue is resolved by the laboratory analysis, the problem should be documented and included in the laboratory report. The corrective action varies somewhat from analysis to analysis, but typically involves the following:

- A check of procedures
- A review of documents and calculations to identify possible errors
- Correction of errors
- Re-performing calculations to improve accuracy
- A re-analysis of the sample extract, if sufficient volume is available, to determine if results can be improved
- A complete reprocessing and re-analysis of additional sample material (if available and if the holding time has not been exceeded)

7.9 LABORATORY DATA PACKAGE DELIVERABLES

The laboratory deliverable package will include a hard copy and an electronic data deliverable (EDD). The package will include information on the date analyses were performed, names of analytical staff, analytical techniques and methods used, results of the analyses, and standard narratives identifying any analytical or QA/QC problems and corrective actions. Summaries of the following QA/QC elements will be in the data package:

- Sample extraction and analysis dates
- Results of MBs, MSs, and MSDs
- Analytical accuracy
- Analytical precision
- Reporting limits

The electronic data files will contain all information found in the hard copy reports submitted by the laboratory.

7.10 DATA MANAGEMENT AND REPORTING PROCEDURES

The analytical process will be tracked to make sure that the laboratories are meeting holding times and are providing a complete deliverable package. Monitoring staff will receive the original hard copy from the laboratory, verify its completeness, and log the date of receipt. Upon receipt from the laboratory, each analytical report will be thoroughly reviewed and the data evaluated to determine whether it meets the project objectives.

All data will be screened for the following major items:

- A check between electronic data and the hard copy reports provided by the laboratory
- A conformity check between the chain-of-custody forms, compositing protocol, and laboratory reports
- A check for laboratory data report completeness
- A check for typographical errors in the laboratory reports
- A check for suspect values
- A check for missing values requested on the Chain of Custody

Following the initial screening, a more complete QA/QC review will be performed, including evaluation of holding times, method blank contamination, and analytical accuracy and precision from LCSs, MSs, and MSDs. If blank contamination is present, the data will be evaluated and qualified according to USEPA guidelines for organic and inorganic data review. Accuracy will be evaluated by reviewing MS/MSD and LCS recoveries. Depending on the analytical method, precision will be evaluated by reviewing field duplicate, MSD, and laboratory duplicate sample RPDs. Control limits for spike recoveries (accuracy) and RPDs (precision) are defined by the project DQOs listed in Table D1-5.

7.11 ELECTRONIC DATA TRANSFER

The analytical laboratory will provide data in both hard copy and electronic formats. The format required for electronic submittals will be provided to the laboratory to make sure the files can be imported directly into the Authority's Web-based database. Laboratory data will be in a format compatible with guidelines from the California Environmental Data Exchange Network (CEDEN).

8.0 REPORTING

All data will be submitted to SMARTS, and to the Regional Clearinghouse, called the Project Clean Water website, for data that is used to evaluate attainment of WQIP goals. All sampling results must be submitted to SMARTS within 30 days of receiving results from the laboratory. For details on reporting procedures if results exceed NAL benchmarks, see Section 7.0.

9.0 HEALTH AND SAFETY

Sampling sometimes may be necessary when the sampling location and/or the discharge create hazardous conditions. Safety precautions will be used at all times when conducting wet or dry weather monitoring. Safe practices are not limited to those listed here; all reasonable safety precautions should always be taken, based on site and current conditions.

9.1 SAFETY GUIDELINES

Samplers will follow these guidelines in the field:

- Keep a first aid kit with field equipment.
- Watch out for traffic along the access road when sampling or making observations.
- Do NOT remain in open areas or stand under trees or tall structures if lightning is occurring in the vicinity.
- Always watch your step; the ground may be wet and slippery, steep, or unstable. Do not attempt to climb down unsafe slopes.
- Always wear clean, nitrile or polyethylene gloves when sampling.
- Protect eyes and skin against contact with acids and other preservatives.
- Use common sense when deciding whether to sample during adverse weather conditions. Do not sample during dangerous conditions, such as high winds or lightning.
- Do not enter a confined space (spaces with limited or restricted means for entry or exit, and which are not designed for continuous occupancy).
- Be familiar with Safety Data Sheets (SDSs) for all chemicals used in the field and when calibrating instruments. Know the health hazards and emergency medical treatments, and follow proper disposal instructions.

9.2 SAFETY EQUIPMENT

The following safety equipment is to be used wet and dry weather sampling:

- Safety glasses
- Nitrile gloves
- Work boots or rubber boots
- Safety vest
- Hard hat
- Flash light
- Rain pants and coat

The following safety equipment is in the vehicle and readily available for use during wet and dry weather sampling:

- First aid kit
- Safety rope
- Cellular telephone

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APPENDIX D-2: MUNICIPAL AND BMP EFFECTIVENESS MONITORING PLAN

1.0 BACKGROUND

Provisions C.2, D.2, and D.4 of San Diego Regional Water Quality Control Board (Regional Water Board) Order No. R9-2013-0001 (the Municipal Permit) require wet and dry weather monitoring and assessment of storm water and non-storm water discharges. The monitoring program is structured around compliance with the Municipal Permit's monitoring requirements at outfalls of the municipal separate storm sewer system (MS4), as well as elements of ongoing studies of the effectiveness of best management practices (BMPs). The objective of the monitoring program, as outlined in Provision D.2 of the Municipal Permit, is to measure the effectiveness of the Authority's jurisdictional runoff management program in reducing the discharge of pollutants in storm water from the MS4 to the maximum extent practicable (MEP), effectively prohibiting non-storm water discharges, and to guide pollutant source identification efforts. However, MS4 outfall wet weather monitoring will be performed as a part of the San Diego Bay Watershed Management Area (WMA) monitoring program rather than the Authority's program, with dry weather investigations performed by the Authority. The results of the MS4 wet and dry monitoring programs will be used to support Copermittees' efforts to track progress in achieving Water Quality Improvement Plan (WQIP) goals and guide further pollutant source identification. In addition to MS4 outfall monitoring, the Authority will continue to conduct BMP effectiveness sampling. This program began in 2006–2007 under the 2007 Municipal Permit (Regional Water Board Order No. R9-2007-0001), and meets two of the objectives of the Authority's Sampling Plan: (1) to identify and rate sources of pollutants of concern (POCs) at SAN in terms of annual mass loading in storm water, the potential for reduction through BMP implementation, and the best combination of sources to address through BMP implementation to achieve pollutant load reduction objectives, and (2) to monitor the performance and effectiveness of BMPs. The BMP effectiveness sampling data may also be used in effectiveness assessments outlined in Provision D.4 of the Municipal Permit. Details on this sampling program are included in Appendix D-2C.

The Municipal Permit mandates that the Copermittees in each WMA in the San Diego region jointly develop and implement a WQIP. The WQIP's purpose is to identify the highest and focused priority water quality conditions in each WMA and specify numeric goals, strategies, and schedules to (1) achieve water quality standards in receiving waters, (2) protect receiving waters and associated habitats from MS4 discharges, and/or (3) support beneficial uses in receiving waters. The Authority, as one of ten Responsible Copermittees in the San Diego Bay WMA, will facilitate WQIP submittal by June 2015 for Regional Water Board approval (Caltrans is also participating in this process voluntarily). This will be followed by a 30-day public comment period, after which time the Copermittees will have 60 days to make any necessary changes.

APPENDIX D-2A: MUNICIPAL WET WEATHER MONITORING PROGRAM

2.0 INTRODUCTION

Upon approval of the WQIP by the Regional Water Board, the Authority will be subject to new requirements for wet weather monitoring to comply with the goals, strategies, and schedules in the WQIP. This updated section of the Storm Water Monitoring Plan (SWMP) will take effect after the WQIP's acceptance by the Regional Water Board. As stated in the Background Section of Appendix D-2, the San Diego Bay WMA monitoring program will perform the wet weather outfall monitoring described below, and not the Authority. However, the results will be used towards assessing the effectiveness of the Authority's JRMP in attaining WQIP goals. Until the WQIP is accepted, the Authority will continue to implement its Transitional Wet Weather Monitoring Program.

Table D2-1 summarizes the Authority's wet weather monitoring programs under the Municipal Permit. Table D2-2 summarizes the Copermittees' wet weather monitoring programs under the San Diego Bay WQIP.

Table D2-1. Summary of the Authority's Wet Weather Compliance Monitoring Programs

Monitoring Program	Regional or Jurisdictional	Monitoring Agency	Sample Type	Analyses	Station Type	Frequency of Events	Number of Sites	Permit Reference
Focused Priority Condition Monitoring ¹	Jurisdictional	Authority	Grab	Metals (total and dissolved)	MS4	4 qualifying storm events (QSEs) and observations	18	2013 Municipal Permit: B.4, D.2.c.(5).(f)
MS4 Outfall Discharge Monitoring	Regional	Copermittees	Visual observations; in-situ field measurements; grab and composite samples	Chemistry, toxicity, indicator bacteria	MS4 Outfall	Annually	10 ²	2013 Municipal Permit: D.2.c

Notes:

1. Sites for priority condition monitoring correspond with the sites in the Industrial Permit Monitoring Implementation Plan (Appendix D-1).
2. There is one MS4 outfall within the Authority's jurisdiction that will be monitored under the MS4 outfall wet weather monitoring program.

Table D2-2. Summary of Copermittees' Wet Weather Monitoring Programs

Monitoring Program	Regional or Jurisdictional	Monitoring Agency	Sample Type	Analyses	Station Type	Frequency of Events	Number of Sites	Permit Reference
San Diego Reference Streams and Beaches Special Study	Regional	Copermittees	In-situ field measurements; grab (water)	Indicator bacteria, toxicity, flow, precipitation, chemistry	Receiving water	3 QSEs	6	2013 Municipal Permit: D.3.a.(1)
Riparian Area Special Study	WMA	Copermittees	Grab (water)	Metals (selenium)	Receiving water	50 events in 2014	5	2013 Municipal Permit: D.3.a.(1)
TMDL ¹ Receiving Water Monitoring of Chollas Creek	Jurisdictional	N/A to SAN	Composite samples; grab samples (for bacteria)	Indicator bacteria, metals, pesticides	Receiving water	3 QSEs	4	2013 Municipal Permit: D.1.d.(3).(f).(iii); Attachment E (Provisions 1, 4, and 6)
TMDL ¹ Monitoring of Shelter Island Shoreline Park	Jurisdictional	N/A to SAN	Grab (water)	Indicator bacteria	Receiving water	Weekly	5	2013 Municipal Permit: D.1.d.(3).(f).(iii); Attachment E (Provision 5)
TMDL ¹ Monitoring of SIYB	Jurisdictional	N/A to SAN	Composite samples, grab (water); visual observations; <i>in-situ</i> field measurements	Dissolved copper	Receiving water and MS4 Outfall	3 QSEs	2	2013 Municipal Permit: D.1.d.(3).(f).(iii); Attachment E (Provision 2)
Hydromodification Monitoring Program (HMP)	Regional	N/A to SAN	Visual observations; in-situ measurements	Rain gauge and stream gauge analysis, channel assessments, flow, sediment transport	Receiving water	NA	NA	2013 Municipal Permit: D.1.c.(6)
Long-term Receiving Water Monitoring	Regional	Copermittees	In-situ field measurements; visual observations; trash assessment; grab; and composite samples	Chemistry, nutrients, indicator bacteria, toxicity, bioassessment, trash	Receiving water	3 QSEs	1	2013 Municipal Permit: D.1.d

Notes:

1. SAN is not named in these TMDLs; TMDLs are included here because they apply to San Diego Bay, a receiving water body of the Authority.

DEH = (San Diego County) Department of Environmental Health

IDDE = illicit discharge detection elimination

TMDL = total maximum daily load

N/A = not applicable

MLS = mass loading station

TWAS = temporary water assessment station

NA = not available

SIYB = Shelter Island Yacht Basin

2.1 MONITORING FREQUENCY

Provision D.2.c.(2) of the Municipal Permit requires sampling at outfall discharge monitoring locations once per year. Collectively, the wet weather events monitored by the Copermittees must represent the range of hydrologic conditions experienced in the San Diego region.

2.2 SITE SELECTION

Outfalls 12 and 15 are the major outfalls currently under the jurisdiction of the Authority. An outfall associated with a non-industrial drainage area is classified as major if it meets one of the following criteria:

- A circular pipe having a pipe internal diameter of greater than 36 inches
- Discharge from a single conveyance other than a circular pipe that is associated with a drainage area of more than 50 acres

An outfall associated with an industrial drainage area is classified as major if it meets one of the following criteria:

- A circular pipe having a pipe internal diameter of greater than 12 inches
- Discharge from a single conveyance other than a circular pipe which is associated with a drainage area of more than 2 acres

The two major outfalls within the Authority’s jurisdiction drain industrial areas but are tidally influenced and cannot be safely monitored. Two upstream proxies were originally chosen for monitoring. However, the second alternate upstream monitoring location (in drainage basin 15) was determined to be submerged in tidal water and is therefore not a viable sampling location. Monitoring location site C-B12-9a will be sampled as a representation of SAN’s wet weather discharge to the MS4. This meets the Municipal Permit Provision D.2.a.(3)(a)(ii) requirement for the Authority of at least one wet weather MS4 outfall discharge monitoring station for each Copermittee within each WMA.

Table D2-3. Authority MS4 Outfall Discharge Monitoring Station

Drainage Basin	Monitoring Location ID	Latitude	Longitude	Outfall Diameter (inches)	Sampling Method	Location Description	Accessibility
12	C-B12-9a	32.734697	-117.202831	NA	Visual Observations, Grab/Composite	Inlet pipe of Terminal 2 West Oil-Water Separator (OWS) at storm drain inlet	Accessible

2.3 VISUAL OBSERVATIONS

Visual observations will be recorded at site C-B12-9a during each wet weather monitoring event. Visual observations will include a narrative description of the state (location, date, duration of the storm event, rainfall estimates, and duration of the preceding dry period) and the measured storm water flow rates and volumes at the site through the duration of the storm.

2.4 FIELD AND ANALYTICAL MONITORING

The Municipal Permit requires both field and laboratory analytical sampling during wet weather MS4 outfall monitoring. Five field parameters will be analyzed during each wet weather sampling event: pH, temperature, special conductance (SC), dissolved oxygen (DO), and turbidity. Additionally, grab samples will be collected for laboratory analysis of hardness and indicator bacteria.

The laboratory parameters listed in Table D2-4 will be analyzed. Site C-B12-9a will be used to comply with sampling requirements under both the Municipal Permit and Industrial Permit. Therefore, analysis will be conducted for parameters required under both permits as a grab sample for the Industrial Permit (see Appendix D-1) and a composite sample plus grab samples for the Municipal Permit. San Diego Bay, the receiving water of the Authority's wet weather outfall sampling locations, is Clean Water Act Section 303(d) listed for PCBs. Provision D.2.c.5.(f).(ii) of the Municipal Permit requires this parameter to be analyzed. The remaining constituents in Table D2-4 are derived from Table D-6 of the Municipal Permit, which presents a core set of constituents to be monitored at all MS4 outfall discharge monitoring locations.

Apart from the grab samples listed above, all other constituents will be sampled using one of the following methods:

- 1) Time-weighted composite composed of hourly discrete samples, collected over the course of the storm or for the first 24-hour period, whichever is shorter; this sample may be collected using automated equipment
- 2) Flow-weighted composite collected using automated sampling equipment over the course of the storm or for the first 24-hour period, whichever is shorter
- 3) If automated compositing is not feasible, a sample composed from a minimum of four grab samples, collected for the first 24-hour period of a storm, or over the course of the entire storm if it is shorter than 24 hours

Table D2-4. Analytical Monitoring Constituents for Wet Weather MS4 Outfall Discharge Monitoring Stations¹

Conventionals and Nutrients	Metals (Total and Dissolved)	Indicator Bacteria	Organics
Total Dissolved Solids	Arsenic	Total Coliform	Polychlorinated Biphenyls (PCBs) ³
Total Suspended Solids	Cadmium	Fecal Coliform	
Turbidity	Chromium	<i>Enterococcus</i>	
Total Hardness	Copper		
Total Organic Carbon	Iron		
Dissolved Organic Carbon	Lead		
Sulfate	Nickel		
MBAS	Selenium		
Total Phosphorus	Thallium		
Orthophosphate	Zinc		
Nitrite ²			
Nitrate			
Total Kjeldahl Nitrogen			
Ammonia			

Notes:

1. Source: Municipal Permit, Table D-6.
2. Nitrite and Nitrate may be analyzed as Nitrite+Nitrate.
3. Required per Provision D.2.a.3.(e).(vi).[a] of the Municipal Permit. San Diego Bay is 303(d)-listed for PCBs.
MBAS = Methylene Blue Active Substances

2.5 STORM WATER ACTION LEVELS

The WQIP has incorporated Storm Water Action Levels (SALs) to measure progress toward meeting WQIP strategies and the effectiveness of implementation efforts. The Municipal Permit lists the SALs in Table D2-5 for discharges of storm water to the MS4:

Table D2-5. Storm Water Action Levels for Dischargers from MS4s to Receiving Waters

Parameter	Units	Action Level
Turbidity	NTU	126
Nitrate+Nitrite (Total)	mg/L	2.6
Phosphorus (Total P)	mg/L	1.46
Cadmium (Total Cd)*	µg/L	3.0
Copper (Total Cu)*	µg/L	127
Lead (Total Pb)*	µg/L	250
Zinc (Total Zn)*	µg/L	976

Notes:

NTU – Nephelometric Turbidity Units; mg/L – milligrams per liter; µg/L – micrograms per liter

As specified with Table C-5 of the Municipal Permit, storm water samples with total metal concentrations that exceed the corresponding SALs will be compared with the California Toxics Rule criteria and the United States Environmental Protection Agency (USEPA) one-hour maximum concentration for the detected level of receiving water hardness associated with that sample. If the total metals concentration exceeds the SAL but does not exceed the applicable USEPA one-hour maximum concentration criterion for the level of hardness measured with sampling, the sampling result is not considered to be above the numeric SAL. SALs are not considered enforceable effluent limitations, but rather as a tool to support WQIP assessments, goals, and strategies.

Focused Priority Condition Monitoring

As required under Provisions B.2 and D.2.c of the Municipal Permit, parameters identified as priority water quality conditions in the San Diego Bay WQIP as the highest threat to receiving water quality in the Authority's jurisdiction will be sampled and analyzed at the MS4 outfall monitoring location during wet weather events. The Authority will monitor copper and zinc concentrations in wet weather discharges as the priority pollutants contributing to impairments in receiving water quality, as determined in the WQIP. These priority pollutants will be monitored in all wet weather monitoring programs, encompassing the requirements of the Municipal Permit and the Industrial Permit.

3.0 ASSESSMENTS

The assessments used to evaluate the effectiveness of SAN's MS4 monitoring programs are described in detail in Section 11.0. In summary, the following assessments, required per Provision D.4.b.(2) of the Municipal Permit, will be based on data collected during wet weather monitoring, and will be included in the WQIP Annual Reports and the Report of Waste Discharge.

Monitoring Program Effectiveness Assessments:

- 1) Identify trends and conditions of MS4 outfall discharges and receiving water quality conditions in San Diego Bay.
- 2) Evaluate progress toward meeting the Authority's WQIP goals for its Focused Priority pollutant concentration and load reductions.
- 3) Compare water quality sampling data and applicable SALs, and determine whether the analysis and assumptions used to develop WQIP strategies should be updated based on this comparison.
- 4) Identify progress made towards meeting storm water quality goals and pollutant load reductions from different drainage areas.
- 5) Identify data gaps in the current wet weather monitoring program and revisions necessary to collect sufficient data for thorough water quality condition analysis.
- 6) Identify modifications to the wet weather monitoring locations and frequencies necessary to identify pollutants in storm water discharges from the MS4s.

Focused Priority Condition Assessments:

- 1) Identify data gaps and additional monitoring required to assess progress toward meeting water quality goals outlined in the WQIP.

- 2) Identify changes or additions to the priority water quality conditions.
- 3) Evaluate progress toward meeting WQIP long-term and short-term goals.
- 4) Identify necessary updates to WQIP strategies and schedules to meet established goals, as necessary.
- 5) Provide rationale for updates or changes to priority water quality conditions, strategies, and/or schedules, as applicable.
- 6) Include results from special studies related to water quality conditions or sources of priority condition pollutants, if applicable to the Authority.
- 7) Identify new and developing regulations, revised 303(d) listings, Basin Plan amendments, and/or Regional Water Board recommendations related to priority water quality conditions.
- 8) Identify the amount of resources applied to achieve established goals related to priority water quality conditions.
- 9) Evaluate the overall effectiveness of strategies implemented to achieve established goals.

APPENDIX D-2B: MUNICIPAL DRY WEATHER MONITORING PROGRAM

4.0 INTRODUCTION

Background. Under the Municipal Permit, the Authority is required to develop and implement a program to detect and eliminate illicit connections and illegal discharges to the Authority’s MS4. This program is described in Section 3.0 of the Authority’s SWMP, “Non-Storm Water Discharge/Illicit Discharge Detection and Elimination Component.”

The dry weather monitoring program has been updated to comply with the goals, strategies, and schedules in the WQIP for detecting and eliminating illicit discharges and to comply with Provision D.2.b of the Municipal Permit. These updates will take effect after WQIP’s acceptance by the Regional Water Board. Until the WQIP is accepted, the Authority will continue to implement its Transitional Dry Weather Monitoring Program.

Non-Storm Water Discharges and Illicit Discharges. Non-storm water discharges, as defined by the Municipal Permit, include all discharges to and from an MS4 that do not originate from precipitation events (i.e., all discharges from an MS4 other than storm water). Non-storm water discharges can include discharges that are illicit (unauthorized), or National Pollutant Discharge Elimination System (NPDES)-permitted (authorized). An illicit discharge is any discharge to an MS4 that is not composed entirely of storm water, except discharges pursuant to an NPDES permit and discharges resulting from firefighting activities (40 Code of Federal Regulations [CFR] 122.26(b)(2)). An illicit connection is a connection to an MS4 that conveys an illicit discharge. Authorized discharges are those identified in Provisions E.2.a.(1) through E.2.a.(5) of the Municipal Permit and Section IV.A of the Industrial Permit and are not identified as a source of pollutants by the Authority. These are described in Sections 3.0 and 7.0.

Dry Weather Field Screening Monitoring Program. A requirement and critical element of the Illicit Discharge Detection and Elimination program is a Dry Weather Field Screening Monitoring Program, as specified under Provisions D.2 and E.2 of the Municipal Permit. The purpose of the program is to identify non-storm water and illicit discharges, categorize these discharges as transient or persistent flows, and prioritize flows to be investigated and eliminated following implementation of the WQIP. The Authority will use the results of this program to assess the effectiveness of its Jurisdictional Runoff Management Program (JRMP) toward reducing or prohibiting non-storm water discharges (NSWDs) into the MS4. Under the transitional Dry Weather Field Screening Monitoring Program, the two MS4 outfalls solely within the Authority’s jurisdiction (i.e., Outfalls 12 and 15) were inventoried and incorporated into the MS4 map. The Authority also performs dry weather monitoring at selected stations where industrial wet weather monitoring occurs. Analytical monitoring may be conducted at any of these locations and serves two important purposes: (1) provide more information to help the Authority detect and eliminate illicit discharges and illicit connections, and (2) provide additional analytical data to help prioritize water quality issues, sources, and stressors during implementation of the WQIP and JRMP. Once the monitoring and assessment programs of the WQIP are adopted, the Authority will continue to conduct dry weather field screening monitoring and visual observations of the MS4 outfalls and other locations twice per year during dry weather conditions.

Table D2-6 summarizes the Authority’s dry weather monitoring programs. Table D2-7 summarizes Copermittees’ dry weather monitoring programs under the San Diego Bay WQIP.

Table D2-6. Summary of the Authority's Dry Weather Monitoring Programs

Monitoring Program	Regional or Jurisdictional	Monitoring Agency	Sample Type	Analyses	Station Type	Frequency of Events	Number of Sites	Permit Reference
MS4 Outfall NSWD and Field Screening	Jurisdictional	SAN	Visual observations, <i>in-situ</i> measurements, grab (water)	As needed for IDDE follow-up	MS4 Outfall	2	2	2013 Municipal Permit: D.2.b.; E.2.c; E.2.d;
Dry Weather Industrial	Jurisdictional	SAN	Visual observations	NA	Drainage Area	Monthly	18	Industrial Permit ¹ : XI.A, IGP Factsheet II.C

Notes:

IDDE = Illicit Discharge Detection and Elimination

Table D2-7. Summary of Copermittees' Dry Weather Monitoring Programs

Monitoring Program	Regional or Jurisdictional	Monitoring Agency	Sample Type	Analyses	Station Type	Frequency of Events	Number of Sites	Permit Reference
TMDL ¹ Monitoring of Shelter Island Shoreline Park	Jurisdictional	N/A to SAN	Grab (water)	Indicator bacteria	Receiving water	At least 5 per month	4	2013 Municipal Permit: D.1.c.(3).(f).(iii); Attachment E (Provision 5); IO No. R9-2011-0036
TMDL ¹ Monitoring of Chollas Creek	Regional	N/A to SAN	Grab, visual observations, <i>in-situ</i> measurements	Indicator bacteria	Receiving water	At least 5 per month	3	2013 Municipal Permit: D.1.c.(3).(f).(iii); Attachment E (Provision 6)
TMDL ¹ Monitoring of SIYB	Jurisdictional	N/A to SAN	<i>In situ</i> field measurement, grab (water column), visual observations	Chemistry, toxicity	Receiving water and MS4 Outfall	1	7	2013 Municipal Permit: D.1.c.(3).(f).(iii); Attachment E (Provision 2)

Table D2-7. Summary of Copermittees' Dry Weather Monitoring Programs (continued)

Monitoring Program	Regional or Jurisdictional	Monitoring Agency	Sample Type	Analyses	Station Type	Frequency of Events	Number of Sites	Permit Reference
Long-Term Receiving Waters Monitoring	Regional	Copermittees	<i>In situ</i> field measurement, visual observations, trash assessment, grab, and composite samples	Chemistry, nutrients, bacteria, toxicity, bioassessment, trash	Receiving water	3 events	1	2013 Municipal Permit: D.1.b; D.1.c.(2); D.1.c.(3)
San Diego Reference Streams and Beaches Special Study	Regional	Copermittees	Grab (water)	Indicator bacteria, chemistry, nutrients, bioassessment, flow	Receiving water	Weekly until dry	10	2013 Municipal Permit: D.3.a.(1)
San Diego Bay Debris Study	WMA	Copermittees	Grab, visual observations	Trash assessment	Receiving water	2 events	142	2013 Municipal Permit: D.3.a.(2)
Riparian Area Special Study	WMA	Copermittees	Grab (water)	Metals (selenium)	Receiving water	50 events in 2014	5	2013 Municipal Permit: D.3.a.(1)
Southern California Bight Monitoring	Regional	Copermittees	Grab (sediment)	Chemistry, toxicity, bioassessment	Receiving water	Dependent on program	420	2013 Municipal Permit: D.1.e.(1).(b)
Regional Harbor Monitoring Program	Regional	RHMP Agencies	<i>In situ</i> field measurement, grab (water, sediment), visual observation	Water/sediment: chemistry, toxicity, bioassessment, trash, fish trawls; special studies (as needed)	Receiving water	1 event every 5 years	75	2013 Municipal Permit: D.1.e.(1).(b)
SMC Regional Monitoring	Regional	Copermittees	Grab (water, algae, infauna)	Chemistry, nutrients, toxicity and bioassessment	Receiving water	Annually	Approximately 3 sites per WMA, but may be randomly distributed	2013 Municipal Permit: D.1.e.(1).(a)
Beach Water Quality (AB411)	Regional	Copermittees	Grab (water)	Indicator bacteria	Receiving water	Weekly from April 1 through October 31	4	N/A

Notes:

1. SAN is not named in these TMDLs; they are included here because they apply to San Diego Bay, a receiving water body of SAN.

DEH = (San Diego County) Department of Environmental Health; IDDE = illicit discharge detection elimination; MLS = mass loading station; MS4= municipal separate storm sewer system;

N/A = not applicable; SMC = Southern California Stormwater Monitoring Coalition; SIYB = Shelter Island Yacht Basin; TBD = to be determined; TMDL = total maximum daily load;

TWAS = temporary water assessment station

5.0 STORM DRAIN SYSTEM MAPPING (MS4 MAP)

Pursuant to Provisions D.2 and E.2 of the Municipal Permit, the Authority has updated its MS4 map, provided in Appendix B, Figure for BMP SC-01. As defined by the Municipal Permit, an MS4 consists of all conveyances within the jurisdiction of the Authority that it owns or operates and that collect or convey storm water, including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, and storm drains.

The map identifies:

- All segments of the MS4 owned, operated, and maintained by the Authority
- Locations of all known connections with other MS4s not owned by the Authority
- Locations of inlets and outfalls that collect and/or discharge runoff within the MS4
- Receiving waters to which the Authority's MS4 outfalls discharge. (Note: there are no receiving waters within the Authority's jurisdiction)
- Locations of the MS4 outfalls from which the Authority's jurisdiction discharge. (Note: only two outfalls (12 and 15) discharge solely Authority runoff; other outfalls discharge comingled runoff).

There are no MS4 outfalls with known persistent flows. Outfalls 12 and 15 are susceptible to tidal influences.

The map also addresses all requirements of the Site Map under the Industrial Permit Section X.E., as described in Section 7.0. The accuracy of the MS4 map is confirmed during dry weather field screening and the map is updated annually. Some information in the most recent map is provisional, pending receipt of as-built drawings from ongoing construction at SAN.

6.0 STATION INVENTORY

An inventory of major MS4 outfalls in the jurisdiction of the Authority that discharge directly to the receiving water (the Navy Boat Channel, which is part of San Diego Bay) was completed per Municipal Permit Provision D.2.a.(1). As stated previously, only two MS4 outfalls discharge directly to the receiving waters from the Authority's jurisdiction, and therefore these outfalls were selected for dry weather field screening and MS4 outfall discharge monitoring under the Municipal Permit, as shown in Table D2-8.

Table D2-8. Monitoring Stations for Dry Weather Field Screening Outfall Monitoring

Drainage Basin	WMA/HSA	Monitoring Location ID	Latitude	Longitude	Sampling Method	Location Description	Accessibility	Dry Weather Flow Classification
12	San Diego Bay 908.21	DWO1	32.736435	-117.207825	NA	Outfall from runway, ramp, and taxiway area to Navy Boat Channel	Inaccessible – tidally influenced	Unknown
15	San Diego Bay 908.21	DWO2	32.736435	-117.736407	NA	Outfall from Terminal 2 ramp and taxiway to Navy Boat Channel	Inaccessible – tidally influenced	Unknown
12	San Diego Bay 908.21	C-B12-9a	32.734697	-117.202831	Visual Observations/ Grab	Inlet pipe at storm drain inlet for T2W OWS	Accessible	Transient Flows
15	San Diego Bay 908.21	NA	32.735872	-117.206794	NA	Effluent from the storm filter in the loading, ramp, and Remain Overnight parking area of Terminal 2. Site is submerged and cannot be safely monitored.	Inaccessible – tidally influenced	Unknown

In compliance with Provision E.2.C of the Municipal Permit, the Authority also selected the Industrial Permit wet weather monitoring locations for dry weather field screening, since “MS4 outfalls and other portions of its MS4” are required to be investigated (Table D2-9).

Table D2-9. Additional Sampling Locations for Dry Weather Monitoring

Monitoring Location ID²	Drainage Basin	Sampling Method	Location Description
C-B03-1c	3 ¹	Grab	Sheet flow at storm drain inlet, over zipper line in oval
C-B03-2	3	Grab	Sheet flow at storm drain inlet
C-B05-4	5	Grab	Sheet flow at storm drain inlet near Generator Area
C-B06-5a	6	Grab	Inlet pipe in manhole downstream of Central Receiving and Distribution Center (CRDC) BMPs
C-B07-6	7	Grab	Inlet pipe in manhole west of Aircraft Services International Group (ASIG)/American oil-water separator (OWS)
C-B07-7a	7	Grab	Sheet flow downstream of cargo area
C-B08-8	8	Grab	Sheet flow from the loading area of Terminal 1
C-B12-9a	12	Grab	Inlet pipe at storm drain inlet near Terminal 2 West
C-B01-11	1	Grab	Drainage basin is currently under construction. Sampling location will be re-evaluated once construction is complete.
C-B03-12	3	Grab	Sheet flow at trench drain near Landmark
C-B05-13	5	Grab	Sheet flow at storm drain inlet near DHL
C-B06-14	6	Grab	Inlet pipe in manhole near FedEx loading area and material storage
C-B06-15	6	Grab	Sheet flow at storm drain near Airport Rescue and Fire-Fighting Facility (ARFF)
C-B06-16	6	Grab	Inlet pipe at trench drain near Commuter Terminal
C-B06-17	6	Grab	Sheet flow from taxiway
C-B15-18	15	Grab	Sheet flow at trench drain near Terminal 2 West
<i>Alternate Site</i>			
C-B08-19 ³	8	Grab	Sheet flow from runway area

Notes:

1 Drainage basin has changed from 1 to 3 at this site because of the decommissioning of part of the storm drain line in Taxiway C, linking the site to Outfall 1. It now drains to Outfall 3 and is located in a runway oval.

2 Sampling locations C-B05-3 and C-B09-10b are no longer being sampled for compliance purposes because these sites are non-industrial (i.e., parking lots).

3 Alternate sampling location for runway. If site C-B03-1c is inaccessible because of safety concerns, site C-B08-19 will be sampled instead.

7.0 DRY WEATHER FIELD SCREENING

Field screening of dry weather MS4 outfalls and inlet monitoring locations will be scheduled to coincide with two of the monthly visual inspections as required under Section XI.A of the Industrial Permit. Field and laboratory analytical sampling will occur as needed to facilitate IDDE investigations or to gain additional data for WQIP updates. The Authority will retain records of all monitoring information, including calibration and maintenance records of monitoring instrumentation, for at least five years from the date of sample collection or measurement. This period may be extended by request of the Regional Water Board or USEPA at any time and will be extended during the course of any unresolved litigation regarding a discharge.

Field screening visual observations are performed after an antecedent dry period of at least 72 hours following a storm event with precipitation of more than 0.1 inch. Parameters include those required in Table D-5 of the Municipal Permit:

- Station identification and location
- Presence of flow, or pooled or ponded water
- If flow is present:
 - Flow estimation (i.e., width of water surface, approximate depth of water, approximate flow velocity, flow rate)
 - Flow characteristics (i.e., presence of floatables, surface scum, sheens, odor, color)
 - Flow source(s) suspected or identified from non-storm water source investigation
 - Flow source(s) eliminated during non-storm water source identification
- If pooled or ponded water is present:
 - Characteristics of pooled or ponded water (i.e., presence of floatables, surface scum, sheens, odor, color)
 - Known or suspected source(s) of pooled or ponded water
- Station description (i.e., deposits or stains, vegetation condition, structural condition, observable biology)
- Presence and assessment of trash in and around station
- Evidence or signs of illicit connections or illegal dumping

If flow or ponded runoff is observed at a dry weather field screening and analytical monitoring location, and there has been at least 72 hours of dry weather (defined as no storm producing rainfall greater than 0.1 inch), the Authority will make observations and attempt to ascertain the source of flow or ponding. This usually involves tracking the flow upstream and, if the source cannot be found and an illicit discharge is suspected, taking field measurements and collecting grab samples for analytical screening.

The Municipal Permit requires that, for a Copermittee with fewer than 125 major outfalls, 80 percent of outfalls must be visually inspected during dry weather conditions. Because there are only two major outfalls, both outfalls must be screened during each monitoring event (2 outfalls * 80% coverage = 1.6 outfalls, i.e., 2 outfalls). Informal field observations typically consist of a brief visual inspection, whereas a formal field observation completely documents the observations on a field form. For MS4 inspections, the Authority uses the MS4 Outfall Visual Observation Field Datasheet, developed by the Copermittees. The datasheet has four parts: general site description, atmospheric and runoff conditions, field screening observations (including flow estimates) and a trash assessment. The field datasheet is reviewed and updated annually by the Copermittees as a group.

A description of the MS4 Outfall Visual Observation Field Datasheet sections follows.

General Site Description—This section provides basic information (such as the location, date, time, and conveyance type) as well as a history of the flow status, indicating whether a site has previously been subject to persistent dry weather flow.

Atmospheric and Runoff Conditions—This section of the form assesses the potential dry weather flow sources and destinations, and documents whether there is evidence of an obvious illicit discharge. Atmospheric conditions assessed include current weather, time and quantity of last rain, and tidal height, if applicable.

Field Screening Observations—This section generally assesses the observed dry weather flow or ponded water (including variables such as odor, water clarity, the presence of floatables, and color, together with any visible deposits or stains) and the vegetation and biological characteristics of the area. Also recorded are flow estimates using the most appropriate method, including depth-velocity measurement, bottle-fill time, and leaf float velocity assessment. (This section needs to be completed only if flow or ponding is observed.)

Trash Assessment—The assessment of trash records the spatial extent, types, and amount of trash present. A photograph of the site can document the site conditions for the record and for future reference, and should be taken when deemed appropriate by monitoring personnel.

A second field sheet, the Dry Weather Monitoring Field Datasheet, may be used if field screening measurements are taken. This field form contains much of the same information recorded on the MS4 Outfall Visual Observation Field Datasheet, with the addition of a Field Measurements section. Both the MS4 Outfall Visual Observation Field Sheet and the Dry Weather Monitoring Field Datasheet are in Attachment G.

If field samples are required, some or all of the following constituents will be analyzed in a sample of the flowing or ponded water at the applicable dry weather monitoring outfalls or inlet locations, depending on the source of the suspected illicit discharge:

- Specific Conductance (estimates of total dissolved solids [TDS] will be calculated from conductivity)
- Water temperature
- pH
- Turbidity
- Reactive phosphorus (ortho-P)
- Nitrate nitrogen
- Ammonia nitrogen
- Surfactants (methylene blue active substances [MBAS])

Additional constituents may also be analyzed to help identify the illicit discharge. Results of the field screening will be recorded on the Dry Weather Field Monitoring Datasheet. Field screening Data Quality Objectives (DQOs) are summarized in Table D2-10.

Table D2-10. Data Quality Objectives—Field Screening

Analyte	Container	Analytical Method	Reporting Limits	Accuracy
Specific Conductance	Plastic	Field Meter	0.01	±0.5%
pH	Plastic	Field Meter	1-14	± 0.01 units
Temperature	Plastic	Field Meter	0.01 °C	±0.15
Turbidity	Plastic	Field Meter	0.05	±2%
MBAS (surfactants)	Plastic	Field Kit	0.5 mg/L	±0.125
Nitrate, NO ₃ -N	Plastic	Field Kit	1.35 mg/L	±0.1
Reactive Phosphorous, PO ₄ -P	Plastic	Field Kit	0.07 mg/L	±0.05
Ammonia, NH ₃ -N	Plastic	Field Kit	0.05 mg/L	±0.05

Notes:

mg/L = milligrams per liter

If the source of a non-storm water discharge or ponding cannot be identified and eliminated on the basis of field observations and screening alone, a grab sample may be collected and submitted for analytical laboratory analysis. Personnel conducting the monitoring will use their discretion as to the need to collect a grab sample at a particular site. The following factors will be considered: the results of the field screening analysis, the conditions and characteristics of the site and the runoff, the occurrence of illicit connections or illegal discharges at the location in the past, the conditions and uses in the tributary area, and other relevant factors. Once results of the analyses are available, they will be recorded on the Dry Weather Field Monitoring Datasheet for that site.

If grab samples are collected, the following constituents will be analyzed in a laboratory certified by the State of California Department of Public Health:

- Total hardness
- Oil and grease
- Diazinon and chlorpyrifos
- Dissolved cadmium, copper, chromium III, chromium VI, lead, nickel, silver, and zinc
- *Enterococcus*, total coliform, and fecal coliform bacteria (Colilert and Enterolert may be used as alternative methods, with fecal coliform determined by calculations.)
- PCBs

If persistent flow (as defined in Section 4.1 below) is observed at any of the locations, additional parameters from Table D-7 of the Municipal Permit will be analyzed.

Dry weather monitoring involves collection of grab samples only, and only when sampling is deemed necessary to identify the source of an illicit discharge. If sampling or analyses are conducted, records of monitoring information shall include [40 CFR 122.41(j)(3)]:

- 1) The date, exact place, and time of sampling or measurements
- 2) The individual(s) who performed the sampling or measurements
- 3) The date(s) analyses were performed

- 4) The individual(s) who performed the analyses
- 5) The analytical techniques or methods used
- 6) The results of such analyses

Field Equipment Checklist

The field equipment listed below will be used to conduct dry weather monitoring. This list will be reviewed prior to conducting monitoring to ensure that the proper materials are available.

1)Field Notebook:

- Site map
- Monitoring station checklist
- Photographs of monitoring stations
- Monitoring datasheets
- Point of Contact (POC) list
- Health and Safety Plan

2)Personal Protection Equipment:

- Nitrile gloves
- Protective eyeglasses or goggles
- Steel-toed rubber boots/waders or work boots
- Safety harness or flotation device
- Hard hat
- Safety vest
- Safety rope

3)General Equipment:

- Digital camera
- Cellular telephone
- Extra batteries for all meters
- Pick or manhole puller

4)Sampling Equipment:

- Sample collection equipment
- Small, clear container for visual observations
- Portable Field Test Kits, colorimeters or spectrophotometer, and reagents for meter

- Multi-parameter or individual probes to measure temperature, electrical conductivity, pH, and turbidity
- De-ionized water in squeeze bottles
- Thermometer
- Waste disposal bottles
- Pump and tubing, or polypropylene bucket with rope, or a sampling rod
- Sample bottles with preservatives
- Coolers with bagged ice and bubble wrap
- Flow measurement equipment (required equipment will depend on method used):
 - Measuring tape for measuring stream width
 - Folding scale for measuring stream depth
 - Flow meter or wristwatch
- Extra sample containers

5)Miscellaneous:

- Clipboard
- Pens and/or pencils
- Permanent felt tip pen
- Paper towels
- Tape
- Crate for carrying supplies and equipment

7.1 NON-STORM WATER PERSISTENT FLOW

The MS4 outfalls field screening monitoring conducted pursuant to the Municipal Permit Provision D.2.a.(2) revealed that neither of the major outfalls in SAN’s jurisdiction have persistent flows. As stated in Attachment C of the Municipal Permit, a persistent flow is defined as “*the presence of flowing, pooled, or ponded water more than 72 hours after a measureable rainfall event of 0.1 inch or greater during three consecutive monitoring and/or inspection events.*” Major MS4 outfalls will continue to be monitored for the presence of persistent flows as part of the MS4 outfall dry weather field screening monitoring program.

8.0 SAMPLING PROCEDURES AND QUALITY ASSURANCE/QUALITY CONTROL

Appendix D-1, Industrial Monitoring Implementation Plan, describes sampling and analysis procedures, instrument calibration procedures, and field and laboratory quality assurance and quality control (QA/QC) procedures for dry and wet weather monitoring programs. It also includes sections on data management and reporting, and health and safety.

9.0 INVESTIGATION ACTION CRITERIA

Reports of illicit discharges or illicit connections can originate from the following sources:

- Field screening visual observations
- Non-storm water analytical flow monitoring
- Reports or notifications from hotlines or other sources

If reports of illicit discharges originate from sources outside of field staff conducting field screening or monitoring, reports will be assessed in a timely manner. The validity of a report or notification will be based on the inspector's best professional judgment, given the information that has been obtained. Valid reports will be prioritized for further investigation and all discharges reported and investigated. These reports will be included with the results (e.g., elimination of the discharge, enforcement actions issued, etc.) in the JRMP Annual Report Form as part of the WQIP Annual Report.

Obvious illicit discharges (e.g., based on color, odor, or exceedance of an action level) and any discharges that pose an immediate threat to human health or the environment will be investigated immediately. Any of the following circumstances will be reported to the California Emergency Management Agency (CalEMA) in accordance with the *California Hazardous Material Spill Release Notification Guidance*:

- Discharges or threatened discharges of oil in marine waters
- Any spill or other release of one barrel or more of petroleum products at a tank facility
- Discharges of any hazardous substances or sewage, into or on any waters of the state
- Discharges that may threaten or impact water quality
- Any found or lost radioactive materials
- Discharges of oil or petroleum products into or on any waters of the state
- Hazardous Liquid Pipeline releases and any rupture, explosion, or fire involving a pipeline

Other non-storm water flows will be classified as persistent or transient. If a persistent flow is identified, monitoring personnel will use their discretion to determine whether a source investigation is necessary. The decision will be based on site-specific characteristics and may involve collection of analytical samples. If analytical samples are collected, the Authority will rely on the latest action criteria developed by the Copermittee dry weather monitoring workgroup, listed in Tables D2-17 and D2-18, to prioritize follow-up investigations. An exceedance of these criteria will necessitate a follow-up investigation to identify and eliminate the source causing the exceedance. Dry weather screening and analytical monitoring stations found to exceed dry weather monitoring criteria for any constituent will be given priority for further screening.

Upon WQIP implementation, the presence of a pollutant causing or contributing to a 303(d)-listed status in a receiving water body and the presence of a pollutant identified as a high-priority or focused priority water quality problem by the Authority (i.e., copper and zinc) will also be cause for a prioritized source investigation. The relevant 303(d)-listed waterbodies are identified in Table D2-19.

Table D2-17. Instantaneous Maximum Action Criteria for Analytes—Field Screening

Analyte	Action Level ¹	Source and Notes
pH (pH units)	<6.0 or >9.0	Municipal Permit and Ocean Plan water quality objective for discharges to Bays, Harbors, and Lagoons/Estuaries. Elevated pH is especially problematic in combination with high ammonia.
Orthophosphate-P (mg/L)	2.0	USEPA Multi-sector General Permit
Nitrate-N (mg/L)	10.0	Basin Plan and drinking water standards
Ammonia-N (mg/L)	1.0	Based on workgroup experience. May also consider un-ionized ammonia fraction.
Turbidity (NTU)	225	Municipal Permit and Ocean Plan water quality objective for discharges for Bays, Harbors, and Lagoons/Estuaries. Also base judgment on channel type and bottom, time since last rain, background levels, and, most importantly, visual observation (e.g., unusual colors and lack of clarity) and unusual odors.
Temperature (F or C)	Best Professional Judgment	Base judgment on season, air temperature, channel type, shading, etc.
Conductivity (mS/cm)	Best Professional Judgment	Values > 5 mS/cm may indicate IC/ID; however, EC may be elevated in some regions because of high TDS from groundwater exfiltration to surface water, mineral dissolution, drought, and seawater intrusion. Normal source ID and discharge elimination work is not effective in these situations. Knowledge of area background conditions is important. Values < 0.75mS/cm may indicate excessive potable water discharge or flushing.
Methylene Blue Active Substance MBAS (mg/L)	1.0	Basin Plan, with allowance based on Workgroup field experience and possible field reagent interferences

Notes:

1. The referenced action level will not be the sole criterion for initiating a source identification. Dry weather monitoring data will be interpreted using the various available information, including best professional judgment and within- and between-site sample variability.

mg/L = milligrams per liter, NTU = Number of Transfer Units, mS/cm = milli-Siemens per centimeter

Table D2-18. Action Criteria for Analytes—Analytical Monitoring

Analyte (Units)	Action Level ¹	Source and Notes
Oil and Grease (mg/L)	15	USEPA Multi-sector General Permit. If a petroleum sheen is observed, the sample will be collected from the water surface. Visual observations may justify immediate investigation.
Diazinon (µg/L)	0.5	Response to diazinon and chlorpyrifos levels above 0.5 µg/L will focus on education and outreach to potential dischargers in the target drainage basin. High levels will be investigated aggressively, as with other potential IC/IDs.
Chlorpyrifos (µg/L)	0.5	
Dissolved Cadmium (µg/L)	16	Municipal Permit and California Toxics Rule maximum daily action level (MDAL) criteria for saltwater used to determine the appropriate action level for individual samples.
Dissolved Copper (µg/L)	5.8	
Dissolved Chromium III (µg/L)	NA ²	
Dissolved Chromium VI (µg/L)	83	
Dissolved Lead (µg/L)	14	
Dissolved Nickel (µg/L)	14	
Dissolved Silver (µg/L)	2.2	
Dissolved Zinc (µg/L)	95	
Total Coliform (MPN/100mL)	10,000		Basin Plan objective for REC-1 bays and estuaries. The action level is reached if a single sample, verified with a repeat sample within 48 hours, exceeds 10,000 MPN/100mL.
Fecal Coliform (MPN/100mL)	400	Municipal Permit and Basin Plan non-storm water instantaneous maximum. The NAL is reached if more than 10 percent of samples exceed 400 MPN/100mL within a 30-day period.
Enterococcus (MPN/100mL)	104	Municipal Permit non-storm water and Basin Plan non-storm water instantaneous maximum designation for REC-1 waterbodies.

Notes:

1. The referenced action level will not be the sole criterion for initiating a source identification. Dry weather monitoring data will be interpreted using the various available information, including best professional judgment, and within- and between-site sample variability.
2. There is no CTR action level established for Chromium III in saltwater.

µg/L = micrograms per liter; mg/L = milligrams per liter; MPN/100mL = most probable number per 100 milliliters

Table D2-19. Section 303(d)-Listed Receiving Water Bodies

Receiving Water Body	Pollutant of Concern	Discharging Outfalls
San Diego Bay	Polychlorinated Biphenyls (PCBs)	All
San Diego Bay Shoreline, Downtown Anchorage	Benthic Community Effects, Sediment Toxicity	1, 2, 3, 4
San Diego Bay Shoreline, at Harbor Island (East Basin)	Copper	5, 6, 7
San Diego Bay Shoreline, at Harbor Island (West Basin)	Copper	8, 9, 10, 11
San Diego Bay Shoreline, at Spanish Landing	Total Coliform	8, 9, 10, 11

10.0 INVESTIGATIONS AND ELIMINATION OF DISCHARGES AND CONNECTIONS

Follow-up source investigations and procedures for the elimination of illicit discharges and connections will be conducted as described below. Source investigations will typically be conducted by the Environmental Affairs Department (EAD) monitoring personnel. Source investigations are initiated when observations, field screening results, laboratory analytical results, or a reported complaint suggest a reasonable potential for the existence of an illicit discharge. Obvious illicit discharges or connections (e.g., discharges exhibiting unusual color, odor, sheen, or high volume), or discharges that pose an immediate threat to human health or the environment, warrant immediate investigation. All other identified discharges of non-storm water must be prioritized and investigated in a timely manner.

Investigations will result in the classification of all persistent non-storm water discharges into one of four endpoint categories, based upon the source of the discharge:

- A—Natural in origin and conveyance
- B—Illicit discharge/connection
- C—Other non-storm water discharges
- D—Unidentified

Table D2-20 identifies potential characteristics of Endpoint A discharges, flows that are natural in origin and conveyance. A complete list of Endpoint A discharge categories is provided in Provision E.2.a.(3) of the Municipal Permit, and may include stream flows, springs, uncontaminated groundwater infiltration, and discharges of potable water.

Illicit discharges (Endpoint B) may be identified using a combination of observations, field screening, and analytical results. Some common characteristics of illicit discharges are provided in Table D2-21.

Other categories of non-storm water discharges that may be exempt from classification as illicit discharges are listed in Provisions E.2.a.(1) through E.2.a.(5) of the Municipal Permit. Non-storm water discharges must still be regulated as illicit discharges if they are found to exceed non-storm water action levels or to contribute to pollution in the receiving waters. Table D2-22 summarizes some categories of exempt non-storm water discharges.

If the source of a discharge cannot be identified (Endpoint D), it will be addressed as an illicit discharge. This JRMP will be updated to address common and suspected sources of unidentified non-storm water discharges.

Table D2-20. Characteristics of Endpoint A Discharges

Example	Potential Characteristics	Potential Constituents
Groundwater or spring seepage into the storm drain system	Dissolved oxygen tends to be low Color tends to be clear Turbidity tends to be low Hardness tends to be high Total dissolved solids (TDS) tends to be high Bubbling into channel Seeping into MS4 pipe joints Cracks from tree roots Moist sides or bottom of channel High water table in region	Iron Manganese Selenium Sodium Calcium Nutrients

Table D2-21. Characteristics of Endpoint B Discharges

Source Category	Potential Characteristics	Potential Activities
Illicit Discharge or Connection	Foam/suds (MBAS) Colored discharge Low Dissolved Oxygen Oil Sheen Chlorine Odor High pH Low pH Odor Nitrogen Phosphorus Metals Trash/Materials High Turbidity Total Coliform, Fecal Coliform, Enterococci Sediment	Non-residential Car Washing Steam Cleaning Engine Cleaning Mat Washing Pool Discharge Concrete/Plaster Acid Washing Sewer overflows Construction Dumpster Leakage Greywater Discharge Over-Irrigation

Table D2-22. Categories of Endpoint C Discharges

Source Category	Potential Discharges
Other Non-Storm Water Discharge	Discharge covered under <i>General Waste Discharge Requirements for Discharges from Temporary Groundwater Extraction and Similar Waste Discharges to San Diego Bay, Tributaries Thereto under Tidal Influence, and Storm Drains or Other Conveyance Systems Tributary Thereto</i> (NPDES Permit No. CAG919001) or <i>General Waste Discharge Requirements for Discharges from Groundwater Extraction and Similar Discharges to Surface Waters within the San Diego Region Except for San Diego Bay</i> (NPDES Permit No. CAG919002) ¹
	<ul style="list-style-type: none"> • Uncontaminated pumped groundwater • Discharges from foundation drains² • Water from crawl space pumps • Water from footing drains³
	Discharge has coverage under <i>General Waste Discharge Requirements for the Discharges of Hydrostatic Test Water and Potable Water to Surface Waters and Storm Drains or Other Conveyance Systems within the San Diego Region</i> (NPDES Permit No. CAG679001) ⁴
	Discharges to be Controlled through Statute, Ordinance, Permit, Contract, Order, or Similar Means ⁵ <ul style="list-style-type: none"> • Air conditioning condensation • Individual residential car washing • Dechlorinated swimming pool discharges
	Emergency firefighting flows ⁶ Controlled irrigation with BMPs implemented (as authorized under the Industrial Permit)

Notes:

1. Addressed as illicit discharge only if discharge does not have coverage. [Municipal Permit E.2.a.(1)]
2. Provision E.2.a.(1) of the Municipal Permit applies to this category of non-storm water only if the system is designed to be located at or below the groundwater table to actively or passively extract groundwater during any part of the year. Provision E.2.a.(3) applies to this category of non-storm water discharge only if the system is designed to be located above the groundwater table at all times of the year and the system is expected to discharge non-storm water only under unusual circumstances.
3. Provision E.2.a.(3) of the Municipal Permit applies to this category of non-storm water discharge only if the system is designed to be located above the groundwater table at all times of the year, and the system is expected to discharge non-storm water only under unusual circumstances.
4. Addressed as illicit discharge only if discharge does not have coverage. [Municipal Permit E.2.a.(2)]
5. Addressed as illicit discharge only if discharge is not controlled by Municipal Permit requirements via these means. [Municipal Permit E.2.a.(1)]
6. Addressed as illicit discharge only if the Authority or the Regional Water Board identifies the discharge as a source of pollutants to receiving waters. [Municipal Permit E.2.a.(5)]

Step 1—Location of Observation

Source investigations begin at the location where the observations that initiated the investigation were made. If the observations were made by someone other than the current investigators, or if the initial observations were made more than several hours prior to the initiation of the source investigation, the investigation should begin with a thorough visual inspection of the location. Investigators will take Global Positioning System (GPS) coordinates at the site and fill in the Dry Weather Field Monitoring Datasheet.

If flows exist, samples may be collected for field screening and laboratory analysis, as deemed appropriate by the investigators. If the illicit discharge is still occurring and is deemed to pose a substantial threat to resources and humans downstream, if feasible, actions should be taken immediately by the Authority to prevent or retard the discharge from flowing further downstream.

Step 2—Source Tracking

While at the observation location, the investigator should consult various resources (such as the MS4 map, land use maps, and aerial photographs) to determine the characteristics of the tributary areas. In some circumstances, the investigator may be able to identify probable sources of the illicit discharge based on the expected activities of certain upstream sites or the results of previous investigations and past dry weather monitoring reports. If so, the investigator may choose to go directly to these potential sources to investigate. If inspections of these potential sources do not reveal the source of the illicit discharge, or if potential sources are too numerous, then the investigator should track the discharge upstream.

If the discharge has ceased, it may be impossible to track the source. In these circumstances, the investigator should document that the discharge has ceased and cannot be tracked. A brief drive or walkthrough survey of the tributary area should be conducted and documented to verify that there is no obvious source. In some cases, the sources may still be identified by evidence at the site or further upstream. For example, if a sediment laden discharge was reported, an upstream site may reveal signs of sediment discharge such as deposits along curbs or in inlets, signs of eroded slopes, or exposed soils lacking required BMPs. Roads and road gutters should be checked for evidence of flows such as runoff from vehicle washing or irrigation. Areas in a road that have been dug up and re-paved may indicate a new or illicit connection to the MS4. Finally, the investigator will look for evidence of recent or past dumping, such as wet and/or stained pavement or gutters.

When source tracking, the investigator should use MS4 maps and other resources to aid in the investigation. Any traceable characteristic of the illicit discharge (color, constituents, odor, quantity, etc.) should be noted, as these will aid the investigator in tracking and identifying sources. The Authority's strategy to source tracking is to track the discharge upstream, thereby reducing the tributary area and potential sources. While working upstream along the MS4, the investigator may encounter tributary pipes or inlets and each should be evaluated for their potential to be the conveyor of the discharge. If a pipe or inlet is dry, it can automatically be eliminated if the illicit discharge is still occurring. If a pipe or inlet is the source of the flow in the main portion of the MS4, then the tracking should continue along that pipe or inlet. If the main portion of the MS4 and the tributary pipe or inlet both contain flow, more detailed observations must be made. The investigator may be able to rule out a conveyance based on visual observations, characteristics of the illicit discharge, or field screening to identify constituents.

Step 3—Inspection of Potential Sources

Once the set of possible sources has been reduced to a manageable set, the investigator may choose to end the source tracking and continue the investigation by inspecting the various potential sources. Test strips or other field measurements can be used for quick preliminary results for multiple flows. However, if none of these potential sources can be identified as the source of the discharge or if the investigator cannot identify any potential sources, the source tracking may continue all the way to the source. It is generally easiest to track the largest flows first. If they are about the same size, start with the one that is easiest, shortest, or with the least number of junctions, or track those originating from areas with the greatest potential for illicit discharges.

Tracking along underground MS4 conveyances is more difficult because observations can be made only at the locations of manholes, outlets, and inlets. The Site Map (Figure 3) will be useful for these investigations. When the map indicates the confluence of two MS4 conveyances or if an unmapped confluence is suspected, if possible, the investigator should make observations at the point of confluence. Otherwise, the investigator should make observations at the nearest manhole or access point upstream along each conveyance. Manholes will not always need to be checked if there are no junctions between them; however, the investigator should be aware that the source of discharge may be an illicit connection or unmapped confluence existing between observation points. Investigators **MUST NOT ENTER A MANHOLE** unless confined-space certified and following established safety procedures. The investigator should check surrounding inlets, the surrounding area, and appropriate Authority personnel or records for evidence of infrastructure construction or other activities that might have resulted in an illicit connection. In the case of chronic illicit discharges for which a source cannot be identified, the Authority may choose to conduct dye testing, smoke testing, video monitoring, underground visual inspections, and/or continued water monitoring at the suspected source(s).

If flow is coming from another jurisdiction, the flow should be documented and the relevant jurisdiction notified. Flows will not be tracked beyond the boundaries of Authority jurisdiction.

Step 4—Discharge Elimination

Once the source of a discharge has been identified, if the discharge is still occurring, it must be categorized as belonging to one of the four endpoints.

If the flow is found to be an illicit discharge, it must be eliminated; other non-permitted, non-storm water flows should be also eliminated, when possible. The investigator(s) should contact appropriate Authority personnel who will issue the necessary enforcement mechanism to the discharger to ensure that alterations are implemented to terminate the discharge and clean up the discharge. In cases where the responsible party is present at the source, or the discharge poses a substantial threat to humans or the environment, the investigator may choose to confront the responsible party before appropriate Authority personnel arrive to terminate the discharge as quickly as possible. The actions required of the responsible party to eliminate the illicit discharge will vary, depending on the type of illicit discharge. Cleanup or remediation actions may also be required of the responsible party, depending on the type and impact of the illicit discharge. The EAD will also determine if the discharge is an isolated incident that will be addressed through enforcement procedures, or if the category of discharge should be prohibited as an illicit discharge, as specified in Provision E.2.a.(6) of the Municipal Permit.

If a discharge is found to be coming from another jurisdiction, the Authority will formally notify a representative of the appropriate jurisdiction.

Step 5—Damage Assessment

After the discharge has been terminated, the inspector or other Authority personnel should travel downstream from the discharge to assess the impacts on downstream resources caused by the discharge. If downstream impacts are detected, additional remediation may be required of the responsible party and monitoring may also be necessary to ensure recovery of downstream areas. Authority personnel may also consider the level of downstream impact caused by the illicit discharge prior to deciding on which level of enforcement action is appropriate.

Step 6—Reporting

Based on the type of discharge and the damage assessment, the Authority may be required to immediately report the discharge to the Regional Water Board. The Authority submits the JRMP Annual Report Form to the Regional Water Board that includes a description of investigations and follow-up actions for illicit discharges and connections, reports the number of illicit discharges and connections identified, and reports the number eliminated for the previous fiscal year. Documentation and reporting requirements of non-storm water and illicit discharges are provided in Section 3.7.2.

11.0 ASSESSMENTS

Effectiveness assessments of SAN's monitoring programs are described in detail in Section 11.0 of this SWMP. In summary, the following assessments, required per Municipal Permit Provision D.4.b.(1), will be conducted on the basis of data collected during dry weather monitoring, and will be included in the WQIP Annual Reports and Report of Waste Discharge:

- 1) Progress toward prohibiting non-storm water and illicit discharges into the MS4 through the IDDE Program
- 2) Comparison between water quality sampling data and applicable non-storm water action levels, and determination of whether the analysis and assumptions used to develop WQIP strategies should be updated on the basis of this comparison

- 3) Identification of progress made toward meeting non-storm water quality goals and pollutant load reductions from different drainage areas
- 4) Identification of data gaps in the current dry weather monitoring program and revisions necessary to collect sufficient data for thorough water quality condition analysis
- 5) Identification of modifications to the dry weather MS4 outfall discharge monitoring locations and frequencies necessary to reduce or eliminate pollutants in non-storm water discharges from the MS4s in the WMA pursuant to Municipal Permit Provision D.2.b.(1)

APPENDIX D-2C: BMP EFFECTIVENESS SAMPLING

12.0 INTRODUCTION

Current and new BMP effectiveness studies will be incorporated into the wet weather monitoring program. These paired watershed and trend analysis studies, which started in 2006, are intended to evaluate the performance and effectiveness of structural and non-structural treatment control BMPs developed as part of recent SAN improvement projects, including the Green Build Terminal 2 West expansion and North Side improvements. The Authority will continue to evaluate the performance and effectiveness of BMPs in the following ongoing studies:

- Paired watershed monitoring – In a paired watershed study, one watershed is the control, within which no BMPs are added or removed; the other is the treatment (i.e., test) watershed, in which new BMPs are implemented. Two paired watershed studies are ongoing to evaluate BMPs in two land-use areas: airport gate area/ramp and short term terminal parking lot. Four years of calibration monitoring have been conducted thus far.
- Trend analysis monitoring – This involves tracking a single monitoring location for 10 years as new BMPs are implemented. The intended goal is to confidently establish a downward trend in pollutant concentrations. Eight years of monitoring have been conducted thus far.
- Discrete BMP sampling – As a result of the completed development projects, a number of treatment control and LID BMPs have been installed throughout the airport property, such as CONTECH StormFilter® systems, hydrodynamic separators, drain inserts, porous pavement, artificial turf, and bioswales. In an effort to evaluate the performance of these BMPs, the new StormFilter® system installed in the Terminal 2 parking lot just upstream from Drainage Basin 9 outfall was monitored and sampled for two storm events during the 2013-2014 season and five events during the 2014-2015 season (site S-B09-3). Monitoring and sampling at this location will continue during future seasons. Preliminary investigation of another newly installed Stormfilter® system just upstream of the new Drainage Basin 15 outfall, prior to the 2013-2014 wet season, indicated that it was tidally influenced and is not suitable for monitoring/sampling. This site has been removed from the monitoring location list.

12.1 SAMPLING OBJECTIVES

The objectives of BMP effectiveness sampling are to monitor the performance and effectiveness of BMPs. The performance of structural and non-structural BMPs will be evaluated at locations that receive runoff from both industrial and non-industrial drainage basins to answer two questions:

- Are the BMPs reducing pollutant concentrations (for both primary and secondary POCs) to below benchmark values?
- Are the BMPs achieving the short-term and long-term objectives for reducing the pollutant load of the primary POCs (i.e., copper and zinc)?

Numeric goals are written into the WQIP for copper and zinc as the focused priority water quality condition for the Authority's jurisdiction. Long-term or final numeric goals were established to meet copper and zinc reductions for Fiscal Year (FY) 2033, and short-term or interim goals were set to measure progress at five-year increments. The Authority has identified strategies to meet these numeric goals, in addition to the core BMPs required by the Municipal and Industrial Permits. Strategies include increased frequency and effectiveness of sweeping, rubber removal, power washing, and catch basin cleaning, enhanced BMP inspections, and a source identification study to identify the highest pollutant generating activities and areas.

Copper and zinc were identified as the priority POCs because they exceeded the benchmark values more than 50 percent of the time; i.e., they had the highest exceedance frequencies airport-wide and for most of the outfalls and drainage basins. The other analytes that exceeded benchmark values are considered, for the

purposes of BMP effectiveness sampling, secondary POCs. During the 2014-2015 wet weather monitoring, nine pollutants exceeded benchmark values more than 50 percent of the time. These pollutants are, in descending order of exceedance frequency, copper (total and dissolved), zinc (total and dissolved), Enterococcus, chemical oxygen demand (COD), biological oxygen demand (BOD), ammonia, aluminum, iron, and total coliforms (Amec Foster Wheeler, 2015).

The number of samples required to evaluate the effectiveness of treatment control BMPs and BMP systems (i.e., combinations of structural and non-structural BMPs) is based on power analyses for the priority POCs. Based on the power analyses conducted in 2007, copper requires a feasible number of samples to produce meaningful data to compare to benchmark values, assess potential changes in mean concentrations over time, and detect differences between influent and effluent concentrations. The number of samples required for zinc is not considered feasible (Amec Foster Wheeler, 2007b).

Based on the power analyses, 14 samples are required to compare mean concentrations with benchmark values in airport operations areas; 14 samples are also required to detect an 80 percent reduction in influent concentrations, either through treatment at a discrete treatment control BMP or through treatment by a BMP system. For parking lot areas, 17 samples are required to compare mean concentrations with benchmark values.

The BMP effectiveness sampling programs are (1) Paired Watershed Monitoring, (2) Trend Analysis Monitoring, and (3) Discrete BMP Sampling.

12.2 BMP EFFECTIVENESS SAMPLING PROGRAMS

Data collected during the BMP effectiveness monitoring programs will be used to accomplish the following, per requirements of the Municipal Permit:

- 1) Evaluate BMP effluent analytical results against long-term and short-term water quality goals.
- 2) Compare BMP analytical data with WQIP numeric targets.
- 3) Evaluate the ability of installed BMPs to reduce pollutant loads to the maximum extent practicable (MEP).
- 4) Identify data gaps and additional monitoring necessary to evaluate BMP effectiveness.
- 5) Assess whether implemented BMPs are effective, and whether additional BMPs are required to reduce pollutants to meet water quality goals.

Monitoring locations for BMP system monitoring are discussed below.

Paired Watershed Monitoring

The effectiveness of BMP systems is being evaluated by continuing an ongoing paired watershed study to collect flow-weighted composite samples from a representative drainage basin and track trends as BMPs become fully implemented over time. In a paired watershed study, one watershed is the control, within which no BMPs are added or removed; the other is the treatment (i.e., test) watershed, in which new BMPs are implemented.

Two periods of monitoring are required: calibration and treatment. During the calibration period, the two watersheds are treated identically and a relationship between the control and treatment watersheds is established.

Two paired watershed studies are being implemented. The first pair consists of the parking lots for Terminal 1 and Terminal 2; the second pair is airport taxiway areas in Terminals 1 and 2. The paired watershed study

calibration was conducted by the Authority during the four wet weather seasons from 2006-2007 through 2009-2010; the paired watershed sites have since been modified in the following ways:

- Paired watershed representing parking lots: The test parking lot watershed was originally represented by a composite of discharge collected at site S-B09-3 and S-B11-4. Access issues prevent sampling the new StormFilter® BMP unit in Basin 11, so it was determined that samples will be composed of Basin 9 StormFilter® effluent. New BMPs installed in Basin 9 include swales, tree planters, permeable pavement, and infiltration trenches. The control watershed remains the same.
- Paired watershed representing airport operations: The test watershed for airport operations was originally represented by site S-B08-14. The Authority evaluated a new StormFilter® installed in Basin 15 for feasibility as a test location, because of the lack of new BMPs, either source control or treatment control, in Basin 8. Artificial turf was also installed in Basin 15, but this BMP is downstream of the potential monitoring location. Paired watershed monitoring will be delayed until the tidal situation in Basin 15 is resolved.

Table D2-11 presents the sampling locations for these two studies, and Table D2-12 shows the analytes sampled for the paired watershed monitoring. Three seasons of treatment period monitoring are remaining for all sites.

Table D2-11. Sampling Locations for Paired Watershed Monitoring

Drainage Basin	Monitoring Location ID	Samples per Season	Minimum Number of Seasons to Sample	Number of Seasons Sampled	Description
<i>Paired Watersheds: Parking Lot</i>					
8	S-B08-1 and S-B08-2	6	3 (calibration period) + 3 (treatment period)	4 (calibration period)	Control watershed representing parking lots
9	S-B09-3e ¹	6	3 (calibration period) + 3 (treatment period)	4 (calibration period) ²	Test watershed representing parking lots
<i>Paired Watersheds: Airport Operations</i>					
12	S-B12-13	5	3 (calibration period) + 3 (treatment period)	4 (calibration period)	Control watershed representing airport operations
15	S-B15-15 ³	5	3 (calibration period) + 3 (treatment period)	4 (calibration period) ⁴	Test watershed representing airport operations

Notes:

1. The effluent from the StormFilter® in Basin 9.
2. Calibration completed at sites S-B09-3 and S-B11-4 will be used to represent this watershed.
3. This site (effluent to airside StormFilter®) is subject to tidal influence and may not be able to be sampled.
4. Calibration completed at site S-B08-14 will be used to represent this watershed.

Table D2-12. Sampled Parameters at Paired Watershed Sites

Parameter	Drainage Basin
Oil and Grease (O&G)	All
pH	
Temperature	
Specific Conductance (SC)	
Total Suspended Solids (TSS)	
Biological Oxygen Demand (BOD)	
Chemical Oxygen Demand (COD)	
Total Hardness	
Total Metals (aluminum, copper, iron, lead, and zinc)	
Dissolved Metals (copper and zinc)	
Ethylene Glycol	

Calibration of the paired watershed study locations was completed in 2010, when a sufficient number of results had been collected to derive regression relationships between the control and treatment watersheds. Treatment sampling was slated to begin in 2013-2014, and was expected to last three years. All six monitoring locations for the paired watershed study were put on hold for monitoring because of various ongoing construction activities of the development projects. Therefore, no paired watershed sampling was conducted during the 2013-2014 and 2014-2015 seasons. The paired watershed BMP effectiveness monitoring is expected to be resumed when future conditions allow. As noted previously, the goal is to detect a significant reduction in copper and zinc concentrations and loads by 2033.

Trend Analysis Monitoring

Samples will continue to be collected for BMP effectiveness monitoring, but the monitoring location will no longer be site S-B06-12 because aircraft will no longer taxi, park or load and unload near this location (i.e., Commuter Terminal will no longer operate as a terminal). Alternatively, trend analysis will be performed annually on samples from site S-B08-14. The goal is to obtain enough data to confidently establish a downward trend. The data must be carefully checked to meet all assumptions of the analysis before conclusions are drawn. The lack of an obvious downward trend does not necessarily mean that BMPs are not effective. This location should be sampled for a minimum of 10 years, or until all planned BMPs have been fully implemented. Eight years of sampling had previously been conducted at site S-B06-12. Table D2-13 and D2-14 present a summary of this sampling program.

Table D2-13. Sampling Location for Trend Analysis Monitoring

Drainage Basin	Monitoring Location ID	Samples per Season	Minimum Number of Seasons to Sample	Number of Seasons Sampled	Description
8	S-B08-14	5	10	0	Trend analysis site to determine reduction of pollutants over time

Table D2-14. Sampled Parameters at Trend Analysis Site

Parameter
Oil and Grease (O&G)
pH
Temperature
Specific Conductance (SC)
Total Suspended Solids (TSS)
Biological Oxygen Demand (BOD)
Chemical Oxygen Demand (COD)
Total Hardness
Total Metals (aluminum, copper, iron, lead, and zinc)
Dissolved Metals (copper and zinc)
Ethylene Glycol
Particle Size Distribution
Polycyclic Aromatic Hydrocarbons (PAHs)
Polychlorinated Biphenyls (PCBs)
Chlordane
Total and Dissolved Metals (Arsenic, Cadmium, Chromium III, Chromium VI, Lead, Mercury, Nickel, Silver)

Discrete BMP Sampling

Two treatment control BMPs were installed in the Remain Over Night (RON) Apron area as a component of the Green Build Terminal 2 West expansion project. These BMPs, a 1.75-acre artificial turf infiltration area and a StormFilter® high-rate media filter, are designed to treat runoff from Drainage Basin 15 prior to discharging to the Navy Boat Channel. The RON Apron BMP Monitoring Plan (URS, 2009) describes the monitoring program that will be instituted to evaluate the effectiveness of these BMPs; major goals of the monitoring program, as outlined in the monitoring plan, are:

- 1) Document the effectiveness of the StormFilter® BMP system in reducing pollutant of concern loads.
- 2) Document the estimated effectiveness of the infiltration BMP in reducing pollutant of concern (specifically for copper and zinc) loads based on estimated influent flow rates.
- 3) Document the effectiveness of the airport-wide storm water and dry-weather runoff BMPs in reducing loads of pollutants of concern, specifically with respect to discharges from the RON Apron project to the Navy Boat Channel.
- 4) Assess SAN's progress in meeting short- and long-term airport-wide pollutant reduction objectives. The initial long term (10-year) pollutant load reduction objectives (61 pounds per year of copper and 35 pounds per year for zinc), and short-term (5-year) objectives (31 pounds per year for copper and 17 pounds per year for zinc) have now been replaced by the WQIP goals, as discussed previously.
- 5) Determine the level of effort required to operate and maintain the BMPs.

Initial evaluations of the StormFilter® BMP indicate tidal issues, which may prevent sampling. Also, no monitoring wells were evident in the artificial turf area, so monitoring of that location is likely not feasible. In order to evaluate the performance of a StormFilter® high-rate media filter, discrete BMP sampling was instead performed during 2013-2014 and 2014-2015 monitoring seasons at the underground StormFilter®

vault installed outside the Terminal 2 parking lot. Table D2-15 presents the sampling locations for the discrete BMP sampling program. Analytes sampled for discrete BMP sampling are shown in Table D2-16.

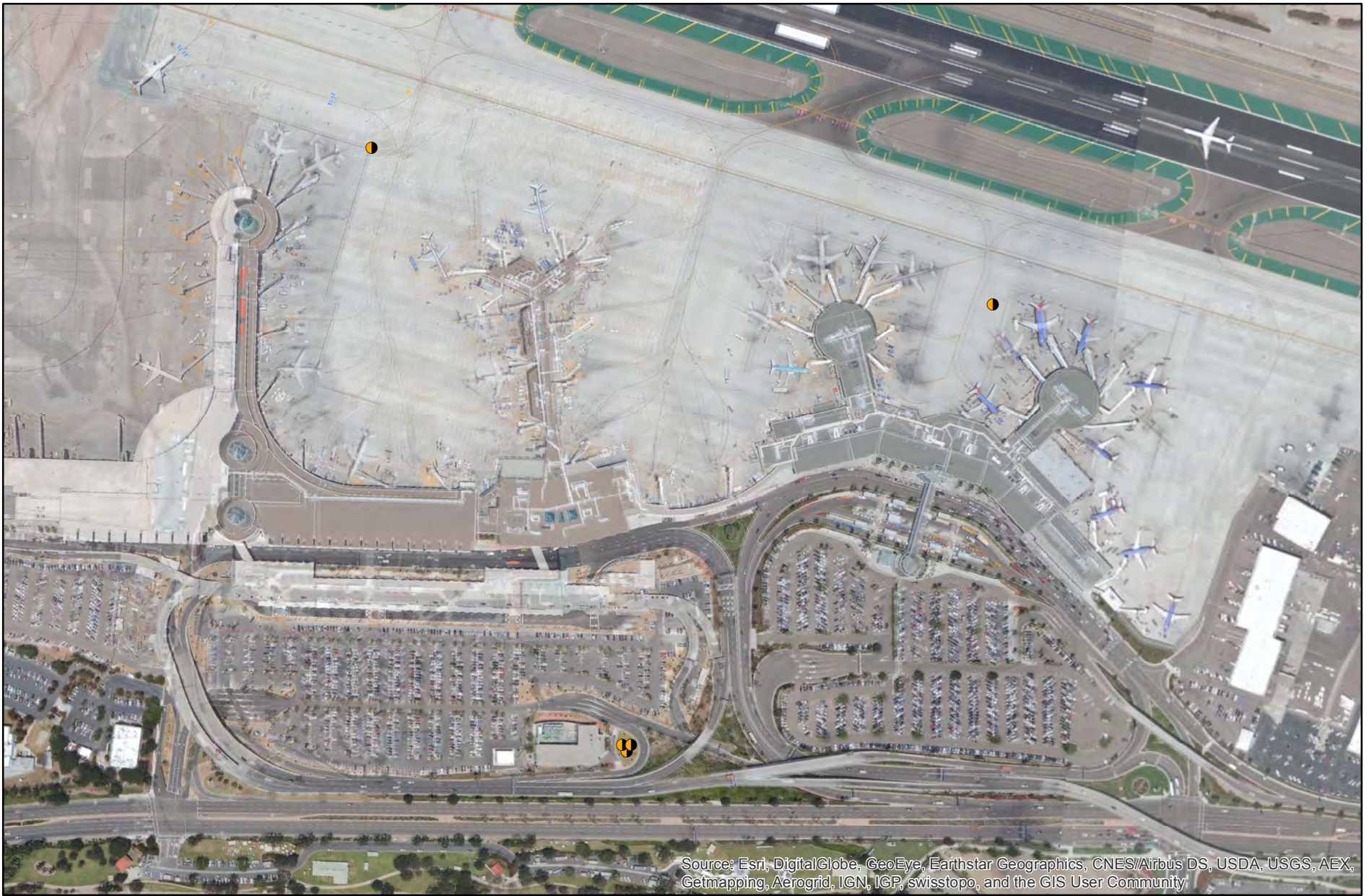
Table D2-15. Sampling Locations for Discrete BMP Sampling in Drainage Basin 9

Drainage Basin	Monitoring Location ID	Samples per Season	Minimum Number of Seasons to Sample	Description
<i>StormFilter® Media Filter BMP</i>				
9	S-B09-3i	5	3	StormFilter® Influent
9	S-B09-3e	5	3	StormFilter® Effluent
9	S-B09-3b	5	3	StormFilter® Bypass

Table D2-16. Sampled Parameters at Discrete BMP Sampling Sites

Parameter
pH
Temperature
Specific Conductance (SC)
Total Suspended Solids (TSS)
Oil & Grease
Total Hardness
Total metals (aluminum, copper, iron, and zinc)
Dissolved metals (copper and zinc)
Polycyclic Aromatic Hydrocarbons (PAHs)
Polychlorinated Biphenyls (PCBs)
Total Coliform
Fecal Coliform
<i>Enterococcus</i>

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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



0 100 200 400 600
Feet

PROJECT NO.:
5025-13-0031
DATE:
JUNE 2015
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RMH
CHECKED BY:
AJA



Type S Sampling Locations
San Diego International Airport

FIGURE

D2-1

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APPENDIX E
TENANT SUMMARY SHEETS

Appendix E - Tenant Summary Sheets



ACE

SIC Codes 7521
 Primary Activity Parking Lot Management
 Drainage Areas 4, 5, 6, 7, 8, 9, 10, 11, 14
 Nearest MS4 Inlet < 200 ft.
 Address 3665 North Harbor Dr. #200
 San Diego, CA 92101

Contact Information
 Mike DeGraffenreid Manager - General
 P 6192911508
michael_degraffenreid@lindberghparking.com
 Mike Yohe Manager
 P 6192258008
 Mike.yohe@aceparking.com

Facility Description and Activities

*** Note : Two separate contracts under ACE. At the moment of Annual/Audit Inspections both contacts should be inspected together.

1. ACE Parking Management supplies 31 blue, red, green and orange airport buses. The shuttle buses are under a separate contract (Mike Yohe) from the general parking lot management but both are ACE. ACE manages parking lots at CT, T1, T2E and T2W, Long Term Parking Lot 1 (North Harbor), Employee Parking Lot, and Long Term Parking Lot (Washington St.).

2. SoCal Auto Detail Services is a subcontractor to ACE that does valet car washing and oil changing. The work is done in Lot 10 (valet lot behind CT). They use a full capture/no runoff system for washing and no supplies are stored onsite at the Airport (all in van).

3. There are 2 dumpsters in Terminal 2 parking lot, 1 in Terminal 1 parking lot, 1 in the employee parking lot (lot 6), and 1 in the shuttle parking lot (next to Gate P18). SDCRAA is responsible for cleaning and having Waste Management pick up dumpster trash.

4. 1 Electric Golf cart, 2 pickup trucks, 1 valet van, and one Tenant sweeper (6500) owned by SDCRAA are used by ACE. The sweeper has been broken for the past 6 months and has requested a replacement.

5. Tenant performs as-needed maintenance of the sweeper onsite in designated maintenance area under the bridge between Terminal 1 and Terminal 2 parking lots. Carts, trucks, and buses are serviced offsite.

6. Sweeper is fueled by ASIG at designated fueling area under the bridge between Terminal 1 and Terminal 2 parking lots. Tenant receives fuel for Carts and stores it in a hazmat locker to fuel carts and blower. Trucks are fueled offsite at public gas stations.

7. Flammable materials storage locker has small amounts of fuel (for refueling of sweepers if required before the next ASIG visit).

8. Terminal parking lots are manual swept once per week, since the Tenant 6500 sweeper is not working. Employee parking lots are swept weekly on Saturdays or Sundays.

9. Minor parking lot repairs are performed by ACE but not in the past year. However, major work would be contracted out.

10. Fleetwash is a subcontractor to ACE that does washing of the shuttle buses. The subcontractor uses a full capture/no runoff system for washing and no supplies are stored onsite at Airport (all in van).

11. Of the 31 shuttle buses, 18 are propane, 5 are diesel, and 8 are CNG. Shuttles are fueled offsite at various locations nearby. A propane tank is under construction in Lot 10, just outside the mobile trailer

office for shuttle services.

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant Sources

Drainage system maintenance
 Equipment storage
 Fluid leaks
 Fuel spills,Fuel transfer
 Outdoor waste storage
 Ramp/Taxiway scrubbing
 Tank fuel transfer
 Trash collection
 Vehicle parking

Potential Pollutants

Anti Freeze
 Battery Acid
 Cleaning Solutions
 Degreasers
 Degreasers (Citrus based)
 Fuel
 Fuel (Diesel)
 Hydraulic Fluids
 Lubricants
 Oil & Grease
 Solvents
 Trash

Best Management Practices Applicable to Facility

Activities

Non-Storm Water Management
 Outdoor Equipment Ops Maintenance Areas
 Aircraft, Ground Vehicle & Equipment
 Maintenance
 Aircraft, Ground Vehicle & Equipment Fueling
 Aircraft, Ground Vehicle & Equipment Cleaning
 Outdoor Material Storage
 Waste Handling & Disposal
 Employee Training
 Outdoor Wash down/Sweeping
 Parking Lots
 Drainage System Maintenance
 Housekeeping
 Safer/Alternative Products
 Spill Prevention, Control & Clean Up

BMPs

SC01 - 1, 2, 3, 4
 SC02A - 1, 2
 SC02B - 1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13
 SC03 - 1, 2, 4, 5, 6, 8
 SC04 - 1, 2, 3, 4, 5, 6, 7, 8
 SC07 - 1, 2, 3, 7, 12
 SC08 - 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12
 SC10 - 1, 2, 4
 SC12 - 1, 2, 3, 4, 5, 9
 SC16 - 1, 2, 3, 4, 5, 6, 11
 SC17 - 2
 SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9
 SC19 - 1, 2
 SR01 - 1, 2, 3, 4, 5, 6, 7, 8, 9

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

SoCal Auto Detail (subcontractor) uses a full capture system for valet car washing and oil changes.

Fleetwash (subcontractor) uses a full capture system for shuttle bus washing.

Materials Storage Area

Flammable materials locker between Terminal 1 and Terminal 2 Parking Lots

Materials Storage Amounts

No materials recorded above 55gallons

Shipping/Receiving Area

Lot 10 mobile trailer office

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CHECKED BY: AJA



ACE
Operating Areas
San Diego International Airport

FIGURE
E-1

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Air Canada Jazz Airlines

SIC Codes Primary Activity Drainage Areas Nearest MS4 Inlet Address	4512, 4522 Passenger Carrier 12 200 - 1000 ft. 3665 North Harbor Dr. #223 San Diego, CA 92101	Contact Information Ken Sturgill Manager - General P 6192200164 C 7757710699 ksturgill@atsstl.com <hr/> Alioune Sow Manager - Regional P 3108499935 alioune.sow@aircanada.com
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Facility Description and Activities

** Fleet has changed to Air Canada Rouge which is the low end less expensive division of Air Canada.

1. All equipment maintenance is done in the GES maintenance shop area by GES.
2. All aircraft maintenance is performed by Pacific Aircraft Maintenance.
3. Fueling is conducted by ASIG at gate. ATS conducts monthly station safety audits which include observing fueling. ATS requests a poundage of fuel to be put into the aircraft prior to each fueling.
4. Cleaning of vehicles is done at the triturator. No aircraft cleaning is performed at SDIA.
5. All ground handling activities are performed by ATS, a vendor to Air Canada.
6. Tenant operates out of Gate 22.
7. Lavatory services are nightly for flights that are parked overnight on the RON, and are performed on demand for flights that turn daily.
8. No potable water flushing occurs at the airport, all flushing and cleaning is done offsite.
9. ATS is a subtenant and performs services above the wing and below the wing for Air Canada.

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant Sources

Aircraft sanitary services
 Equipment storage
 Fluid leaks
 Fuel spills, Fuel transfer
 Material loading/unloading
 Trash collection

Potential Pollutants

Anti Freeze
 Battery Acid
 Cleaning Solutions
 Fuel
 Lavatory Chemicals
 Lavatory Wastes
 Lubricants
 Metals
 Oil & Grease

Sediment

Trash

Best Management Practices Applicable to Facility

Activities

Non-Storm Water Management
 Outdoor Equipment Ops Maintenance Areas
 Aircraft, Ground Vehicle & Equipment Maintenance
 Aircraft, Ground Vehicle & Equipment Fueling
 Aircraft, Ground Vehicle & Equipment Cleaning
 Outdoor Loading/Unloading of Materials
 Outdoor Material Storage
 Waste Handling & Disposal
 Employee Training
 Lavatory Service Operation
 Housekeeping
 Safer/Alternative Products
 Spill Prevention, Control & Clean Up

BMPs

SC01 - 1, 2, 4
 SC02A - 1, 2
 SC02B - 1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13
 SC03 - 1, 2, 4, 5, 6, 8
 SC04 - 1, 2
 SC06 - 1, 2, 3, 6, 7
 SC07 - 1, 2, 3, 5
 SC08 - 1, 2, 3, 4, 7, 8, 9, 12
 SC10 - 1, 2, 3, 4
 SC11 - 3, 4, 5, 6, 7, 8, 9, 10
 SC18 - 1, 2, 3, 4, 5, 9
 SC19 - 1, 2
 SR01 - 1, 2, 3, 5, 6, 7, 8, 9

* Appendix B provides descriptions for each BMP category

Structural Control measures used by facility:

Materials Storage Area

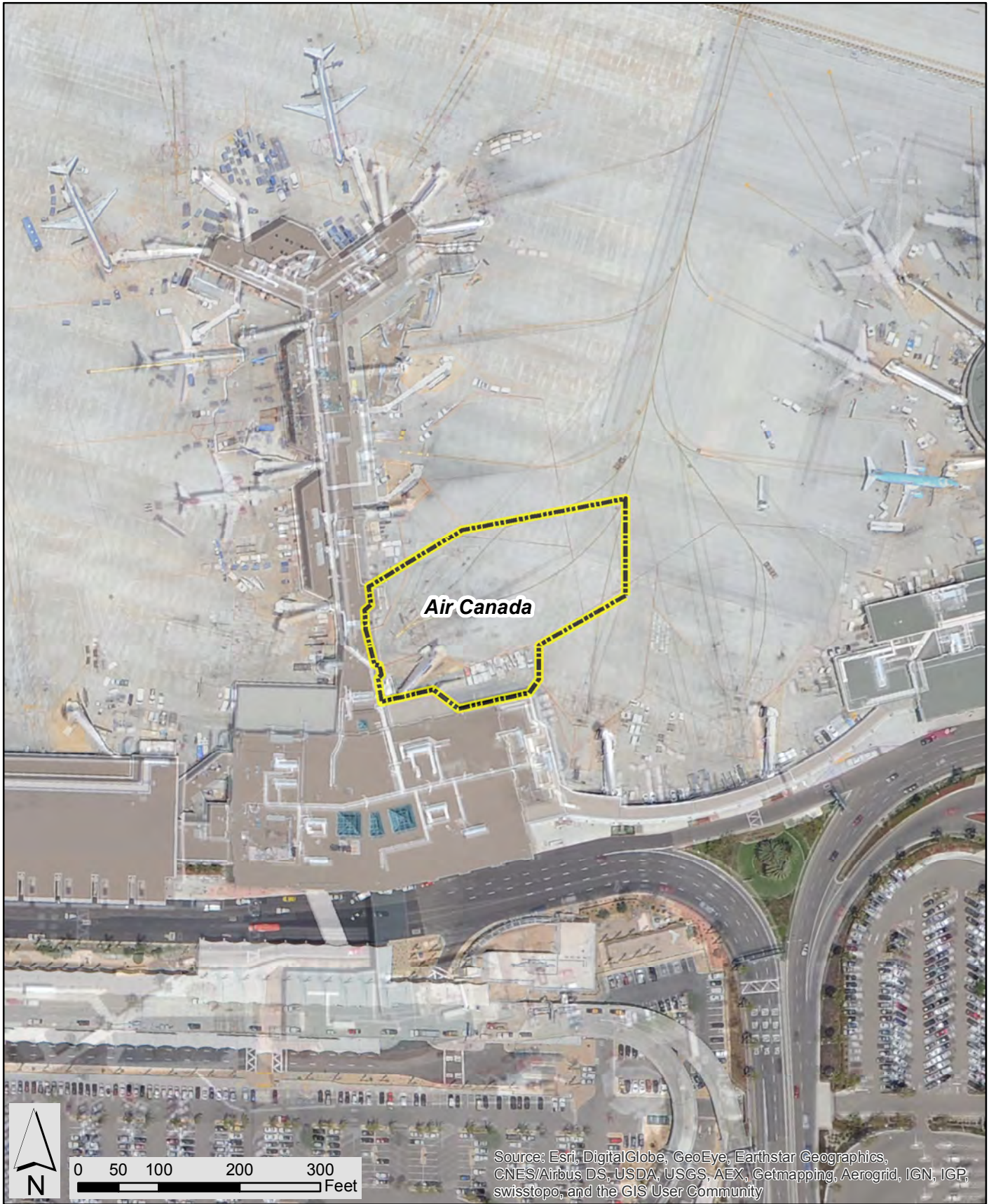
No major material storage; equipment maintenance materials stored at GES maintenance shop

Materials Storage Amounts

No materials stored above 55gallons for daily operations

Shipping/Receiving Area

Not recorded



PROJECT NO.:
5025-13-0031

DATE:
JUNE 2015

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RMH

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AJA



**Air Canada
Operating Areas
San Diego International Airport**

FIGURE
E-2

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Aircraft Rescue & Fire Fighting

SIC Codes	9224	Contact Information	
Primary Activity	Airport Rescue & Fire Fighting	Wayne Thomas	Unknown
Drainage Areas	6	P 6194002710	
Nearest MS4 Inlet	< 200 ft.	wthomas@san.org	
Address	3698 Pacific Hwy. San Diego, CA 92102	Dean Robbins	Unknown
		P 6194002761	
		d Robbins@san.org	

Facility Description and Activities

1. Four fire fighting vehicles are stored and fueled indoors by ASIG.
2. Maintenance is done by Southern California Fleet Services in flat dirt parking lot area away from storm drains. All waste is taken off site by Inland Fire mechanics. Southern California Fleet Services brings in all maintenance equipment and fluids.
3. There are two storage areas outside the ARFF building. A shed in front of the ARFF houses the 3% foam, Purple K powder fire retardant and empty drums. A second container/shed holds tools and tires.
4. Firefighting equipment and foam testing is performed once a year on the North ramp. Ocean Blue is contracted to collect all runoff from the exercise. They barricade all storm drain and ramp area to collect all test water. They vacuum up all runoff and foam for proper disposal. The nearest storm drain is connected to an oil-water separator that Ocean Blue blocks the end of and vacuums out if necessary.
5. Washing of the trucks is done in flat dirt parking lot area away from storm drains or at the American Airlines wash rack. Once per year the trucks are waxed by an outside vendor.
6. Foam trailer is stored full in the bay with the trucks (1000 gal, 3% foam concentrate).
7. Use SDFDtelestaffdesk@sandiego.gov to reach all captains. Indicate in Subject/First Line of email to transmit information to Captains. If not email captains individually.
8. ARFF are not responsible for equipment. It is all owned by the Airport Authority.
9. Airport Authority is responsible for storm drain cleaning and maintenance.

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant Sources

Building & Ground maintenance
 Drainage system maintenance
 Equipment storage
 Fire fighting equipment testing
 Fluid leaks

Potential Pollutants

Anti Freeze
 Battery Acid
 Cleaning Solutions
 Fire Fighting Foam
 Fuel (Diesel)

Fuel spills,Fuel transfer
 Fuel storage Herbicide
 usage Outdoor
 washdown Outdoor
 waste storage
 Pesticide usage
 Tank fuel transfer
 Trash collection
 Vehicle parking

Tenant Summaries

Fuel (Gas)
 Lubricants
 Oil & Grease
 Rubber Particulates
 Sediment
 Trash

Best Management Practices Applicable to Facility

Activities

Non-Storm Water Management
 Outdoor Equipment Ops Maintenance Areas
 Aircraft, Ground Vehicle & Equipment
 Maintenance
 Aircraft, Ground Vehicle & Equipment Fueling
 Aircraft, Ground Vehicle & Equipment Cleaning
 Outdoor Material Storage
 Waste Handling & Disposal
 Building & Ground Maintenance
 Employee Training
 Fire Fighting Foam Discharge
 Parking Lots
 Drainage System Maintenance
 Housekeeping
 Safer/Alternative Products
 Spill Prevention, Control & Clean Up

BMPs

SC01 - 1, 2, 3, 4
 SC02A - 1, 2
 SC02B - 1, 2, 3, 4, 5, 6, 7, 8, 10, 11
 SC03 - 1, 2, 3, 4, 5, 8
 SC04 - 1, 2, 3, 5, 6, 7, 8
 SC07 - 1, 2, 3, 7
 SC08 - 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 14
 SC09 - 1, 2, 3, 4
 SC10 - 1, 2, 3, 4
 SC13 - 1, 2, 3, 5
 SC16 - 1, 2, 4, 6, 11
 SC17 - 2, 3, 6
 SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9
 SC19 - 1, 2
 SR01 - 1, 2, 3, 4, 5, 6, 7, 8, 9

* Appendix B provides descriptions for each BMP category

Structural Control measures used by facility:

Equipment testing area is sloped to divert water into oil water separator.

Booms are deployed during foam testing to prevent foam from entering storm water system. Foam is vacuumed and removed from site.

Materials Storage Area

Inside ARFF Station; Aqueous Film Forming Foam (AFFF) stored inside foam trailer in station

Materials Storage Amounts

1000 gal AFFF (3% concentrate); no other materials recorded above 55 gallons

Shipping/Receiving Area

ARFF Station

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5025-13-0031

DATE:
JUNE 2015

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AJA



ARFF
Operating Areas
San Diego International Airport

FIGURE
E-3

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Aircraft Service International Group

<p>SIC Codes 4581</p> <p>Primary Activity Fueling Services</p> <p>Drainage Areas 7</p> <p>Nearest MS4 Inlet < 200 ft.</p> <p>Address 2340 Stillwater Rd. San Diego, CA 92101</p>	<p>Contact Information</p> <p>Barry Lopez Manager</p> <p>P 6192988614 C 6192506916</p> <p>barry.lopez@asig.com</p> <hr/> <p>Jaime Machorro Manager - Maintenance</p> <p>P 6192986570 C 6196662253</p> <p>jaime.machorro@asig.com</p>
--	--

Facility Description and Activities

1. ASIG main office and shop is located east of the cargo area next to the American Airlines maintenance shop.
2. Vehicle maintenance is conducted inside Maintenance Shop. Tenant has implemented a Vehicle Discrepancy Report (VDR) to identify leaking truck and to minimize the amount of vehicles may be leaking during fueling.
3. Waste accumulation areas are located inside Maintenance Shop.
4. Outdoor material storage container/shed contains drums of used absorbent and fuel filters.
5. One onsite storm drain inlet drains to OWS.
6. Eighteen refueling trucks - 8,000-gallon, 10,000-gallon, and 15,000-gallon capacities tanker truck staged outdoors on pavement.
7. Refueling trucks fueled at the Allied remote fueling facility.
8. Two eyewash stations - one indoors and one in parking lot.
9. Vehicles are washed weekly at the wash rack, which is bermed and connect to the sanitary sewer.
10. Asbury Environmental picks up oil and coolant waste. HTS (Hazardous Transportation Services) picks up all other waste.
11. Initial and annual refresher training for employees. Airlines provide their training so ASIG personnel follow fueling procedures and safety protocols.
12. Sweeping is performed as needed.
13. Tenant has a Storm Water Pollution Prevention Plan, and a Spill Prevention, Control, and Countermeasure Plan.
14. Tenant uses the emergency response company Shaw.

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant Sources

Cargo handling

Potential Pollutants

Fuel

Equipment storage
 Fluid leaks
 Fuel spills,Fuel transfer
 Fuel storage
 Material loading/unloading
 Outdoor waste storage
 Tank fuel transfer
 Trash collection
 Vehicle parking

Tenant Summaries

Fuel (Diesel)
 Fuel (Gas)
 Hydraulic Fluids
 Lubricants
 Oil & Grease Paints
 Transmission Fluid
 Trash

Best Management Practices Applicable to Facility

Activities

Non-Storm Water Management
 Outdoor Equipment Ops Maintenance Areas
 Aircraft, Ground Vehicle & Equipment Maintenance
 Aircraft, Ground Vehicle & Equipment Fueling
 Aircraft, Ground Vehicle & Equipment Cleaning
 Outdoor Loading/Unloading of Materials
 Outdoor Material Storage
 Waste Handling & Disposal
 Employee Training
 Parking Lots
 Housekeeping
 Safer/Alternative Products
 Spill Prevention, Control & Clean Up

BMPs

SC01 - 1, 2, 4
 SC02A - 1, 2
 SC02B - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
 SC03 - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11
 SC04 - 1, 2, 3, 5, 6, 7, 8
 SC06 - 1, 2, 3, 4, 5, 6, 7
 SC07 - 1, 2, 3, 7, 11, 12
 SC08 - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14
 SC10 - 1, 2, 3, 4
 SC16 - 1, 2, 4, 6, 11
 SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9
 SC19 - 1, 2
 SR01 - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

Vehicle washing area is sloped to divert wash water into a sump connected to the sanitary sewer.
 Refueling vehicle fuel transfer area is sloped to divert water into oil water separator.
 Storm drain is covered to prevent water from entering MS4.

Materials Storage Area

Inside ASIG maintenance shop, outdoor material storage container at maintenance shop, and shed at maintenance shop

Materials Storage Amounts

18 refueling trucks parked outside maintenance shop containing 8000 to 15000 gallons of fuel each; hazwaste (waste oil and solvents) stored in 55gallon drums in maintenance shop hazwaste area

Shipping/Receiving Area

ASIG maintenance shop

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PROJECT NO.:
5025-13-0031

DATE:
JUNE 2015

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RMH

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ASIG
Operating Areas
San Diego International Airport

FIGURE
E-4

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Alaska Airlines

SIC Codes 4512, 4522
 Primary Activity Passenger Carrier
 Drainage Areas 7, 8
 Nearest MS4 Inlet < 200 ft.
 Address 3665 North Harbor Dr. #228
 San Diego, CA 92101

Contact Information
 Danny Flores Manager - Station
 P 6196804600 C 6198695412
 danny.flores@alaskaair.com

 Warren Paulsen Supervisor - Maintenance
 P 6196804651 C 9495474896
 warren.paulsen@alaskaair.com

Facility Description and Activities

1. DAL Global Services is a subtenant to Alaska, and provides ground handling services and vehicle and equipment maintenance on DAL equipment. Maintenance operations and materials for DAL have moved to the cargo area maintenance shop.
2. Alaska performs minor aircraft maintenance at the gate. Materials are stored indoors in the maintenance office, except for three large storage sheds outside.
3. GAT is contracted to perform cargo handling.
4. GES maintains Alaska equipment, trucks, AC carts, etc.
5. Most significant materials are stored indoors in the Material Storage Area.
6. Wastes are stored in the Waste Accumulation.
7. Spill response material for fuel and lavatory spills is kept away from operational area near facility entrance.
8. Operate out of gates 13 through 18. Aircraft Remain Over Night (RON) at gates 20 and 21.
9. Aircrafts are dry washed only.
10. Contact Janet Baad for HAZMAT Business Plan.

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant Sources

Aircraft sanitary services
 Cargo handling
 Drainage system maintenance
 Equipment storage
 Fluid leaks
 Fuel spills, Fuel transfer
 Material loading/unloading

Potential Pollutants

Adhesives
 Anti Freeze
 Battery Acid
 Cleaning Solutions
 Degreasers (Citrus based)
 Fuel
 Fuel (Sump)

Outdoor waste storage
 Potable water flushing
 Tank fuel transfer
 Trash collection

Tenant Summaries
 Hydraulic Fluids
 Lavatory Chemicals
 Lavatory Wastes
 Lubricants
 Oil & Grease
 Paints
 Recyclables
 Sealants
 Sediment
 Trash

Best Management Practices Applicable to Facility

Activities

Non-Storm Water Management
 Outdoor Equipment Ops Maintenance Areas
 Aircraft, Ground Vehicle & Equipment Maintenance
 Aircraft, Ground Vehicle & Equipment Fueling
 Aircraft, Ground Vehicle & Equipment Cleaning
 Outdoor Loading/Unloading of Materials
 Outdoor Material Storage
 Waste Handling & Disposal
 Employee Training
 Lavatory Service Operation
 Potable Water System Flushing
 Drainage System Maintenance
 Housekeeping
 Safer/Alternative Products
 Spill Prevention, Control & Clean Up

BMPs

SC01 - 1, 2, 4
 SC02A - 1, 2
 SC02B - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
 SC03 - 1, 2, 4, 5, 6, 8
 SC04 - 1, 2
 SC06 - 1, 2, 3, 4, 5, 6, 7
 SC07 - 1, 2, 3, 4, 7, 11, 12
 SC08 - 1, 2, 3, 4, 5, 8, 9, 10, 11, 12, 14
 SC10 - 1, 2, 3, 4
 SC11 - 3, 4, 5, 6, 7, 8, 9, 10
 SC14 - 1, 2, 3
 SC17 - 2
 SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9
 SC19 - 1, 2
 SR01 - 1, 2, 3, 5, 6, 7, 8, 9

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

Vehicle washing area is sloped to divert wash water into a sump connected to the sanitary sewer.

Materials Storage Area

Cargo/maintenance shop and storage area at Gate 15

Materials Storage Amounts

Waste oil with solvents (55 gallons) and contaminated absorbent with solvents (55 gallons) stored at Gate 15 storage area; no other materials recorded above 55 gallons

Shipping/Receiving Area

Cargo/maintenance shop

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PROJECT NO.:
5025-13-0031

DATE:
JUNE 2015

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RMH

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AJA



Alaska
Operating Areas
San Diego International Airport

FIGURE
E-5

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Allegiant Air

SIC Codes 4512, 4522
 Primary Activity Passenger Carrier
 Drainage Areas 12
 Nearest MS4 Inlet 200 - 1000 ft.
 Address 3707 North Harbor Dr. T2E
 San Diego, CA 92101

Contact Information
 Ken Sturgill General Manager
 P 6192200164 C 7757710699
 ksturgill@atsstl.com

 Charles Hopkins Manager - Regional
 P 7028305760 C 5153069605
 charles.hopkins@allegiantair.com

Facility Description and Activities

1. All equipment maintenance is done by GES. Daily vital fluid checks are performed by ATS staff and monthly Preventive Maintenance Inspections are conducted by Tom Mascarenas of GES. ATS is a subtenant to Allegiant.
2. Fueling is conducted by ASIG at the Gates. ATS conducts monthly station safety audits which include observing fueling. ATS requests a poundage of fuel to be put into the aircraft prior to each fueling.
3. Cleaning of vehicles is done at the triturator facility. No aircraft cleaning is performed at SIDA.
4. All aircraft maintenance is performed by Pacific Aircraft Maintenance.
5. Tenant operates primarily out of Gate 23 (gate 22 is a shared gate also used by Hawaiian and West Jet). Allegiant has flights twice per week (Thursday & Sunday) from February to August.
6. No potable water flushing occurs at the airport, all flushing and cleaning is done offsite.
7. ATS is a subtenant of Allegiant and performs services above the wing and below the wing for Allegiant.

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant Sources

Aircraft sanitary services
 Equipment storage
 Fluid leaks
 Fuel spills,Fuel transfer
 Fuel storage
 Material loading/unloading
 Outdoor waste storage
 Trash collection

Potential Pollutants

Anti Freeze
 Battery Acid
 Cleaning Solutions
 Fuel
 Lavatory Chemicals
 Lavatory Wastes
 Lubricants
 Metals
 Oil & Grease
 Sediment

Trash

Best Management Practices Applicable to Facility

Activities

Non-Storm Water Management
 Outdoor Equipment Ops Maintenance Areas
 Aircraft, Ground Vehicle & Equipment Maintenance
 Aircraft, Ground Vehicle & Equipment Fueling
 Aircraft, Ground Vehicle & Equipment Cleaning
 Outdoor Loading/Unloading of Materials
 Waste Handling & Disposal
 Employee Training
 Lavatory Service Operation
 Housekeeping
 Safer/Alternative Products
 Spill Prevention, Control & Clean Up

BMPs

SC01 - 1, 2, 4
 SC02A - 1, 2
 SC02B - 1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13
 SC03 - 1, 2, 3, 4, 5, 6, 8
 SC04 - 1, 2
 SC06 - 1, 2, 3, 6, 7
 SC08 - 1, 2, 3, 4, 5, 8, 9, 12
 SC10 - 1, 2, 3, 4
 SC11 - 3, 4, 5, 6, 7, 8, 9, 10
 SC18 - 1, 2, 3, 4, 5, 9
 SC19 - 1, 2
 SR01 - 1, 2, 3, 5, 6, 7, 8, 9

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

Materials Storage Area

Operates out of gate 23; no significant material storage

Materials Storage Amounts

No materials recorded above 55gallons

Shipping/Receiving Area

Not recorded



0 50 100 200 300 Feet

PROJECT NO.:
5025-13-0031
DATE: JUNE 2015
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CHECKED BY: AJA



**Allegiant
Operating Areas
San Diego International Airport**

FIGURE
E-6

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Allied Aviation

SIC Codes 5171
 Primary Activity Fuel Storage
 Drainage Areas 6, 7
 Nearest MS4 Inlet < 200 ft.
 Address 3698 Pacific Hwy. #C
 San Diego, CA 92101

Contact Information
 Nelson Kelly Manager - General
 P 6195747808 C 6199214883
 nelson.kelly@alliedaviation.com

 Terry Munson Supervisor - Ops
 P 6195747808 C 6199215694
 terry.munson@alliedaviation.com

Facility Description and Activities

1. Allied Aviation main office is located in the North Ramp Area next to the ARFF station. A second "remote" fueling facility is located adjacent to the CT. An above ground OWS is installed (Jan 2013) at the remote fueling station and is functioning properly. This will prompt changes in current stormwater practices.
2. The Fuel Storage Facility has the following: - Three dual-position jet fuel unloading islands with spill containment. These pumps are used only as emergency backups. - Two 1,000,000-gallon jet fuel ASTs within secondary containment. - One 15,000-gallon diesel underground storage tank (UST). - One 15,000-gallon auto gas UST. - One 1,000 gallon Jet A Low Lead Fuel Tank, within secondary containment. - A diesel/auto gas loading/unloading island with spill containment. - One 3,000-gallon waste fuel UST. - An equipment pad with spill containment. - A foam equipment building with a 1,500-gallon 3% aqueous foam concentrate AST. - A 12,000-gallon oil/water separator includes an 8,000-gallon holding tank to treat fuel spills.
3. The Remote Fueling Facility, operated by Allied Aviation and used by ASIG, Landmark, and American to load fuel trucks, has the following: - Four single-position refueler loading islands with spill containment. - One 12,000-gallon underground waste water tank. - One 3,000-gallon underground reclaimed fuel tank. - An underground pipeline conveying fuel from the Fuel Storage Facility.
4. A trailer unit or mini vac-truck of 250-gallon capacity is available to clean up spills.
5. NRC is the designated Oil Spill Response Organization (OSRO) to provide cleanup services in case of a spill.
6. ASIG trucks take Jet-A fuel at the Remote Fueling Facility and then take fuel to the gates. Jet fuel comes from 10th Avenue by an underground pipeline to two 1,000,000-gallon ASTs at the Fuel Storage Facility. An annual survey is performed on leak detection systems. After Landmark relocates, all fuel be provide by Allied.
7. The only equipment maintenance performed is on the nozzle valves at the loading islands and the valves on pumps. Pipes at loading/unloading islands are painted.
8. At the Fuel Storage Facility, pig mats are placed over the storm drains that are not linked to the OWS, this is done only during fueling activities.
9. The emergency eye wash station is tested monthly and water is allowed to evaporate and does not reach the storm drain. Fire hydrants at the foam house are flush-tested annually producing a foam discharge. A bermed area is created in the parking lot and all discharge goes into the drains connected to

the OWS. IPS performs this task.

10. The only outdoor area that is cleaned is the concrete pad at the loading islands in the Remote Fueling Facility. The area is steam cleaned, and the discharge enters the 12,000-gallon underground wastewater tank. Filter Recycling collects and disposes of wastewater and picks up wastes.

11. The Firefighting equipment near the two 1-million gallon tanks are tested annually with water only to make sure adequate water pressure is available. The water is discharged into the storm drains. BMPs have been recommended to prevent discharge carrying any potential pollutants into the storm drain.

12. At the foam house, the test ports inside the house are used to test the water to foam ratio. IPS performs testing and berms testing area, captures, and disposes of discharge.

13. Filter Recycling services the OWS and the 12,000-gallon wastewater UST annually and collects all hazardous wastes. Annual wet weather sampling is done at catch basins per the Industrial Stormwater Permit.

14. Tenant has a Storm Water Pollution Prevention Plan, Spill Prevention, Control, and Countermeasure Plan, and Facility Response Plan.

15. Quarterly scrubbing is performed to remove oil & grease stains within lanes at the remote fueling station.

16. Other providers include California Detection Systems (Cal-Detection) and Western Pump. Cal-Detection performs trace test to determine if there is leak in the fuel pipes and cathodic protection for corrosion control. Western Pump performs maintains underground alarms for DUSTO (Designated Underground Storage Tank Operator).

17. New lightning protection onsite to dissipate electricity from lightning.

18. Allied has their own SWPPP and SPCC. They conduct their own storm water sampling at 4 locations within their operational area.

Significant Materials/Activities Potentially Exposed to Storm Water

<u>Potential Pollutant Sources</u>	<u>Potential Pollutants</u>
Building & Ground maintenance	Anti Freeze
Cargo handling	Cleaning Solutions
Equipment storage	Degreasers
Fire fighting equipment testing	Degreasers (Citrus based)
Fluid leaks	Fire Fighting Foam
Fuel spills,Fuel transfer	Fuel
Fuel storage	Fuel (Diesel)
Material loading/unloading	Fuel (Gas)
Outdoor apron washdown	Hydraulic Fluids
Outdoor waste storage	Lubricants
Pesticide usage	Metals
Tank fuel transfer	Oil & Grease

Trash collection
 Vehicle parking
 Water/Fuel mixture within berm

Paints
 Pesticides/Herbicides/Fertilizers
 Solvents

Best Management Practices Applicable to Facility

Activities

BMPs

Non-Storm Water Management	SC01 - 1, 2, 4
Outdoor Equipment Ops Maintenance Areas	SC02A - 1, 2
Aircraft, Ground Vehicle & Equipment Maintenance	SC02B - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Aircraft, Ground Vehicle & Equipment Fueling	SC03 - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11
Outdoor Loading/Unloading of Materials	SC06 - 1, 2, 3, 4, 5, 6, 7
Outdoor Material Storage	SC07 - 1, 2, 3, 6, 7, 8, 9, 10, 11, 12
Waste Handling & Disposal	SC08 - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14
Building & Ground Maintenance	SC09 - 1, 3
Employee Training	SC10 - 1, 2, 3, 4
Outdoor Wash down/Sweeping	SC12 - 6, 7, 8, 9
Fire Fighting Foam Discharge	SC13 - 1, 2, 3, 4, 5
Parking Lots	SC16 - 1, 2, 6, 11, 12
Housekeeping	SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9
Safer/Alternative Products	SC19 - 1, 2
Spill Prevention, Control & Clean Up	SR01 - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10
Structural Treatment Control BMPs	TC01 - 1, 2, 3, 4

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

Fueling areas are sloped to divert water into oil water separator.
 Concrete secondary containment around storage tanks.
 Concrete curbing to direct drainage to the oil water separator.
 A 12,000-gallon oil water separator and 8,000-gallon holding tank to treat fuel spills.
 Pig mats are placed over storm drains that are not linked to the oil water separator during fueling activities.
 Parking lots are bermed and diverted to the oil water separator during fire-hydrant testing.

Materials Storage Area

Fuel storage facility (FSF); remote fueling facility (RFF)

Materials Storage Amounts

1,500 gallon AFFF (3% concentrate) stored at FSF foam equipment building
2 1,000,000 gal jet fuel ASTs at FSF
1 15,000 gal diesel UST at FSF
1 15,000 gal auto gas UST at FSF
11,000 gal Jet A Low Lead AST at FSF
1 3,000 gal waste fuel UST at FSF
1 12,000 gal oil/water separator with 8,000 gal holding tank to treat fuel spills at FSF
1 12,000 gal underground waste water tank at RFF
1 3,000-gallon underground reclaimed fuel tank at RFF
55 gallon drum waste absorbent at FSF
No other materials recorded above 55 gallon

Shipping/Receiving Area

Fuel storage facility (FSF)



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DATE:
JUNE 2015

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RMH

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**Allied Aviation
Operating Areas**
San Diego International Airport

FIGURE
E-7

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American Airlines

<p>SIC Codes 4512, 4522</p> <p>Primary Activity Passenger Carrier</p> <p>Drainage Areas 6, 7, 12</p> <p>Nearest MS4 Inlet 200 - 1000 ft.</p> <p>Address 3707 North Harbor Dr. #103 San Diego, CA 92101</p>	<p>Contact Information</p> <p>Faith Ikeda Manager - General</p> <p>P 6192315452 C 8014036817</p> <p>Faith.Ikeda@aa.com</p> <hr/> <p>Richard Johnson Environmental Coordinator</p> <p>P 6192313350 C 6198897817</p> <p>Richard.Johnson@aa.com</p>
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Facility Description and Activities

1. ASIG is contracted to perform all fueling activities. (Effective October 10, 2012) Aircraft, vehicles and equipment are fueled where they are parked.
2. American plans to scrap two (2) 8,400 gallon Jet A fueling trucks and one (1) combination 400 gallon diesel/350 gallon gasoline fueling truck as they are not currently functioning. One (1) 10,000 gallon Jet A fueling truck may be kept for use, but old trucks will be removed. The trucks are branded with ASIG decals. ASIG is responsible for their maintenance. The two 8,400 gallon trucks are currently parked between ARFF and Allied Aviation.
3. Aircraft maintenance is performed by American's own mechanics. Minor maintenance is performed at the gate. Major maintenance is performed in the wash rack area or north ramp.
4. Vehicles and equipment maintenance is performed inside or outside the American's Maintenance Shop (Auto shop).
5. Vehicles and equipment painting is performed inside or outside the American's Maintenance Shop using paint rollers.
6. ATS is contracted to maintain the vehicles and equipment effective November 15, 2012.
7. ATS will be using American's Maintenance Shop.
8. Aircraft and vehicles are washed at the American Aircraft Wash rack. The wash rack is used only by American. Washing activities are performed only 4 days per week (2 aircraft per night and 5 engines per week). Engine washing uses a fully contained water recapture system. Before a storm event any washing activities discontinue. During a storm event washing is not performed.
9. An oil water separator (sump) is located at the wash rack. It collects the wash water and discharges it into the sewer. During a storm event the valve is switched to discharge the storm water to the storm drain system. Environmental Recovery Services is contracted to sample and clean the sump every 3 to 4 months. The sump is inspected by the County of San Diego every 6 months.
10. Prime Flight is contracted to clean aircraft inside overnight.
11. ELS is contracted to maintain jet bridges and belts.
12. American does not perform deicing operations (effective 2012).
13. American no longer does freight/cargo handling. GAT still receives deliveries (i.e. cabin supplies) for American.

14. American Airlines has five designated waste accumulation areas - one between Gates 31 and 32, two inside the auto shop, one outside of the auto shop, and one in stores next to the auto shop. The two accumulation areas located at the auto shop will be removed effective November 15, 2012.
15. Heritage Environmental Services is contracted to collect hazardous wastes accumulated by American Airlines. Some are recycled and some are treated and disposed of.
16. Tenant has an Emergency Contingency Plan, a Spill Prevention, Control, and Countermeasure Plan.
17. Provides on call maintenance for USAirways.
18. USAirways and American operations are expected to completely merge in April 2015.
19. USAirways and American currently have two separate Hazardous Business Plans. Plan to merge into mostly American's plan, policies, and procedures in April 2015.

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant Sources

Aircraft sanitary services
 Equipment storage
 Fluid leaks
 Fuel spills, Fuel transfer
 Outdoor waste storage
 Potable water flushing
 Tank fuel transfer
 Trash collection

Potential Pollutants

Acetone
 Adhesives
 Anti Freeze
 Battery Acid
 Carburetor Cleaner
 Caulking
 Cleaning Solutions
 Coolant
 Degreasers (Citrus based)
 Fuel
 Fuel (Diesel)
 Fuel (Jet)
 Hydraulic Fluids
 Lavatory Chemicals
 Lavatory Wastes
 Lubricants
 Metals
 Oil & Grease
 Paints
 Recyclables
 Rust Preventer
 Sealants

Sediment Solvents

Transmission Fluid

Trash

Best Management Practices Applicable to Facility

Activities

Non-Storm Water Management
 Outdoor Equipment Ops Maintenance Areas
 Aircraft, Ground Vehicle & Equipment Maintenance
 Aircraft, Ground Vehicle & Equipment Fueling
 Aircraft, Ground Vehicle & Equipment Cleaning
 Outdoor Material Storage
 Waste Handling & Disposal
 Employee Training
 Lavatory Service Operation
 Potable Water System Flushing
 Housekeeping
 Safer/Alternative Products
 Spill Prevention, Control & Clean Up

BMPs

SC01 - 1, 2, 4
 SC02A - 1, 2
 SC02B - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
 SC03 - 1, 2, 4, 5, 6, 8
 SC04 - 1, 2, 3, 5, 6, 7, 8
 SC07 - 1, 2, 3, 5, 7, 11, 12
 SC08 - 1, 2, 3, 4, 5, 8, 9, 10, 11, 12, 14
 SC10 - 1, 2, 3, 4
 SC11 - 3, 4, 5, 6, 7, 8, 9, 10
 SC14 - 1, 2, 3
 SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9
 SC19 - 1, 2
 SR01 - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

American Airlines wash rack uses a fully contained water recapture system which is diverted to a SUMP connected to the sanitary sewer.

Materials Storage Area

American maintenance/cargo area; Gate 31/32

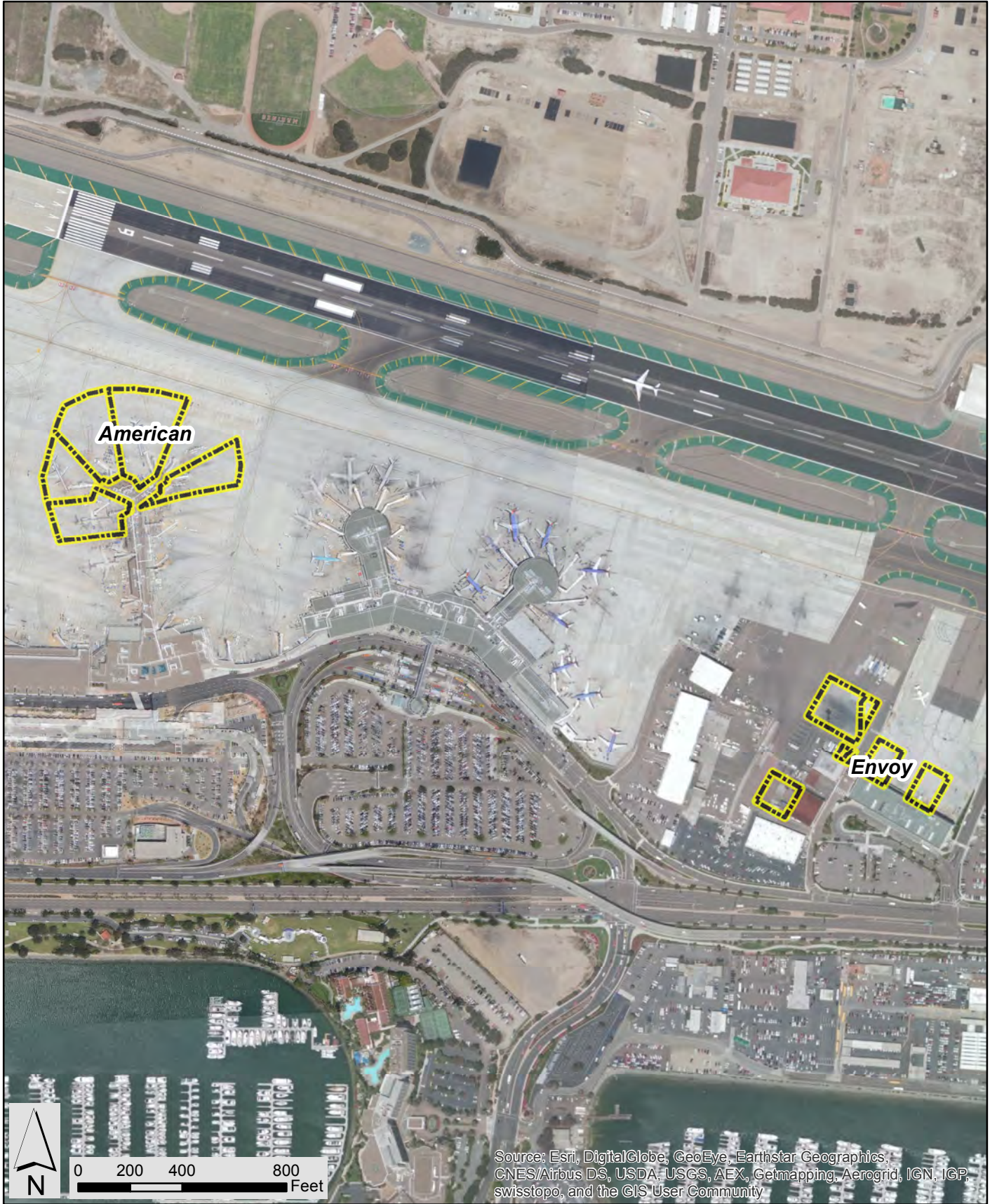
Materials Storage Amounts

Waste accumulation in 55 gallon drums at Gate 31/32 and at maintenance/cargo area
 100 gallons oil, lubricating-Exxon

Shipping/Receiving Area

American maintenance/cargo area

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PROJECT NO.:
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DATE: JUNE 2015
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**American/Envoy
Operating Areas**
San Diego International Airport

FIGURE
E-8

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Bradford

SIC Codes 4581
 Primary Activity Cargo Handling
 Drainage Areas 6
 Nearest MS4 Inlet < 200 ft.
 Address 2247 West Washington St.
 San Diego, CA 92101

Contact Information
 Chris Stolarczyk General Manager
 C 6198479648
cStolarczyk@airportlogistics.org
 Arturo Cruz Supervisor - Ops
 P 6196391201
 alopez@airportlogistics.org

Facility Description and Activities

1. Approximately 67 inbound (to the RDC) deliveries per day and approximately 17 outbound (from RDC to terminals) per day, which include food products, plastic totes, bread racks, milk crates, donations, and outbound parcels for UPS or FedEx.
2. All supplies are handed over to tenants at the moment of delivery and staged outside on the ramp until tenant move supplies. Crates, pallets, kegs, and other plastic containers are staged outside on the ramp until Bradford returns for pickup.
3. One refrigeration room and one cooler room in the warehouse.
4. The several trucks and vans used as a part of their operations are washed and all maintenance is done off site. (3 box trucks and 1 cargo van)
5. Once per week (usually Sunday) trash and recycling is transported from the RDC to the main compactor area on the south side ramp.
6. Trash containers are indoors and outdoors. Only two small gondolas outdoors and they have lids and are kept in a covered area.
7. All cleaning products used are "green." Building and facility is certified LEED Gold. Cleaning supplies are the "Greenworks" line of products.
8. Outdoor sweeping is done weekly, on the weekends.
9. Employees do annual training, including training on spill prevention and response, and batteries.
10. No hazardous materials are maintained or transported.
11. All materials are stored indoors.
12. Bradford does extraction and transport of grease from airport concessionaires. Extraction is done Monday's, Wednesday's and Friday's at 1am by two methods: (1) Extraction unit with the capacity of 130 gallons is rolled into a truck and is transported to the terminals. The unit is then rolled into the terminals where hoses are used to extract the grease from the tenants grease containers. The unit is then transported by truck back to the RDC, where the grease is then transferred again into a large, indoor storage tank 865 gallon capacity; (2) the tenants empty their fryers at their close of shift into lined buckets and we pick up the lined buckets and exchange them with replacements. In addition, there is a covered 225 gallon receptacle located at the front of the RDC for by-product material (grill scrapings).
13. On a monthly basis, a grease recycling company (DarPro) comes to the RDC and uses hoses to transfer

the grease from the storage tank into their trucks to transfer back to their facility. The WVO is converted into Bio diesel and sheet metal stamping oil.

14. Water is heated via solar heating system.

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant Sources

Cargo handling
Material loading/unloading
Outdoor waste storage
Tank fuel transfer
Trash collection
Vehicle parking

Potential Pollutants

Anti Freeze
Battery Acid
Cleaning Solutions
Fuel
Fuel (Diesel)
Hydraulic Fluids
Oil & Grease
Paints
Pesticides/Herbicides/Fertilizers
Recyclables
Sediment
Trash

Best Management Practices Applicable to Facility

Activities

Non-Storm Water Management
Outdoor Equipment Ops Maintenance Areas
Aircraft, Ground Vehicle & Equipment Cleaning
Outdoor Loading/Unloading of Materials
Outdoor Material Storage
Waste Handling & Disposal
Employee Training
Parking Lots
Housekeeping
Safer/Alternative Products
Spill Prevention, Control & Clean Up
Structural Treatment Control BMPs

BMPs

SC01 - 1, 2, 3, 4
SC02A - 1, 2
SC04 - 2, 6
SC06 - 1, 2, 3, 4, 5, 6, 7
SC07 - 1, 2, 3, 5, 7, 12
SC08 - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
SC10 - 1, 2, 3, 4
SC16 - 1, 2, 4, 5, 6, 11, 12
SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9
SC19 - 1, 2
SR01 - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10
TC01 - 1, 2, 3, 4

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

4 storm drains are equipped with drainage inserts and oil/grease absorbent bags. Trench storm drains near loading docks are lined with inserts to capture debris and sediment. These are cleaned out every Sunday as part of scheduled maintenance.
Roof runoff is directed into infiltration beds on the sides of the building.

Materials Storage Area

Bradford (CRDC)

Materials Storage Amounts

865 gal waste oil and grease from food vendors
No other materials recorded over 55 gal

Shipping/Receiving Area

Bradford (CRDC)

Bradford receives approximately 180,000 cubic feet of concessions and food goods monthly, to distribute to the airport terminals

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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

PROJECT NO.:	5025-13-0031
DATE:	JUNE 2015
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**Bradford
Operating Areas**
San Diego International Airport

FIGURE
E-9

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British Airways Airlines

SIC Codes 4512, 4522
 Primary Activity Passenger Carrier
 Drainage Areas 8, 12
 Nearest MS4 Inlet < 200 ft.
 Address 3707 North Harbor Dr. #117
 San Diego, CA 92101

Contact Information
 David Johnson Manager - Station
 C 6192521820
 d.johnson@gsintlinc.com

 Timothy Hosea P Manager - General
 6192780797 C 6199125308
 timothy.hosea@ba.com

Facility Description and Activities

1. British Airways operates out of gate 20 in Terminal
2. British Airways' aircraft fueling is carried out by ASIG.
3. British Airways has only one (1) vehicle and all maintenance pertaining to said vehicle is performed off airport.
4. Minor aircraft maintenance is performed at the gate. Major aircraft maintenance is performed on the north ramp. Major maintenance is performed by a BA/AA engineer, while minor maintenance is performed by a local mechanic.
5. Aircraft and vehicles are not washed on site.
6. Five waste accumulation areas - one between Gates 31 and 32, two inside auto shop, one outside of auto shop, and one in stores next to auto shop.
7. Heritage Environmental Services collects British Airways used oils monthly.
8. All freight/cargo handling is carried out by CAS and ATS. CAS occasionally receives deliveries (i.e. cabin supplies) for British Airways.
9. Tenant has used the Airport Storm Water Management Plan, and has an Emergency Contingency Plan, and a Spill Prevention, Control, and Countermeasure Plan.
10. Flying Foods is a vendor for BA.
11. GSI manages employees and equipment for BA.
12. GAT performs lavatory services.
13. No equipment cleaning is performed currently. BA may contract power wash cleaning services for a quarterly wash and/or steam clean. Company berms the area and vacuums the water.

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant Sources

Aircraft sanitary services
 Equipment storage

Potential Pollutants

Anti Freeze
 Cleaning Solutions

Fluid leaks
 Fuel spills, Fuel transfer
 Outdoor waste storage
 Potable water flushing
 Trash collection

Tenant Summaries

Fuel
 Hydraulic Fluids
 Lavatory Chemicals
 Lavatory Truck Wash Water
 Lavatory Wastes
 Lubricants
 Oil & Grease
 Recyclables
 Trash

Best Management Practices Applicable to Facility

Activities

Non-Storm Water Management
 Outdoor Equipment Ops Maintenance Areas
 Aircraft, Ground Vehicle & Equipment Maintenance
 Aircraft, Ground Vehicle & Equipment Fueling
 Waste Handling & Disposal
 Employee Training
 Lavatory Service Operation
 Potable Water System Flushing
 Housekeeping
 Safer/Alternative Products
 Spill Prevention, Control & Clean Up

BMPs

SC01 - 1, 2, 4
 SC02A - 1, 2
 SC02B - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
 SC03 - 1, 2, 4, 5, 6, 8
 SC08 - 1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 14
 SC10 - 1, 2, 3, 4
 SC11 - 3, 4, 5, 6, 7, 8, 9, 10
 SC14 - 1, 2, 3
 SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9
 SC19 - 1, 2
 SR01 - 1, 2, 3, 4, 5, 6, 7, 8, 9

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

Materials Storage Area

No major material storage areas

Materials Storage Amounts

No materials over 55 gallons stored for daily operations

Shipping/Receiving Area

CAS (at Landmark) receives occasional shipments for BA



PROJECT NO.:
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JUNE 2015

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RMH

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**British Airways
Operating Areas**

San Diego International Airport

FIGURE
E-10

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Delta Airlines

<p>SIC Codes 4512, 4522</p> <p>Primary Activity Passenger Carrier</p> <p>Drainage Areas 7, 8, 12, 15</p> <p>Nearest MS4 Inlet < 200 ft.</p> <p>Address 3835 North Harbor Dr. #107 San Diego, CA 92101</p>	<p>Contact Information</p> <p>Jeff Rasor Manager - Station</p> <p>P 6194912885</p> <p><u>jeff.rasor@delta.com</u></p> <hr/> <p>Bassel Sakkab Supervisor</p> <p>P 6194912885</p> <p>bassel.h.sakkab@delta.com</p>
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Facility Description and Activities

1. GAT handles cargo for Delta.
2. DAL Global Services (DGS) is Delta's subtenant for GSE maintenance. DGS operates the GSE maintenance shop located at the cargo loading/unloading building. DGS performs vehicle and GSE maintenance for Delta and several other airlines. Maintenance is primarily performed inside the GSE maintenance shop, however, some is performed outdoors. In addition to maintenance, DGS provides ground handling and baggage services.
3. Ground support equipment, cargo containers, dollies, and other items are stored behind the cargo building and the DGS maintenance shop and west ramp.
4. Delta's own technicians perform aircraft maintenance at the gates. Pacific Aircraft Maintenance has a contract with Delta as backup to Delta's technicians.
5. Vehicles and GSE are washed at ASIG's wash rack.
6. Spill kits are located at every gate with a larger cart between Gate 49 and 50.
7. Delta/DGS each performs regular inspections of vehicles/GSE and aircraft during fueling operations.
8. All fueling is performed by ASIG.
9. Flushing of potable water lines is not performed.
10. Hazardous wastes are collected by Nexeo Solutions LLC (formerly Ashland), who does liquid waste recycling.
11. Tenant has a Corporate Storm Water Pollution Prevention Plan, a Hazardous Waste Emergency Plan, a Hazardous Waste Management Plan, and a FOD Plan.
12. Delta conducts aircraft maintenance at gates if needed.
13. Occasionally will use Gate 41 as a spill over gate. Gate 42 and 47-51 are preferred gates.
14. Delta handles all of Sun Country's operations in San Diego.

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant Sources

Potential Pollutants

Aircraft sanitary services
 Cargo handling
 Equipment storage
 Fluid leaks
 Fuel spills,Fuel transfer
 Material loading/unloading
 Outdoor waste storage
 Tank fuel transfer
 Trash collection

Tenant Summaries

Acetone
 Anti Freeze
 Battery Acid
 Brake Fluid
 Carburetor Cleaner
 Cleaning Solutions
 Coolant
 Degreasers
 Fuel
 Fuel (Diesel)
 Hydraulic Fluids
 Lavatory Chemical Wastes
 Lavatory Chemicals
 Lavatory Wastes
 Lubricants
 Metals
 Oil & Grease
 Paints
 Rust Preventer
 Solvents
 Trash

Best Management Practices Applicable to Facility

Activities

Non-Storm Water Management
 Outdoor Equipment Ops Maintenance Areas
 Aircraft, Ground Vehicle & Equipment
 Maintenance
 Aircraft, Ground Vehicle & Equipment Fueling
 Aircraft, Ground Vehicle & Equipment Cleaning
 Outdoor Loading/Unloading of Materials
 Outdoor Material Storage
 Waste Handling & Disposal
 Employee Training

BMPs

SC01 - 1, 2, 4
 SC02A - 1, 2
 SC02B - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
 SC03 - 1, 2, 4, 5, 6, 8, 9, 10
 SC04 - 1, 2, 3, 5, 6, 7
 SC06 - 1, 2, 3, 4, 6, 7
 SC07 - 1, 2, 3, 7, 11, 12
 SC08 - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14
 SC10 - 1, 2, 3, 4
 SC11 - 3, 4, 5, 6, 7, 8, 9, 10

Lavatory Service Operation	SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9
Housekeeping	SC19 - 1, 2
Safer/Alternative Products	SR01 - 1, 2, 3, 4, 5, 6, 7, 8, 9
Spill Prevention, Control & Clean Up	

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

Concrete curbing is used to direct stormwater away from covered storage area.

Materials Storage Area

Delta maintenance/cargo shop

Materials Storage Amounts

100 gallons Mobil jet oil II

100 gallons Mobil Jet 254

Refillable propane tanks stored at maintenance/cargo shop may be over 55 gal

1400 cu feet nitrogen gas

337 cu feet oxygen gas

55 gallons used lubricating oils

No other materials recorded above 55 gal

Shipping/Receiving Area

Delta maintenance/cargo shop

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PROJECT NO.:
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DRAWN BY: RMH
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Delta
Operating Areas
San Diego International Airport

FIGURE
E-11

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DHL

SIC Codes 4513
 Primary Activity Air & Ground Freight
 Drainage Areas 3, 5, 6
 Nearest MS4 Inlet
 Address 225 Washington St.
 San Diego, CA 92101

Contact Information
 Renee Hoffman Manager - Station
 P 6193586270 C 7143912664
 renee.hoffman@dhl.com

 Heather McLeroy Supervisor
 P 6193586250 C 6197938797
 heather.mcleroy@dhl.com

Facility Description and Activities

1. DHL has one cargo plane (767 plane) that comes in in the AM.
2. DHL trucks come on site (through the WA St. entrance) to pick up cargo and take it back to off site facility for sorting.
3. IAS (vendor to DHL) unloads the plane and does all ground handling.
4. GDX also has a truck that comes on site to pick up cargo. Other vendors who drop off containers are Belt Transportation, CEVA, and Fast Trucking.
5. Some cargo is transferred to a small DHL van which is parked on the ramp.
6. In the PM the plane is loaded with material from incoming trucks.
7. ABX (vendor) does maintenance on the DHL plane on the ramp.
8. DHL GSE is maintained by Able with AMES.
9. No washing of any equipment is performed on the ramp.
10. Landmark fuel the DHL plane and GSE.
11. Bathroom on the DHL plane is serviced by Diamond Environmental.
12. There is one DHL office trailer on site.
13. There are two self contained Diamond port-o-potties on site for DHL employees.
14. There are 2 conex containers on the ramp where maintenance supplies and equipment are stored. Spill kit is also stored here.
15. Hazardous wastes are stored in clamshells outside.
16. All GSE and equipment are parked on the ramp by the trailers.
17. DHL employees do safety training which includes spill response procedures.

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant Sources

Cargo handling

Potential Pollutants

Degreasers (Citrus based)

Drainage system maintenance
 Fluid leaks
 Fuel spills, Fuel transfer
 Material loading/unloading
 Outdoor waste storage
 Tank fuel transfer
 Trash collection

Tenant Summaries
 Hydraulic Fluids
 Oil & Grease
 Paints

Best Management Practices Applicable to Facility

Activities

Non-Storm Water Management
 Outdoor Equipment Ops Maintenance Areas
 Aircraft, Ground Vehicle & Equipment Maintenance
 Aircraft, Ground Vehicle & Equipment Fueling
 Aircraft, Ground Vehicle & Equipment Cleaning
 Outdoor Loading/Unloading of Materials
 Outdoor Material Storage
 Waste Handling & Disposal
 Employee Training
 Drainage System Maintenance
 Housekeeping
 Safer/Alternative Products
 Spill Prevention, Control & Clean Up

BMPs

SC01 - 1, 2, 4
 SC02A - 1, 2
 SC02B - 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13
 SC03 - 1, 2, 4, 5, 6, 8
 SC04 - 1, 2
 SC06 - 1, 2, 3, 4, 6, 7
 SC07 - 1, 2, 3, 4, 5, 7, 12
 SC08 - 1, 2, 3, 4, 5, 8, 9, 10, 11, 12, 14
 SC10 - 1, 2, 3, 4
 SC17 - 2, 4, 6
 SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9
 SC19 - 1, 2
 SR01 - 1, 2, 3, 4, 5, 6, 7, 8, 9

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

Berms are used to protect the storm drain located beneath the aircraft parking area.

Materials Storage Area

DHL trailer; conex units at North Ramp

Materials Storage Amounts

Waste oil and absorbent stored in 55 gallon drums in conex units; no other materials recorded over 55 gallons

Shipping/Receiving Area

DHL trailer

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PROJECT NO.:
 5025-13-0031
DATE:
 JUNE 2015
DRAWN BY:
 RMH
CHECKED BY:
 AJA



DHL
Operating Areas
San Diego International Airport

FIGURE
E-12

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Elite Line Services

<p>SIC Codes 4581</p> <p>Primary Activity Maintenance (Boarding Bridges & Conveyors)</p> <p>Drainage Areas 6, 12</p> <p>Nearest MS4 Inlet 200 - 1000 ft.</p> <p>Address 3707 North Harbor Dr. #121 San Diego, CA 92101</p>	<p>Contact Information</p> <p>Claudia Cox Manager - Site</p> <p>P 6192985215 C 6195491180</p> <p>ccox@elitelineservices.com</p> <hr/> <p>Marla Matlock Assistant Manager</p> <p>P 6192985215</p> <p>mmatlock@elitelineservices.com</p>
--	--

Facility Description and Activities

** The contract to maintain air bridges and baggage conveyors for the whole airport will go out to bid in January, 2015.

1. ELS services all passenger bridges and baggage conveyors except T2W outbound and inbound 7 and 8. These areas are maintained by Siemens. ticket counters as well as the bag room.
2. ELS also maintains all potable water cabinets. 2. Vehicle maintenance is conducted offsite. ELS has an electric utility cart, several trucks and a van.
3. Vehicles are fueled offsite. Generator uses propane.
4. Wastes are taken to the airport dumpster. Hazardous wastes and waste oils are picked up twice a year by Ocean Blue.
5. No vehicle or equipment washing is performed.
6. ELS does not wash passenger bridges. Flagship will sometime be contracted to power wash the passenger bridges, and ELS monitors to ensure they use berms and vacuum the waste water.
7. The ELS office, parts, and equipment storage is under cover between Gate 26 and Gate 27. Two trailers, tires and other supplies are stored on the North Ramp near the Control Tower and the SDCRAA Bone Yard.

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant Sources

Equipment storage
Fluid leaks
Outdoor waste storage
Potable water flushing
Tank fuel transfer
Trash collection

Potential Pollutants

Adhesives
Brake Fluid
Caulking
Cleaning Solutions
Degreasers
Fuel
Fuel (Gas)
Hydraulic Fluids

Lubricants
 Metals
 Oil & Grease
 Paints
 Solvents
 Transmission Fluid
 Trash

Best Management Practices Applicable to Facility

Activities

Non-Storm Water Management
 Outdoor Equipment Ops Maintenance Areas
 Aircraft, Ground Vehicle & Equipment
 Maintenance
 Aircraft, Ground Vehicle & Equipment Cleaning
 Outdoor Material Storage
 Waste Handling & Disposal
 Employee Training
 Potable Water System Flushing
 Housekeeping
 Safer/Alternative Products
 Spill Prevention, Control & Clean Up

BMPs

SC01 - 1, 2, 4
 SC02A - 1, 2
 SC02B - 1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13
 SC04 - 1, 2
 SC07 - 1, 2, 3, 7, 11, 12
 SC08 - 1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 14
 SC10 - 1, 2, 3, 4
 SC14 - 1, 2, 3
 SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9
 SC19 - 1, 2
 SR01 - 1, 2, 3, 4, 5, 6, 7, 8, 9

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

Concrete curbing is used to direct stormwater away from covered storage area

Materials Storage Area

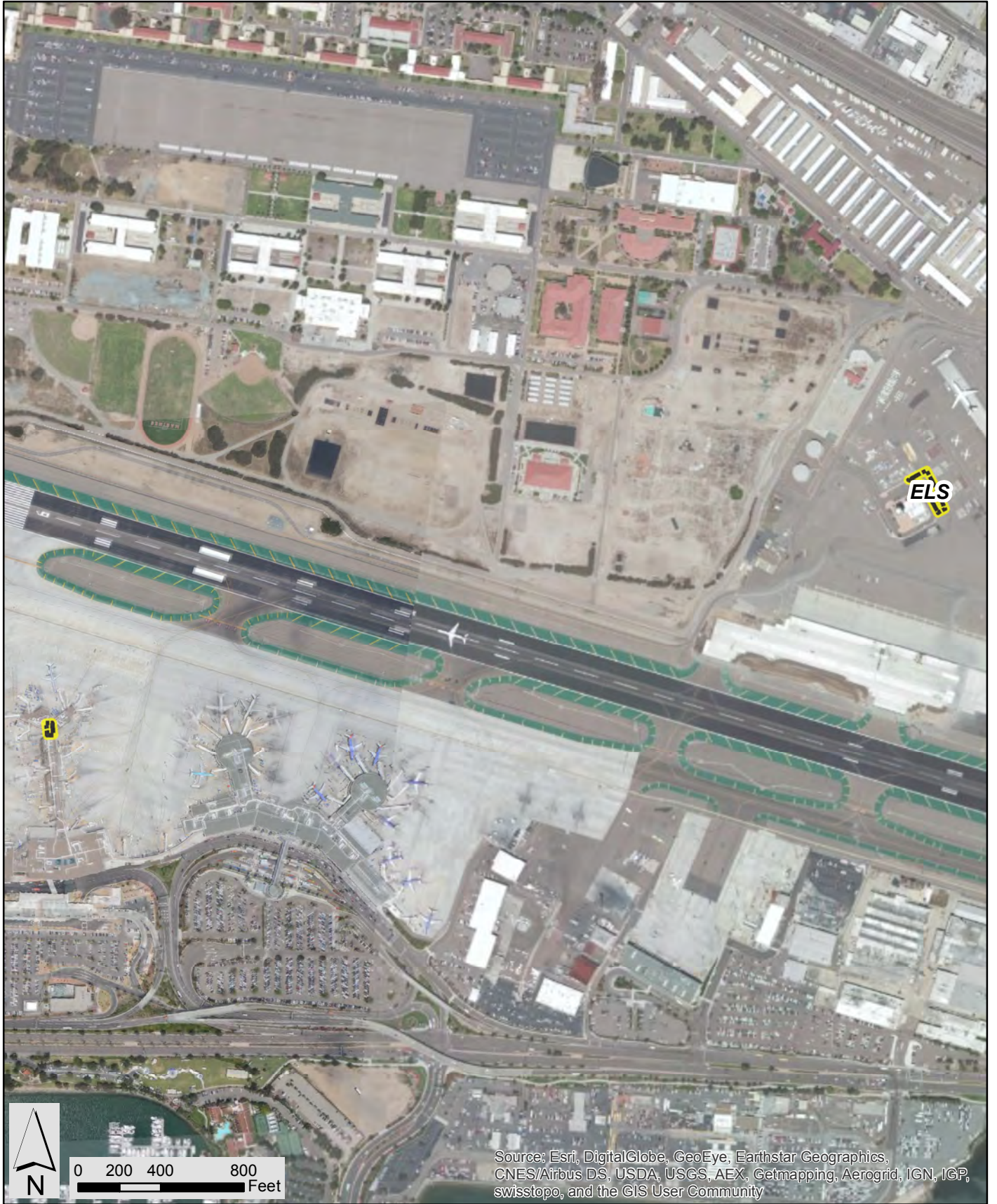
Under cover between gates 26 and 27; some material stored in North Ramp near Bone Yard

Materials Storage Amounts

Hazardous waste and waste oil stored at gate 26/27; amount not recorded

Shipping/Receiving Area

DHL trailer



PROJECT NO.:	5025-13-0031
DATE:	JUNE 2015
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amec foster wheeler 

ELS
Operating Areas
San Diego International Airport

FIGURE
E-13

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Envoy

SIC Codes 4512, 4522
 Primary Activity Passenger Carrier
 Drainage Areas 6
 Nearest MS4 Inlet < 200 ft.
 Address 3225 North Harbor Dr. #109
 San Diego, CA 92101

Contact Information
 Sheryl Tuailena Supervisor
 P 6192317203
 sheryl.tuailena@aa.com

 Hellen Tran Compliance Coordinator
 P 6192317205
 hellen.tran@aa.com

Facility Description and Activities

*Sky West does not hold lease space at the San Diego airport; however, their aircrafts still land at the San Diego Airport. Envoy currently holds the ground handling contract, and any storm water concerns associated with Sky West's ground operations should be assigned to Envoy. **Effective July, 2015, Envoy will be relocated to American's gates in Terminal 2.

1. American Eagle is now know as Envoy and is owned wholly by American Airlines. Envoy will provide commuter/express flights for multiple airlines. Planes will remain branded as the company that they belong to.
2. GAT performs vehicle and equipment maintenance at the GAT shop. Painting is conducted offsite.
3. ASIG is contracted to perform all fueling activities.
4. Minor aircraft maintenance is performed by Pacific Aircraft Maintenance on the ramp. Major maintenance is done in LA.
5. Aircraft or vehicles are washed offsite the airport.
6. American Airlines stores and arranges disposal of American Eagle's waste oils.
7. Honeybee cleaner is stored on spill pallet inside baggage loading area. No other significant materials are stored onsite.
8. American Eagle owns two lavatory carts. Lavatory activities are performed on request only by the tenant and the lavatory waste is disposed of at the triturator facility.
9. ELS is contracted to perform belt maintenance.
10. The tenant utilizes American Airlines Environmental Business Plan.
11. The tenant uses parking places 2, 4 and 6 on the Commuter Terminal.
12. Most of tenant's GSE is electric.
13. Sky West flies airplanes into the airport, but does not have any property at the airport.

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant Sources

Potential Pollutants

Aircraft sanitary services
 Equipment storage
 Fluid leaks
 Fuel spills, Fuel transfer
 Outdoor waste storage
 Trash collection

Tenant Summaries
 Anti Freeze
 Battery Acid
 Cleaning Solutions
 Fuel
 Lavatory Chemicals
 Lavatory Wastes
 Lubricants
 Oil & Grease
 Sediment
 Trash

Best Management Practices Applicable to Facility

Activities

Non-Storm Water Management
 Outdoor Equipment Ops Maintenance Areas
 Aircraft, Ground Vehicle & Equipment Maintenance
 Aircraft, Ground Vehicle & Equipment Fueling
 Aircraft, Ground Vehicle & Equipment Cleaning
 Outdoor Material Storage
 Waste Handling & Disposal
 Employee Training
 Lavatory Service Operation
 Housekeeping
 Safer/Alternative Products
 Spill Prevention, Control & Clean Up

BMPs

SC01 - 1, 2, 4
 SC02A - 1, 2
 SC02B - 1, 2, 3, 4, 5, 6, 10, 11, 12, 13
 SC03 - 1, 2, 4, 5, 6, 8, 9
 SC04 - 1, 2
 SC07 - 11, 12
 SC08 - 1, 2, 3, 4, 5, 8, 9, 10, 11, 12
 SC10 - 1, 2, 3, 4
 SC11 - 3, 4, 5, 6, 7, 8, 9, 10
 SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9
 SC19 - 1, 2
 SR01 - 1, 2, 3, 4, 5, 6, 7, 8, 9

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

Materials Storage Area

American Airlines maintenance shop

Materials Storage Amounts

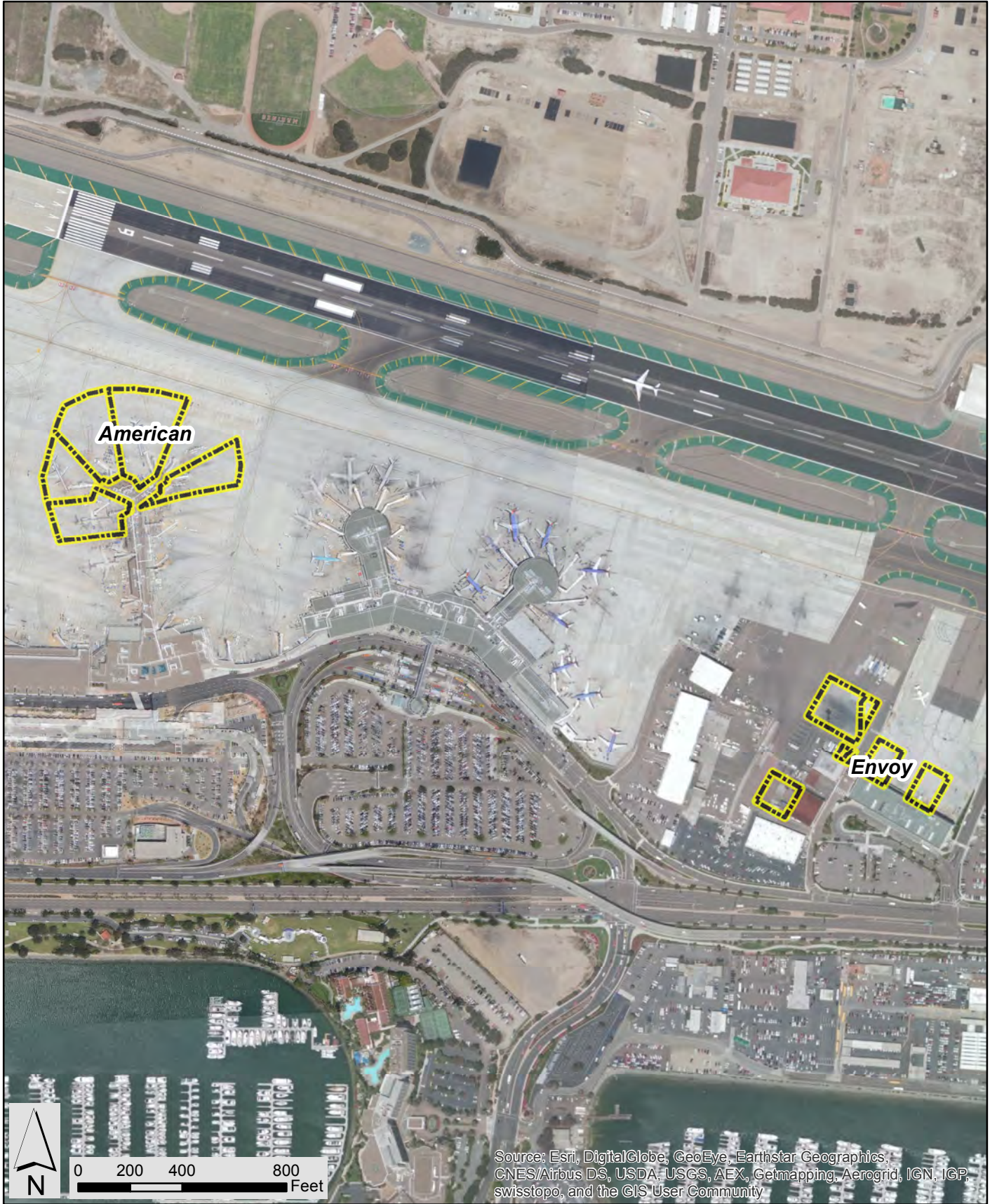
Waste oils stored at American Airlines maintenance shop may be over 55 gallon

Honeybee cleaner stored on spill pallet inside commuter terminal baggage loading area (as of Fall 2014; Spring 2015 commuter terminal has closed)

Shipping/Receiving Area

American Airlines maintenance shop

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PROJECT NO.:
5025-13-0031

DATE:
JUNE 2015

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RMH

CHECKED BY:
AJA



**American/Envoy
Operating Areas**

San Diego International Airport

FIGURE
E-8

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FedEx

SIC Codes 4513
 Primary Activity Cargo Handling
 Drainage Areas 5, 6
 Nearest MS4 Inlet < 200 ft.
 Address 2221 West Washington St.
 San Diego, CA 92110

Contact Information
 Connie Robertson Supervisor
 P 6196889203
 csrobertson@fedex.com

 Robert Garcia Supervisor
 P 6196889203
 rtgarcia@fedex.com

Facility Description and Activities

1. Aircraft loading/unloading occurs at four gates on the North Ramp area.
2. ASIG fuels aircraft, vehicles and equipment.
3. Two dumpsters utilized by FedEx's office are managed by EDCO and located outside of the parking lot.
4. Three above ground storage tanks are outside FedEx's office, two contain drinking water and one contains waste water. Palomar Water delivers potable water and Diamond Environmental Services collects the waste water regularly.
5. A spill kit is located inside a container south of the office, containing absorbent litter, mats, and sox.
6. Minor vehicle maintenance is conducted outdoors in designated vehicle maintenance area. Maintenance area is covered and has a spill protection area.
7. Hazardous waste and waste oil are stored in covered storage containers, on pallets, and inside sheds southeast of FedEx's offices. Quest is contracted to pick up hazardous wastes.
8. Significant materials are stored in covered storage containers on pallets inside the sheds southeast of FedEx's office.
9. Safety Kleen is contracted to clean up any hazardous material spills that may occur.
10. Vehicles are parked in front of and northwest of FedEx's offices.
11. Cargo loading and unloading equipment is staged in designated areas throughout the ramp.
12. GAT performs lavatory and potable water services as needed. This rarely occurs.
13. Fleetwash washes some of the equipment on site. They utilize a system that captures the wash water and dispose of it offsite. The equipment does not utilize cleaning agents, only highly pressurized water for cleaning.
14. Interstate recycles all used batteries.

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant SourcesPotential Pollutants

Cargo handling
 Equipment storage
 Fluid leaks
 Fuel spills,Fuel transfer
 Material loading/unloading
 Outdoor waste storage
 Potable water flushing
 Tank fuel transfer
 Trash collection
 Vehicle parking

Tenant Summaries

Anti Freeze
 Battery Acid
 Brake Fluid
 Carburetor Cleaner
 Cleaning Solutions
 Coolant
 Degreasers
 Degreasers (Citrus based)
 Fuel
 Fuel (Diesel)
 Hydraulic Fluids
 Lubricants
 Metals
 Oil & Grease
 Paints
 Recyclables
 Solvents
 Transmission Fluid
 Trash

Best Management Practices Applicable to Facility

Activities

Non-Storm Water Management
 Outdoor Equipment Ops Maintenance Areas
 Aircraft, Ground Vehicle & Equipment Maintenance
 Aircraft, Ground Vehicle & Equipment Fueling
 Aircraft, Ground Vehicle & Equipment Cleaning
 Outdoor Loading/Unloading of Materials
 Outdoor Material Storage
 Waste Handling & Disposal
 Employee Training
 Potable Water System Flushing
 Parking Lots

BMPs

SC01 - 1, 2, 4
 SC02A - 1, 2
 SC02B - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
 SC03 - 1, 2, 4, 5, 6, 8
 SC04 - 1, 2, 3, 4, 5, 6, 7
 SC06 - 1, 2, 3, 4, 6, 7
 SC07 - 1, 2, 3, 6, 7, 8, 11, 12
 SC08 - 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 14
 SC10 - 1, 2, 3, 4
 SC14 - 1
 SC16 - 1, 2, 3, 4, 5, 6, 11, 12
 SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9

Housekeeping	SC19 - 1, 2
Safer/Alternative Products	SR01 - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10
Spill Prevention, Control & Clean Up	

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

Covered sheds over equipment and material storage areas.

Fleetwash (subcontractor) uses a full capture system to wash vehicles and equipment. Wash water is disposed offsite.

Materials Storage Area

Sheds southeast of FedEx office on north ramp

Covered storage containers on pallets inside the sheds southeast of FedEx's office

Materials Storage Amounts

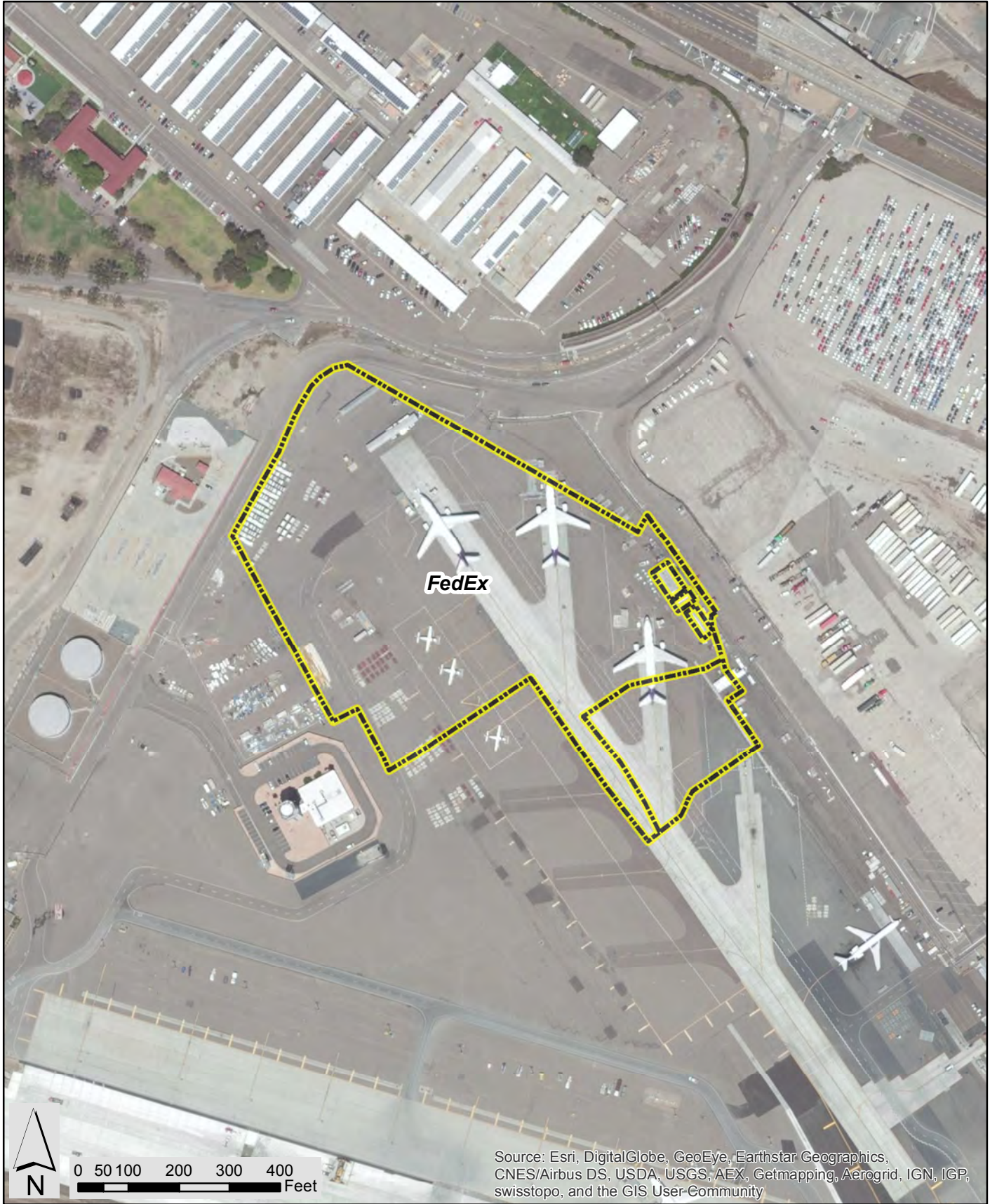
Hazardous waste and waste oils stored in sheds on north ramp southeast of FedEx office may be over 55 gallon

No other materials recorded over 55 gallons

Shipping/Receiving Area

FedEx office

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PROJECT NO.:
 5025-13-0031
 DATE: JUNE 2015
 DRAWN BY: RMH
 CHECKED BY: AJA



FedEx
Operating Areas
San Diego International Airport

FIGURE
E-14

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FlagShip

SIC Codes 4581
 Primary Activity Janitorial
 Drainage Areas 7, 8, 9, 10, 11, 12, 15
 Nearest MS4 Inlet < 200 ft.
 Address 3835 North Harbor Dr. #130
 San Diego, CA 92101

Contact Information
 Gustavo Solis Manager - Account
 P 6192986793 C 9493900190
 gsolis@Flagshipinc.com

 Ramon Gaxiola Unknown
 P 6192986793
 rgaxiola@flagshipinc.com

Facility Description and Activities

1. FlagShip (formerly SPC) is responsible for cleaning the restrooms inside the airport and those on the airside. They empty all trash cans and recycling cans inside and outside the airport, but not the dumpsters. All trash is disposed in dumpsters located in T1 (Compactor/Segregation Area) and T2 (Gate 23, Gate 48, and Gate 25). Flagship does not use dumpster in T2 parking lot near USO.
2. FlagShip cleans the floors and carpets inside the airport, except for those in gift shops or food courts, and they sweep sidewalks up to the curb on the landside and the airside using an industrial dry vacuum cleaner. They do not clean the baggage make up areas. They are also responsible for sweeping 10 ft from the building along on the land and airside.
3. Pressure Washing (information from Airport's Public Relations Specialist, updated 5/27/15): Flagship performs pressure washing Tuesdays through Saturdays between 11:00 pm and 4:00 am, and is scheduled every 30 to 45 days. Locations that receive pressure washing include terminal smoking areas and all baggage claim sidewalks. FlagShip also power-washes the trash compactor area near the Commuter Terminal, the dumpster area between Terminal 2 East and West, the HMS Host grease container area near Gate 27, and the dumpster area at Terminal 1, and the grease container. Carpet cleaning wastewater is also disposed of at the dewatering bin at the trash compactor area. The Airport Authority works with Flagship to use AC condensation water for the pressure washing operation. The AC condensation water is collected into 55 gallon drums, and once full the water is transferred to the pressure washer reservoirs. In 2014, more than 5,225 gallons of AC condensate was recovered and reused for a variety of purposes in airport maintenance, including pressure washing. FlagShip owns two pressure washers. This equipment is used to power-wash the sidewalks on the landside and the airside. The power washers are stored at Gate 17 and covered with a tarp. One washer is used 4 nights every week and the other is used 3 nights every week. During power washing, water is heated to 200 degrees, which probably cools to 140-150 degrees by the time it reaches the surfaces, and at a pressure of 3,000 psi. The pressure washers used by Flagship are equipped with a water recollection and filtration system. They are designed to collect all residual water, filter, recycle and re-use the water throughout the operation of the equipment. An estimated 80-100 gallons of recovered AC condensate water is used per day washing occurs. The reclaimed AC condensate is not potable water and therefore not a violation of state and city water restrictions. Before starting the pressure washing operation, Flagship staff locates all storm water run offs and covers the areas with berms or mats. They then remove and sweep all trash, debris and cigarette butts. Next, staff will determine the path that the water will run and will funnel the water using berms and bags into the vacuum/reclaim system. Once the job is complete, the wash water is vacuumed up, hoses are drained into the sanitary sewage system and equipment is cleaned. The wash

water is vacuumed up by a separate vacuum machine. Water booms are used during this operation to avoid discharges to the storm drains. Wash water is dumped to the dewatering bin at the trash compactor area. 5. Republic (a vendor to SDCRAA) is the company that collects the dumpster from the airport, which also performs a power washing on a schedule that does not coincide with Flagship's. 6. FlagShip also transports and unloads trash/recycling from trash cart system located between Terminal 1 and Terminal 2. 7. Diesel is used to heat water on the power washers; gasoline is used in the engine of the power washers. 8. FlagShip contracts SoCal to clean windows at T2W every 3 to 6 months using FlagShip equipment. All wash waters are collected and disposed of offsite by SoCal. SoCal will be removed and replaced by a separate vendor/FlagShip Staff. 9. Flagship uses battery operated pieces of equipment (vacuum, carpet cleaners, hard floor surface cleaners). 10. A truck mounted carpet extractor is used to clean carpets in terminals and is stored at Gate 17. All water is disposed of in T1 sump (via trash compactors). 11. All outdoor storage is at Gate 17 and some indoor storage is at this location as well. 12. Flagship is the only authorized user of the trash compactor located at the loading dock between gates 23 and 33. It is exclusively for janitorial and concession waste that comes from the terminals. Flagship Airport Services is the only authorized user of the compactor. Air carriers and other tenants that use Airport waste and recycling disposal units must use the main disposal facility located between the Commuter Terminal and Terminal 1. 13. Flagship has an oncall contract to pressure wash and scrub along the ramp and apron. 1

4. Flagship just recently acquired a new pressure washing truck, which is equipped with a vacuum water reclaiming system, and a series of two drums for solids and grease removal, and 4 filters for filtering water for direct reuse. The pressure washing truck is currently staged in the cargo area, but will be moved to Gate 17 once fully operational. Filters are changed once per month and returned to the manufacturer for recycle.

Significant Materials/Activities Potentially Exposed to Storm Water

<u>Potential Pollutant Sources</u>	<u>Potential Pollutants</u>
Equipment storage	Cleaning Solutions
Fluid leaks	Floatables
Fuel spills,Fuel transfer	Food Waste
Outdoor apron washdown	Fuel
Outdoor washdown	Fuel (Diesel)
Outdoor waste storage	Medical Waste
Ramp/Taxiway scrubbing	Oil & Grease
Tank fuel transfer	Recyclables
Trash collection	Trash

Best Management Practices Applicable to Facility

<u>Activities</u>	<u>BMPs</u>
Non-Storm Water Management	SC01 - 1, 2, 4
Outdoor Equipment Ops Maintenance Areas	SC02A - 1, 2

	Tenant Summaries
Aircraft, Ground Vehicle & Equipment Maintenance	SC02B - 1, 2, 3, 4, 5, 6, 10, 11, 12, 13
Aircraft, Ground Vehicle & Equipment Fueling	SC03 - 1, 2, 4, 5, 6, 7, 8, 9, 10
Aircraft, Ground Vehicle & Equipment Cleaning	SC04 - 1, 2, 3, 4, 5, 6, 7, 8
Outdoor Material Storage	SC07 - 1, 2, 3, 7, 12
Waste Handling & Disposal	SC08 - 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13
Building & Ground Maintenance	SC09 - 4
Employee Training	SC10 - 1, 2, 3, 4
Outdoor Wash down/Sweeping	SC12 - 1, 3, 5, 6, 7, 8, 9
Housekeeping	SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9
Safer/Alternative Products	SC19 - 1, 2
Spill Prevention, Control & Clean Up	SR01 - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

Air conditioning condensate is recaptured with reclamation drums and reused for power washing.

Materials Storage Area

Outdoor storage in rain proof storage sheds at Gate 17

Materials Storage Amounts

No materials recorded over 55 gallons

Shipping/Receiving Area

Bradford; receives approximately 3,500 cubic feet of goods for Flagship monthly

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PROJECT NO.:
5025-13-0031
DATE: JUNE 2015
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**Flagship
Operating Areas**
San Diego International Airport

FIGURE
E-15

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Frontier Airlines

SIC Codes 4512, 4522
 Primary Activity Passenger Carrier
 Drainage Areas 8
 Nearest MS4 Inlet 200 - 1000 ft.
 Address 3707 North Harbor Dr. #105
 San Diego, CA 92101

Contact Information
 Fred Jones Manager
 P 619 C 6195428318
 fjones@worldwideflight.com

 Ken Pierce Manager - Regional
 P 4246258230
 kpierce@flyfrontier.com

Facility Description and Activities

1. GAT performs GSE maintenance at the gate or GAT shop.
2. GAT no longer performs cargo operations.
3. Pacific Aircraft Maintenance conduct minor aircraft maintenance while parked on ramp.
4. One flammables cabinet is located in the bag room. All other outdoor materials are not stored on the airport premises.
5. GSE equipment is a combination of gas and propane.
6. Drip pans are used on an as-needed basis.
7. Sweeping is done on an as-needed basis.
8. Statewide Stripes performs all ramp painting.
9. All oils and fluids used for maintenance are stored at GAT or PAM shops.
10. WFS is a vendor for Frontier for above and below wing services in SAN. As part of this agreement, all ground equipment is now WFS-owned and operated. Ken Pierce is the Frontier manager assigned to SAN, however, operationally, the WFS manager is Fred Jones.

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant Sources

Aircraft sanitary services
 Cargo handling
 Equipment storage
 Fluid leaks
 Fuel spills, Fuel transfer
 Material loading/unloading
 Outdoor waste storage
 Potable water flushing

Potential Pollutants

Anti Freeze
 Battery Acid
 Cleaning Solutions
 Degreasers (Citrus based)
 Fuel
 Fuel (Jet) Hydraulic
 Fluids Lavatory
 Chemicals

Trash collection

Tenant Summaries

Lavatory Wastes

Lubricants

Oil & Grease

Paints

Recyclables

Solvents

Trash

Best Management Practices Applicable to Facility

Activities

Non-Storm Water Management
 Outdoor Equipment Ops Maintenance Areas
 Aircraft, Ground Vehicle & Equipment Maintenance
 Aircraft, Ground Vehicle & Equipment Fueling
 Outdoor Loading/Unloading of Materials
 Waste Handling & Disposal
 Employee Training Lavatory
 Service Operation Potable
 Water System Flushing
 Housekeeping
 Safer/Alternative Products
 Spill Prevention, Control & Clean Up

BMPs

SC01 - 1, 2, 4
 SC02A - 1, 2
 SC02B - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13
 SC03 - 1, 2, 4, 5, 6, 8
 SC06 - 1, 2, 3, 4, 6, 7
 SC08 - 1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12
 SC10 - 1, 2, 3, 4
 SC11 - 3, 4, 5, 6, 7, 8, 9, 10
 SC14 - 1, 2, 3
 SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9
 SC19 - 1, 2
 SR01 - 1, 2, 3, 4, 5, 6, 7, 8, 9

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

Materials Storage Area

Storage in lockers at Gate 12

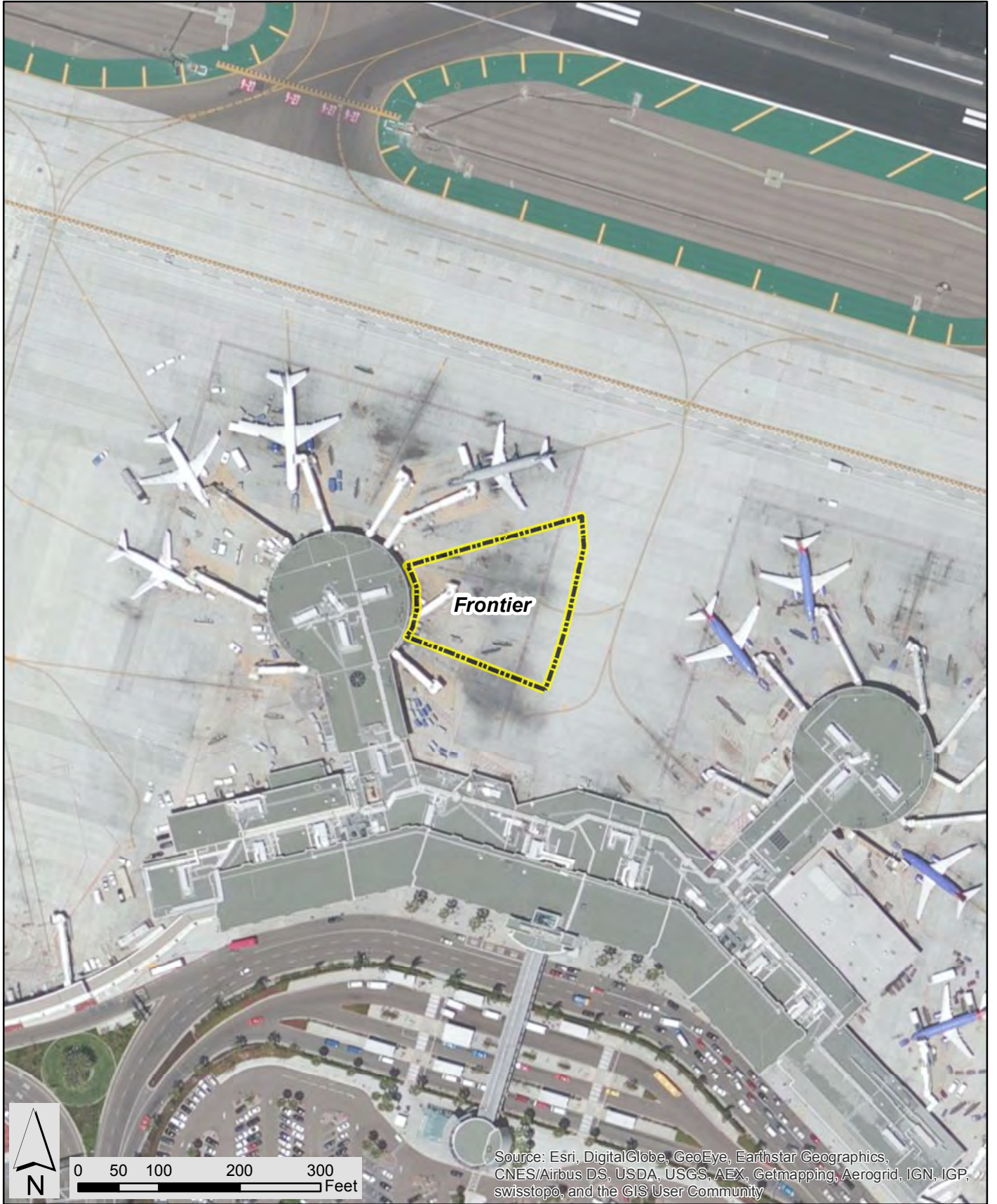
Materials Storage Amounts

25-30 55 gallon propane tanks filled offsite, stored in cages by ramp at Gate 12

No other materials recorded over 55 gallons

Shipping/Receiving Area

Not recorded



PROJECT NO.:
5025-13-0031

DATE:
JUNE 2015

DRAWN BY:
RMH

CHECKED BY:
AJA



Frontier
Operating Areas
San Diego International Airport

FIGURE
E-16

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Hawaiian Airlines

SIC Codes	4512, 4522	Contact Information	
Primary Activity	Passenger Carrier	Lila Da Luz	Manager
Drainage Areas	15	P 6192780973	C 7605800553
Nearest MS4 Inlet	200 - 1000 ft.	lila.daluz@hawaiianair.com	
Address	3707 North Harbor Dr. T2 San Diego, CA 92101	Randal Medeiros	Supervisor - Ops C 7023038999
		randal.medeiros@hawaiianair.com	

Facility Description and Activities

1. Aviation Port Services (APS) is a service provider who owns all ground support equipment, loads and unloads cargo, and performs lavatory services.
2. GSE performs maintenance on vehicles and equipment and GAT handles cargo. Hawaiian has one mechanic as well as one Delta mechanic who assists with maintenance activities when Hawaiian's mechanic is away.
3. ASIG fuels aircraft and vehicles.
4. Aircraft are washed offsite in Honolulu. Pristine Fleet may provide aircraft exterior cleaning if necessary in San Diego.
5. No outdoor material or waste storage areas.
6. One flight per day.
7. ELS performs baggage belt maintenance and gate services.

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant Sources

Aircraft sanitary services
 Cargo handling
 Equipment storage
 Fluid leaks
 Fuel spills, Fuel transfer
 Material loading/unloading
 Outdoor waste storage
 Potable water flushing
 Trash collection

Potential Pollutants

Anti Freeze
 Cleaning Solutions
 Fuel
 Hydraulic Fluids
 Lavatory Chemicals
 Lavatory Wastes
 Lubricants
 Oil & Grease
 Recyclables
 Trash

Best Management Practices Applicable to Facility

Activities

Non-Storm Water Management
 Outdoor Equipment Ops Maintenance Areas
 Aircraft, Ground Vehicle & Equipment Maintenance
 Aircraft, Ground Vehicle & Equipment Fueling
 Aircraft, Ground Vehicle & Equipment Cleaning
 Outdoor Loading/Unloading of Materials
 Waste Handling & Disposal
 Employee Training
 Lavatory Service Operation
 Potable Water System Flushing
 Housekeeping
 Safer/Alternative Products
 Spill Prevention, Control & Clean Up

BMPs

SC01 - 1, 2, 4
 SC02A - 1, 2
 SC02B - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
 SC03 - 1, 2, 4, 5, 6, 8
 SC04 - 1, 2
 SC06 - 1, 2, 3, 4, 6, 7
 SC08 - 1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 14
 SC10 - 1, 2, 4
 SC11 - 3, 4, 5, 6, 7, 8, 9, 10
 SC14 - 1, 2, 3
 SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9
 SC19 - 1, 2
 SR01 - 1, 2, 3, 4, 5, 6, 7, 8, 9

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

Materials Storage Area

No outdoor material storage or waste areas

Materials Storage Amounts

No materials recorded over 55 gallons

Shipping/Receiving Area

Not recorded



PROJECT NO.:
5025-13-0031

DATE:
JUNE 2015

DRAWN BY:
RMH

CHECKED BY:
AJA



**Hawaiian
Operating Areas**

San Diego International Airport

FIGURE
E-17

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High Flying Foods

SIC Codes	5812	Contact Information	
Primary Activity	Food & Beverage	Kimberly Hazard	Manager - Ops
Drainage Areas	8	P 8585310312	
Nearest MS4 Inlet		khazard@highflyingfoods.com	
Address	3225 North Harbor Dr. San Diego, CA 92101	Nick Pelaez	Assistant Manager
			C 5039295773
		npelaez@highflyingfoods.com	

Facility Description and Activities

1) Participates in the Airports compost program 2) Grease is picked up twice per week by Bradford 3) Does not operate any equipment 4) Bradford delivers products to T1 indoor/outdoor storage area and T2 indoor storage unit 5) Flagship picks up trash, recycling, and compost directly from the store 6) All employees went through the airport compost training and managers occasionally inspect the compost for contamination

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant Sources

Material loading/unloading
Outdoor waste storage
Trash collection

Potential Pollutants

Cleaning Solutions
Food Waste
Oil & Grease
Recyclables
Trash

Best Management Practices Applicable to Facility

Activities

Non-Storm Water Management
Outdoor Loading/Unloading of Materials
Waste Handling & Disposal
Employee Training
Housekeeping
Safer/Alternative Products
Spill Prevention, Control & Clean Up

BMPs

SC01 - 1, 2, 4
SC06 - 1, 2, 3, 6, 7
SC08 - 1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 14
SC10 - 1, 2, 3, 4
SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9
SC19 - 1, 2
SR01 - 1, 2, 3, 5, 6, 7, 10

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

Materials Storage Area

Terminal 1, Gates 7, 8, 10, 11, 12

Materials Storage Amounts

No materials recorded over 55 gallons

Shipping/Receiving Area

Bradford



0 50 100 200 300 Feet

PROJECT NO.:
5025-13-0031
DATE: JUNE 2015
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HFF
Operating Areas
San Diego International Airport

FIGURE
E-18

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HMS Host

SIC Codes 5812
 Primary Activity Food & Beverage
 Drainage Areas 7, 8, 10, 12, 15
 Nearest MS4 Inlet < 200 ft.
 Address 3665 North Harbor Dr.
 San Diego, CA 92101

Contact Information
 Joe Niknam Manager - General
 P 6192315100 C 9495876125
 joe.niknam@hmshost.com

 Rick Jauert Manager
 P 6196028898
 rick.jauert@hmshost.com

Facility Description and Activities

***HMS Host operational area has reduced since the T2W has become active. 3 other Concession vendors operate at SAN.

1. All grease traps, common areas and hood cleaning is performed by SDCRAA.
2. Bradford is in charge of removing Waste Vegetable Oil (WVO) from deep fryers three times a week, during non operational hours.
3. Flagship removes trash and food waste. Food waste is collected in a small green container. HMS Host is the first concession to be part of the City of SD composting food waste program.
4. Vehicles are fueled by ASIG and cleaned offsite.
5. Small connex storage units at between gate 1 and 2. Previous unit at Gate 25 has been removed. Additional indoor storage is located at T2W, near gate 48.
6. Ameil Porta is the Terminal Operations Manager who is the point of contact for maintenance. (aporta@san.org). Jim DeCock (jdecock@san.org) is the point of contact regarding any concession questions.
7. A1 Vent conducts vent cleaning in the stores.

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant Sources

Equipment storage
 Fluid leaks
 Fuel spills,Fuel transfer
 Material loading/unloading
 Outdoor waste storage
 Tank fuel transfer
 Trash collection

Potential Pollutants

Anti Freeze
 Cleaning Solutions
 Food Waste
 Fuel
 Lubricants
 Oil & Grease
 Recyclables
 Solvents

Trash

Best Management Practices Applicable to Facility

ActivitiesBMPs

Non-Storm Water Management	SC01 - 1, 2, 4
Outdoor Equipment Ops Maintenance Areas	SC02A - 1, 2
Aircraft, Ground Vehicle & Equipment Maintenance	SC02B - 1, 2, 3, 4, 5, 6, 9, 10, 11, 12, 13
Aircraft, Ground Vehicle & Equipment Fueling	SC03 - 1, 2, 4, 5, 6, 8
Aircraft, Ground Vehicle & Equipment Cleaning	SC04 - 1, 2, 3, 4, 5, 6, 7, 8
Outdoor Loading/Unloading of Materials	SC06 - 1, 2, 3, 6, 7
Outdoor Material Storage	SC07 - 1, 2, 3, 7, 12
Waste Handling & Disposal	SC08 - 1, 2, 3, 4, 5, 8, 9, 10, 11, 12, 14
Employee Training	SC10 - 1, 2, 3, 4
Housekeeping	SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9
Safer/Alternative Products	SC19 - 1, 2
Spill Prevention, Control & Clean Up	SR01 - 1, 2, 3, 4, 5, 6, 7, 8, 9

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

Materials stored outdoors are covered and contained in Connex storage units.

Materials Storage Area

Connex storage unit between gates 1 and 2, and near gate 48

Materials Storage Amounts

No materials recorded over 55 gallons

Shipping/Receiving Area

Bradford



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5025-13-0031
DATE: JUNE 2015
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**HMS Host
Operating Areas
San Diego International Airport**

FIGURE
E-19

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Integrated Airline Services

SIC Codes	4513	Contact Information	
Primary Activity	Maintenance (Aircraft & GSE)	Matthias Manalo	Manager
Drainage Areas	3, 5, 6	P 6192258437	C 6193065843
Nearest MS4 Inlet		mmanalo@iasair.com	
Address	3225 North Harbor Dr. San Diego, CA 92101	Jim Berardi	Crew - Maintenance C 6199933211
		jberardi@iasair.com	

Facility Description and Activities

**IAS was bought out in 2013 by CAS. The merge was still in progress as of Oct, 2014.

1. Previously subleased property from the Airport through ATI, but now operates independently and does not have a current lease contract.
2. Operations are located West of P04 Gate (UPS) and on the DHL ramp.
3. For UPS, IAS provides ground handling services and for DHL they provide ground handling services and equipment.
4. Steam wash vehicles at the ASIG wash rack. The K-loader cannot be transported to the wash rack and is currently only dry cleaned.
5. Landmark fuels the vehicles and equipment on an on-call basis.
6. Jim Berardi is in charge of maintenance of all equipment and vehicles. All materials are stored in the maintenance trailer.

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant Sources

Cargo handling
Equipment storage
Fluid leaks
Fuel spills,Fuel transfer
Fuel storage
Material loading/unloading
Outdoor waste storage
Tank fuel transfer
Trash collection

Potential Pollutants

Anti Freeze
Battery Acid
Carburetor Cleaner
Cleaning Solutions
Coolant
Degreasers
Degreasers (Citrus based)
Hydraulic Fluids
Lubricants
Metals
Oil & Grease

Paints
 Recyclables
 Sealants
 Sediment
 Solvents
 Transmission Fluid
 Trash

Best Management Practices Applicable to Facility

Activities

Non-Storm Water Management
 Outdoor Equipment Ops Maintenance Areas
 Aircraft, Ground Vehicle & Equipment Maintenance
 Aircraft, Ground Vehicle & Equipment Fueling
 Aircraft, Ground Vehicle & Equipment Cleaning
 Outdoor Loading/Unloading of Materials
 Outdoor Material Storage
 Waste Handling & Disposal
 Employee Training
 Housekeeping
 Safer/Alternative Products
 Spill Prevention, Control & Clean Up

BMPs

SC01 - 1, 2, 4
 SC02A - 1, 2
 SC02B - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
 SC03 - 1, 2, 3, 4, 5, 6, 8
 SC04 - 1, 2, 3, 4, 5, 7, 8
 SC06 - 1, 2, 3, 4, 5, 6, 7
 SC07 - 1, 2, 3, 7, 12
 SC08 - 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 14
 SC10 - 1, 2, 3, 4
 SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9
 SC19 - 1, 2
 SR01 - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

Materials Storage Area

North ramp maintenance trailer

Materials Storage Amounts

No materials recorded over 55 gallons

Shipping/Receiving Area

Not recorded



PROJECT NO.:
5025-13-0031
DATE: JUNE 2015
DRAWN BY: RMH
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IAS
Operating Areas
San Diego International Airport

FIGURE
E-20

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Japan Airlines

SIC Codes 4512
 Primary Activity Passenger Carrier
 Drainage Areas 8, 12
 Nearest MS4 Inlet < 200 ft.
 Address 3707 North Harbor Dr. #123
 San Diego, CA 92101

Contact Information
 Linus Lee Manager - Station
 P 6195740662 C 6198511666
 linus.lee@jal.com

 Alan Nakai Manager
 P 6195740549 C 6194819611
 alan_n_nakai@jal.com

Facility Description and Activities

1. 1 flight per day out of gate 20 (back up gate is 22).
2. There is a JAL maintenance office by gate 23 where aircraft supplies and tires are stored.
3. ATS handles below wing operations (trash, lav), cleaning inside the plane and ATS GSE maintenance (done at GES/Tom Mascarenas shop).
4. American Airlines handles the ticket counters and maintenance on the JAL plane.
5. All maintenance related fluids and supplies are stored at either the GES or AA shop areas.
6. Fueling is performed by ASIG.
7. Gate gourmet is used for international trash.
8. Prime flight is used for security.
9. Cargo is handled by CAS at the warehouse and ATS at the plane. Cargo items are occasionally perishable so there is some dry ice.
10. There is a FOD bucket at the gate.
11. FOD walks are done by ATS before flights arrive.
12. No aircraft washing or deicing is done at SAN.
13. Training: employees receive annual training on safety & security, haz material handling, dangerous goods, and spill response. 6. JAL does not use potable water on aircrafts. 7. ATS is a subtenant and performs services below the wing for JAL.

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant Sources

Aircraft sanitary services
 Cargo handling
 Equipment storage
 Fluid leaks

Potential Pollutants

Anti Freeze
 Battery Acid
 Cleaning Solutions
 Fuel

Fuel spills,Fuel transfer
 Fuel storage
 Material loading/unloading
 Outdoor waste storage
 Tank fuel transfer
 Trash collection

Tenant Summaries
 Lavatory Chemicals
 Lavatory Wastes
 Lubricants
 Metals
 Oil & Grease
 Sediment
 Trash

Best Management Practices Applicable to Facility

Activities

Non-Storm Water Management
 Outdoor Equipment Ops Maintenance Areas
 Aircraft, Ground Vehicle & Equipment Maintenance
 Aircraft, Ground Vehicle & Equipment Fueling
 Aircraft, Ground Vehicle & Equipment Cleaning
 Outdoor Loading/Unloading of Materials
 Outdoor Material Storage
 Waste Handling & Disposal
 Employee Training
 Lavatory Service Operation
 Housekeeping
 Safer/Alternative Products
 Spill Prevention, Control & Clean Up

BMPs

SC01 - 1, 2, 3, 4
 SC02A - 1, 2
 SC02B - 1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13
 SC03 - 1, 2, 3, 4, 5, 6, 8
 SC04 - 1, 2
 SC06 - 1, 2, 3, 4, 5, 6, 7
 SC07 - 1, 2, 3, 4, 5, 7, 12
 SC08 - 1, 2, 3, 4, 5, 8, 9, 12
 SC10 - 1, 2, 3, 4
 SC11 - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10
 SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9
 SC19 - 1, 2
 SR01 - 1, 2, 3, 4, 5, 6, 7, 8, 9

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

Materials Storage Area

Maintenance office at Gate 23

Materials Storage Amounts

Waste oil and grease stored in 55 gallon containers in maintenance area; no other materials over 55 gal recorded

Shipping/Receiving Area

Not recorded



PROJECT NO.:
5025-13-0031

DATE:
JUNE 2015

DRAWN BY:
RMH

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AJA



JAL
Operating Areas
San Diego International Airport

FIGURE
E-21

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Jet Blue Airlines

SIC Codes 4512, 4522
 Primary Activity Passenger Carrier
 Drainage Areas 7, 8, 12
 Nearest MS4 Inlet 200 - 1000 ft.
 Address 3835 North Harbor Dr. #108
 San Diego, CA 92101

Contact Information
 Brian Zeugschmidt Manager - General
 P 6197250807 C 6197783808
 brian.zeugschmidt@jetblue.com

 Joseph Aguilera Supervisor
 P 6197250807
 joseph.aguilera@jetblue.com

Facility Description and Activities

1. JetBlue owns two stairs trucks and one air conditioning unit, which is currently unused and is staged for removal.
2. GAT provides ground handling services. They manage all cargo operations, lavatory operations, trash disposal.
3. Certified Aviation Services is contracted for maintenance.
4. A small amount of significant materials are stored in a flammable material storage room located between gate 37 and gate38. Jet Blue is certified by the City as a small quantity generator.
5. 3E provides all MSDS information for go/no go items collected from travelers.
6. A spill kit is located at gate 3
7. 7. ASIG performs all fueling activities for JetBlue.
8. Tenant uses the Airports' SWMP and has a Spill Prevention Plan. A computer based module is required every October.
9. Primary gate is 37 and secondary gate is 36.

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant Sources

Aircraft sanitary services
 Cargo handling
 Equipment storage
 Fluid leaks
 Fuel spills,Fuel transfer
 Material loading/unloading
 Outdoor waste storage
 Potable water flushing

Potential Pollutants

Anti Freeze
 Battery Acid
 Brake Fluid
 Cleaning Solutions
 Coolant
 Degreasers
 Fuel
 Fuel (Gas)

Trash collection

Tenant Summaries

Fuel (Jet) Hydraulic

Fluids Lavatory

Chemicals Lavatory

Wastes Lubricants

Oil & Grease

Recyclables

Solvents

Transmission Fluid

Trash

Best Management Practices Applicable to Facility

Activities

Non-Storm Water Management

Outdoor Equipment Ops Maintenance Areas

Aircraft, Ground Vehicle & Equipment
Maintenance

Aircraft, Ground Vehicle & Equipment Fueling

Aircraft, Ground Vehicle & Equipment Cleaning

Outdoor Loading/Unloading of Materials

Outdoor Material Storage

Waste Handling & Disposal

Employee Training

Lavatory Service Operation

Potable Water System Flushing

Housekeeping

Safer/Alternative Products

Spill Prevention, Control & Clean Up

BMPs

SC01 - 1, 2, 4

SC02A - 1, 2

SC02B - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13

SC03 - 1, 2, 4, 5, 6, 8

SC04 - 1, 2

SC06 - 1, 2, 3, 4, 6, 7

SC07 - 1, 2, 3, 11, 12

SC08 - 1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 14

SC10 - 1, 2, 3, 4

SC11 - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

SC14 - 1, 2, 3

SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9

SC19 - 1, 2

SR01 - 1, 2, 3, 4, 5, 6, 7, 8, 9

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

Concrete curbing is used to direct stormwater away from covered storage area

Materials Storage Area

Flammable materials storage room between gates 37 and 38

Materials Storage Amounts

No materials over 55 gal recorded

Shipping/Receiving Area

Not recorded

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PROJECT NO.:
5025-13-0031
DATE: JUNE 2015
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**Jet Blue
Operating Areas**
San Diego International Airport

FIGURE
E-22

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Landmark Aviation

<p>SIC Codes 4512, 4522</p> <p>Primary Activity Corporate General Aviation</p> <p>Drainage Areas 1, 3</p> <p>Nearest MS4 Inlet 200 - 1000 ft.</p> <p>Address 2904 Pacific Hwy. San Diego, CA 92101</p>	<p>Contact Information</p> <p>Carrie Campbell Manager</p> <p>P 6199540337</p> <p><u>ccampbell@landmarkaviation.com</u></p> <hr/> <p>Reginald Bridges Assistant Manager</p> <p>P 6192470296</p> <p>Rbridges@landmarkaviation.com</p>
--	---

Facility Description and Activities

1) New building on 3300 Terminal Link Rd has 2 office buildings and 5 hangars 2) Building 1 – FBO Lobby and customer offices 3) Hangars 1 – 5 are used for AC parking 4) No longer has an UST 5) Landmark has reduced the number of AC Fuel truck to 3 JetA and 1 Avgas truck. 15K gallons of JetA and 750 Gallons of AVGAS 6) One dual product truck for Diesel and Auto gas a total of 825 gallons 7) Secured covered cabinets located near fuel trucks for hazardous waste 3 cabinets total 8) Asbury Environmental collects waste oil. Lamb Fuels collect unused unleaded gasoline, jet fuel and diesel for recycling. Oil Recycling collects absorbent with oil. (Company may change to Safety Kleen after the move). 9) Eye wash stations and showers located in all 5 hangars 10) Jet Wash no longer does business here and CBF continues to do mostly dry wash 11) GSE equipment is fueled with Diesel or unleaded 3 to 4 times weekly. Fuel is now purchased from Allied at the rack as needed. Most equipment is now electric. 12) Aircraft lavatories are serviced by Landmark. Landmark disposes of lavatory waste at the triturator. 13) Tenant has a Spill Prevention, Control, and Countermeasure Plan – it is in the process of being revised. It will be completed within the 6 month time frame. 14) CAS is a subtenant to Landmark.

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant Sources

Aircraft sanitary services
 Building & Ground maintenance
 Cargo handling
 Drainage system maintenance
 Equipment storage
 Fluid leaks
 Fuel spills,Fuel transfer
 Fuel storage
 Herbicide usage
 Material loading/unloading
 Outdoor waste storage

Potential Pollutants

Anti Freeze
 Battery Acid
 Cleaning Solutions
 Floatables
 Food Waste
 Fuel
 Fuel (Diesel)
 Fuel (Gas)
 Fuel (Jet)
 Hydraulic Fluids
 Lavatory Chemical Wastes

Pesticide usage
 Tank fuel transfer
 Trash collection
 Vehicle parking
 Water/Fuel mixture within berm

Tenant Summaries
 Lavatory Chemicals
 Lavatory Wastes
 Lubricants
 Oil & Grease
 Pesticides/Herbicides/Fertilizers
 Recyclables
 Sediment
 Solvents
 Trash

Best Management Practices Applicable to Facility

Activities

Non-Storm Water Management
 Outdoor Equipment Ops Maintenance Areas
 Aircraft, Ground Vehicle & Equipment Maintenance
 Aircraft, Ground Vehicle & Equipment Fueling
 Aircraft, Ground Vehicle & Equipment Cleaning
 Outdoor Loading/Unloading of Materials
 Outdoor Material Storage
 Waste Handling & Disposal
 Building & Ground Maintenance
 Employee Training
 Lavatory Service Operation
 Parking Lots
 Drainage System Maintenance
 Housekeeping
 Safer/Alternative Products
 Spill Prevention, Control & Clean Up
 Structural Treatment Control BMPs

BMPs

SC01 - 1, 2, 4
 SC02A - 1, 2
 SC02B - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
 SC03 - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11
 SC04 - 1, 2, 3, 4, 5, 6, 7, 8
 SC06 - 1, 2, 3, 4, 6, 7
 SC07 - 1, 2, 3, 6, 7, 8, 9, 10, 11, 12
 SC08 - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14
 SC09 - 1, 2, 3
 SC10 - 1, 2, 3, 4
 SC11 - 3, 4, 5, 6, 7, 8, 9, 10
 SC16 - 1, 2, 6, 11, 12
 SC17 - 2, 3, 4, 5, 6, 7
 SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9
 SC19 - 1, 2
 SR01 - 1, 2, 3, 4, 5, 6, 7, 8, 9
 TC01 - 1, 2, 3, 4

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

Located onsite are 7 bioswales, 7 pervious pavement and infiltration systems, and 1 Contech storm filter.

Materials Storage Area

Secured covered cabinets for haz waste (north ramp near Landmark fuel trucks)

Materials Storage Amounts

Hazwaste and waste oil may be stored over 55 gallons

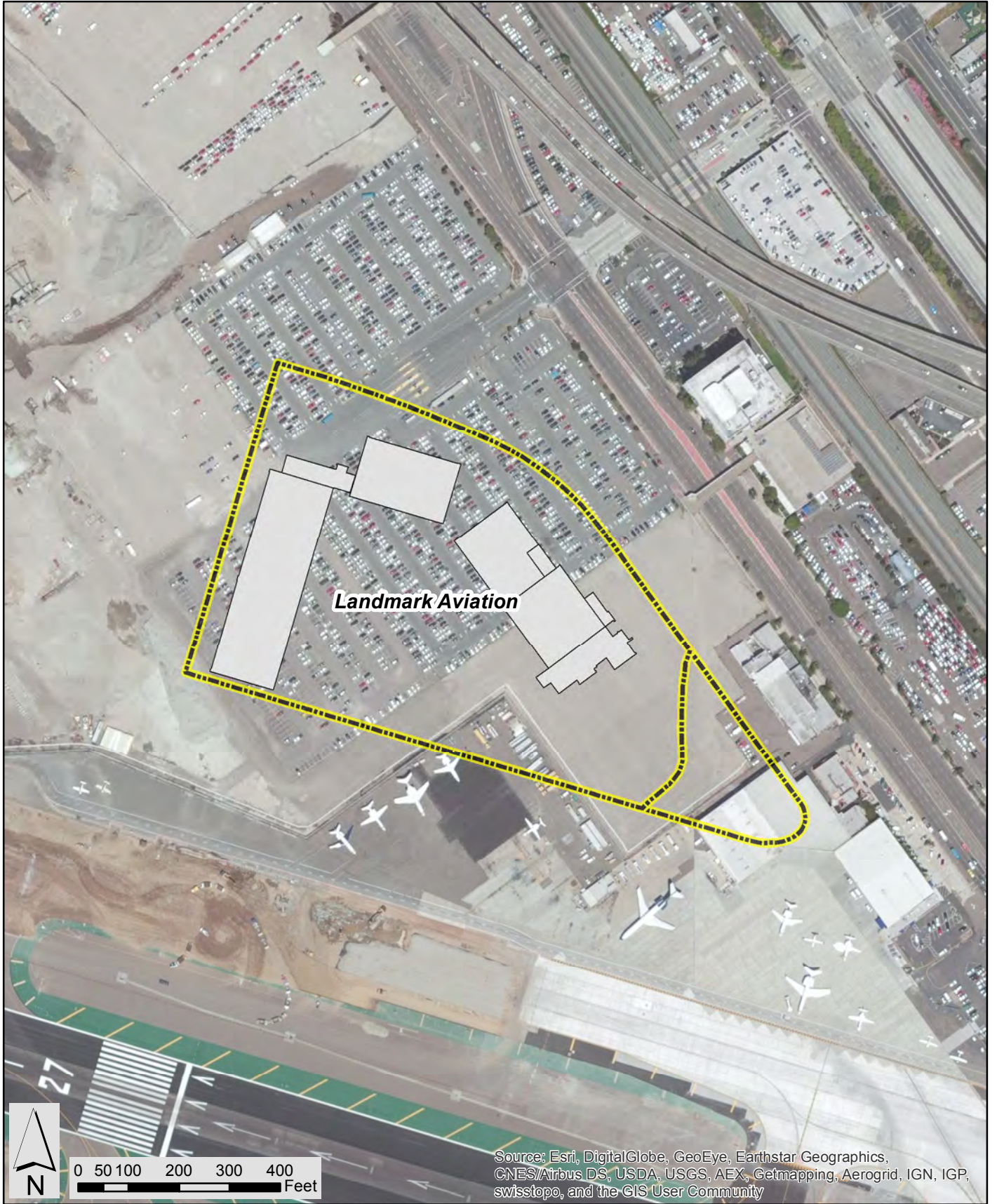
3 15,000 gallon JetA fuel trucks parked in Landmark area

1 750 gallon AVGAS fuel truck parked in Landmark area

Shipping/Receiving Area

Landmark

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PROJECT NO.:
5025-13-0031

DATE:
JUNE 2015

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RMH

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**Landmark Aviation
Operating Areas**

San Diego International Airport

FIGURE
E-23

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Mission Yogurt

SIC Codes 5812
 Primary Activity Food & Beverage
 Drainage Areas 8
 Nearest MS4 Inlet
 Address 3225 North Harbor Dr.
 San Diego, CA 92101

Contact Information
 Rob Ziemer Manager - General
 C 8583348333
 rob.ziemer2@gmail.com

Facility Description and Activities

1. Receives all food and product deliveries from Bradford directly to the store.
2. Mission yogurt does not have any outside refrigeration or storage.
3. Flagship picks up compost, waste, and recyclables directly from the store.
4. Mission yogurt does not use any oil and grease in their food operations.
5. Load and unload food products at T2 west and T1. Bradford delivers to level 1 hallway in T2 and to level 1 door at T1.

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant Sources

Material loading/unloading
 Outdoor waste storage
 Trash collection

Potential Pollutants

Food Waste
 Recyclables
 Trash

Best Management Practices Applicable to Facility

Activities

Non-Storm Water Management
 Outdoor Loading/Unloading of Materials
 Waste Handling & Disposal
 Housekeeping
 Safer/Alternative Products
 Spill Prevention, Control & Clean Up

BMPs

SC01 - 1, 2, 4
 SC06 - 1, 2, 6
 SC08 - 1, 2, 3, 4, 5, 9, 10, 11, 12, 14
 SC18 - 1, 2, 3, 4, 5
 SC19 - 1, 2
 SR01 - 1, 2, 3, 6, 7

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

Materials Storage Area

No outdoor refrigeration or storage

Materials Storage Amounts

No materials stored over 55 gallons; no oil and grease generated

Shipping/Receiving Area

Bradford



PROJECT NO.:
5025-13-0031

DATE:
JUNE 2015

DRAWN BY:
RMH

CHECKED BY:
AJA



**Mission Yogurt
Operating Areas**

San Diego International Airport

FIGURE
E-24

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San Diego County Regional Airport Authority

SIC Codes	4581	Contact Information	
Primary Activity	Facility Maintenance	Michael Threadgill	Supervisor
Drainage Areas	0, 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15	P 6194002741	
Nearest MS4 Inlet	< 200 ft.	mthreadg@san.org	
Address	3835 North Harbor Dr. San Diego, CA 92101	Stanley Moore P	Unknown
		6194002751	
		smoore@san.org	

Facility Description and Activities

1. Road sweeping: Cannon is contracted to sweep the roads into and out of the airport Monday through Friday, 1 am - 4 am, using a 600Tymco sweeper. Cannon sweeps all the roads in front of the Terminals including the Commuter Terminal, overpasses leading into and exiting the airport, and from McCain Road to P-18 gate. Cannon does not sweep Harbor Drive, as it is handled by the City, or any Parking Lots own or leased by the airport, which are handled by the Authorities Ground Transportation Department and contracted through ACE. Sweepings are collected and disposed at the Sycamore Landfill. Cannon Pacific performs daily pre-trip and post-trip inspections of their equipment. All records of sweeping activities are kept by Cannon Pacific and the Airport Environmental Department, records are updated monthly through invoices that have all the information on them. ACE is contracted to sweep and maintain all parking areas including the cell phone parking lot. ACE did not know who will be responsible for maintaining the parking areas currently under construction.
2. Ramp sweeping: Facilities Maintenance sweeps all areas inside the AOA gates, perimeter roads, and construction areas. Sweeping is done 7 days a week during evening hours. Sweeping alternates weeks between each ramp area - Terminal 1, Terminal 2, Cargo areas, and North Ramp. Within each area, each terminal and taxiway is swept at least once week. Some areas are swept twice in a week on request. Two machines (Tennats) operate on Regen-Air technology. Sweeping equipment is inspected weekly by GES. FMD also inspects and sweeps each terminal building, up against the building every other month, as a part of the ramp walk program. The debris/sweepings are vacuumed up into the unit and are disposed of in the lowboy container located on the NE corner of the air traffic control tower. FMD notifies Environmental Affairs when the dumpster needs to be emptied.
2. Ramp scrubbing: Flagship performs ramp scrubbing every 6 months using a 3,500 psi industrial pavement wash. The wash water is collected using storage containers and collected by Ocean Blue who filters and reuses the water.
3. Runway rubber removal: Is conducted by Abhe & Svoboda, every 6-8 weeks, depending on skidometer testing results. They are an all in one system which sprays on the rubber removal solution, scrubs the runway, rinses and vacuums up the rubber particles, removal solution and water. The rubber removal solution is a biodegradable chemical (DC101), 55 gallons of the solution is used for every 10,000 square feet of surface. Only the solution needed is brought on site during each rubber removal. Ocean Blue is responsible for disposal of waste and waste water generated.
4. Oil/water separators: There are 7 oil water separators at the airport: 2 on the North Ramp, 1 by American Airlines maintenance area, 1 near Delta in T2, 1 on the Commuter Terminal ramp, 1 in Allied Aviation's operational area, and 1 by ASIG's remote fueling facility. The oil water separator on the west ramp north of Terminal 2 West has been removed due to construction. Each installed oil water separator

has an alarm system. If the oil reaches a certain level, or oil leaks to the ground, an alarm goes off. Alarms are checked monthly. FMD knew of only one time when an oil water separator was pumped out, and did not recall the contractor. Ocean Blue is contracted to clean these. They have not been contacted to clean oil/water separators since 2010. Inspection of the oil/water separators was last conducted on July 16, 2014. Environmental Affairs has assumed responsibility for inspecting oil/water separators, but it may be FMD in the future. Criteria used for cleanout is the amount of sediment at the bottom of the tanks and the amount of oil & grease & floatables at the top of the tank. The criteria are generally based on whether or not the units function properly and would be expected to function properly for an upcoming rainy season given the amount of sediment/oil/floatables/etc.

5. FMD (contact David Niccum) contracts Diamond to perform maintenance of the 18 grease interceptors, scheduled for every 30 to 90 days (dependent on the size). 3,000- Gallon grease receptacles at the airport: (Interceptors (1) Terminal 2 between the West and East connector (2) Terminal 1. A 2,000 gallon interceptor installed at the Terminal 2 West under Gate 48. Terminal 1 between gates 1 and 2 has a 320-gallon grease interceptor. The grease receptacles have 3 baffles in tandem. The wastewater from restaurants enters the receptacles and goes to the first baffle then the second, and then the third. Ten 25 to 50-gallon grease traps on the airside of the Terminals 1 and 2; some below ground and some above ground. There are also some inside the buildings, close to the restaurants. These also have the baffle system. Grease is vacuumed out of the small traps every 4 weeks, the rest between 2 to 3 months, as required by the City of San Diego, and then they are rinsed in a similar procedure to the grease receptacles, but on a smaller scale, using a 400-gallon tank. Beyond the baffle system, the units are linked to the sanitary sewer.

6. Downstream Services is contracted to clean the storm drains. Types of storm drains include: Drop inlet, Curb inlet, Trench drains, Slit drains, and Separators. Drop inlet, Curb inlet, Trench drains, Slit drains, are cleaned quarterly. Inspections of all storm water conveyance systems occur annually. Separators and underground storm drain pipes leading to city of San Diego drainage systems are cleaned annually. Records are updated after each cleaning event. Records are stored in the Facilities Management and in the environmental affairs department. Contractor vehicles are equipped with large waste water storage capacity and reclamation devices. Wastes from storm drain cleaning are measured for silt, green waste, trash, heavy metals and amount of water consumed to perform the cleaning operation. The contractor is responsible for all waste disposal. Ocean Blue maintains designated drains the tarmac side: 1) SW trash compactor on South side of the fence (SUMP) 2) ASIG facility oil/water separator (Storm drain goes into Oil/Water separator) 3) Least Turn area oval house (Storm Drain). All are inspected daily. If they see a problem somewhere else, they report it to environmental department. These are cleaned as needed in the dry season. During the rainy season they are cleaned monthly and after each rain event. Methods used for cleanout are to pump dry and rinse out, and maintain filter cloths and gravel bags.

7. TCBMPs: Inspection and maintenance of the pervious services and swales consist of regular cleaning by the landscape contractor and the parking lot management contractor. These have not yet been incorporated into a more detailed inspection/maintenance program. Other than the pervious surfaces and swales, TCBMPs are meant to be captured in the contract with Downstream Services. Environmental Affairs has not gotten them completely into the inspection/maintenance program.

8. Fire hydrant flushing: The City of San Diego is responsible for fire hydrant flushing at the airport once a year.

9. Fire suppression system testing is done quarterly. All water flows to dirt area and evaporates or infiltrates. If no dirt area is available, then it is taken to the sewer.

10. Trash/recycling managed by Amiel Porta: Flagship is contracted to collect trash and recyclables. All

trash is taken to the Terminal 1 compactor area. Flagship also that sorts trash and recycle if any bags were dumped in the wrong tipper container. The sorter is responsible of keeping all staged compactor areas clean and free of debris and creating cardboard bails. Signs are posted at the disposal sites in the kitchens and restaurants, on the containers, carts and compactors, and at the central waste and recycling center. Allied waste services removes the waste from the airport. All compactors and dumpsters 1-3X per week (depending on the location). Additional bins are available for metal, wood, cardboard, and food waste. Flagship cleans the tipper containers and gondolas used to stage and haul trash from the terminals to the compactor area. Tippers containers are cleaned 1x per week using a hot water pressure washer, gondolas are cleaned everyday once they are emptied at the end of a shift. The tipper compactors are cleaned in the Terminal 1 compactor area. Wash water is diverted to a sanitary sewer system located in Terminal 1 compactor area. Dumpsters and compactors are cleaned and pressure washed by Allied Waste quarterly as well as needed basis on site. Fleetwash removes the storm water and dispose of it as part of their service. The Food waste compactor is cleaned at the facility when serviced. Daily visual audit is performed as part of the drivers' duty. They report repairs/exchanges needed in a weekly report and they get submitted to our container department to perform such repairs/replace dumpsters. **Dumpsters are replaced on the contract anniversary (November 8th of each year) and all open top front load dumpsters are replaced on a yearly basis. Next replacement is scheduled to be completed between 11/3/14 and 11/7/14.

11. Spill kits: spill response materials (kits contain kitty litter, sandbags, plastic tarps, absorbent sox and pads, shovels, and brooms). They are located in various places on the Air Field. There are three spill kits. One is by the North Ramp, one by Gate 26, and one is by the T1 waste segregation area. Ocean Blue is responsible for stocking the Spill Kits when they run low on equipment.

12. Significant materials storage: the machining/welding shop (Shop 2 on Winship Lane). Pesticides, diesel, gasoline, and turpentine are stored in flammable materials storage lockers near the runway generator area east of the Commuter Terminal, and paints and a non-skid spray for metal steps are stored in a metal shed in the Bone yard area. Metal parts and other materials are stored in the boneyard area and near the runway generator area east of the Commuter Terminal and covered in shop 2, not all are covered and on pallets.

13. Vehicle maintenance is conducted by ASIG. Hawthorn Electric maintains runway closure signs, and is contracted to maintain the light towers and generators, and do onsite oil changes.

14. ASIG fuels maintenance vehicles at four places: Maintenance shop at 2412, 2415 and 2417 Winship Lane, the Commuter Terminal and the valet lot by p18. They also fuel all light towers and generators.

15. FMD maintains the triturator area. ****Note: A new triturator area will be installed next to the waste segregation area. Construction will start in July 2014. The project is expected to be completed in 3 to 5 months.

16. Roundup is used for weed control. Aztec Landscaping performed landscaping services. They bring their own pesticides and remove their landscape wastes. There are 2 dumpster s used by Aztec on the east side of the parking lot next of our Security Gate P-18. P-18 is at the end of Windship Road. They use Roundup for weed control, they perform landscaping services, and they bring their own pesticides and remove their landscape wastes. FMD also sprays for weeds and uses surflan and Kleenup pro.

17. Spill response materials are not on all vehicles.

18. Hazardous wastes are stored at the bone yard in clamshell containers. Ocean Blue is contracted to collect hazardous wastes as needed.

19. All chemicals are stored in shop 1 or in the specific trades shops (shop 2).

20. Stormwater pollution prevention training is performed annually by the Environmental Affairs Department.

21. Storm drain inspections are performed quarterly and before/after the rainy seasons.

22. FMD staff are trained to protect storm drains when performing maintenance and construction activities.

23. Pressure Washing: Flagship performs pressure washing Tuesdays through Saturdays between 11:00 pm and 4:00 am. Locations that receive pressure washing include terminal smoking areas and all baggage claim sidewalks. Due to the high volume of foot traffic in these areas (approximately 50,000 passengers daily) that leaves spills, stains, cigarette butts/ashes, and debris, it is a health and safety risk not to pressure wash these areas. In 2014, the Airport Authority began recovering condensate – liquid created by condensation – from air conditioning units installed in passenger boarding bridges. The Airport Authority works with Flagship to use AC condensation water for the pressure washing operation. The AC condensation water is collected into 55 gallon drums, and once full the water is transferred to the pressure washer reservoirs. In 2014, more than 5,225 gallons of AC condensate was recovered and reused for a variety of purposes in airport maintenance, including pressure washing. The pressure washers used by Flagship are equipped with a water recollection and filtration system. They are designed to collect all residual water, filter, recycle and re-use the water throughout the operation of the equipment. An estimated 80–100 gallons of recovered AC condensate water is used per day washing occurs. The reclaimed AC condensate is not potable water and therefore not a violation of state and city water restrictions. Before starting the pressure washing operation, Flagship staff locates all storm water run offs and covers the areas with berms or mats. They then remove and sweep all trash, debris and cigarette butts. Next, staff will determine the path that the water will run and will funnel the water using berms and bags into the vacuum/reclaim system. Once the job is complete, the wash water is vacuumed up, hoses are drained into the sanitary sewage system and equipment is cleaned.

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant Sources

Aircraft sanitary services
 Building & Ground maintenance
 Cargo handling
 Drainage system maintenance
 Equipment storage
 Fluid leaks
 Fuel spills, Fuel transfer
 Fuel storage
 Herbicide usage
 Material loading/unloading
 Outdoor apron washdown
 Outdoor waste storage

Potential Pollutants

Adhesives
 Anti Freeze
 Asphalt Debris
 Battery Acid
 Brake Fluid
 Caulking
 Cement
 Cleaning Solutions
 Fire Fighting Foam
 Fuel
 Galvanizing Compound
 Hydraulic Fluids

Pesticide usage
 Potable water flushing
 Ramp/Taxiway scrubbing
 Runway rubber removal
 Tank fuel transfer
 Trash collection
 Vehicle parking
 Water/Fuel mixture within berm

Tenant Summaries
 Landscape Wastes
 Lavatory Chemicals
 Lavatory Wastes
 Lubricants
 Metals
 Oil & Grease
 Paints
 Pesticides/Herbicides/Fertilizers
 Purple K
 Rubber Particulates
 Sealants
 Solvents
 Trash
 Turpentine

Best Management Practices Applicable to Facility

Activities

Non-Storm Water Management
 Outdoor Equipment Ops Maintenance Areas
 Aircraft, Ground Vehicle & Equipment Maintenance
 Aircraft, Ground Vehicle & Equipment Fueling
 Aircraft, Ground Vehicle & Equipment Cleaning
 Outdoor Loading/Unloading of Materials
 Outdoor Material Storage
 Waste Handling & Disposal
 Building & Ground Maintenance
 Employee Training
 Lavatory Service Operation
 Outdoor Wash down/Sweeping
 Potable Water System Flushing
 Runway Rubber Removal
 Parking Lots
 Drainage System Maintenance

BMPs

SC01 - 1, 2, 3, 4
 SC02A - 1, 2
 SC02B - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
 SC03 - 1, 2, 3, 4, 5, 6, 8
 SC04 - 1, 2, 3
 SC06 - 1, 2, 3, 4, 6, 7
 SC07 - 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12
 SC08 - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
 SC09 - 1, 2, 3
 SC10 - 1, 2, 3, 4
 SC11 - 1, 2, 3, 4, 7, 9
 SC12 - 1, 2, 3, 4, 5, 6, 7, 8, 9
 SC14 - 1, 2, 3
 SC15 - 1, 2, 3, 4
 SC16 - 1, 2, 3, 4, 5, 6, 11, 12
 SC17 - 1, 2, 3, 4, 5, 6, 7
 SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9

Housekeeping	SC19 - 1, 2
Safer/Alternative Products	SR01 - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10
Spill Prevention, Control & Clean Up	TC01 - 1, 2, 3, 4
Structural Treatment Control BMPs	

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

Concrete curbing is used to direct stormwater away from covered storage area and trash compactor area and into the sanitary sewer.
 Concrete curbing with valves around diesel storage tanks to contain leaks.
 Portable booms are used during washing of dumpster areas to funnel water to collection point where it is removed before entering MS4.
 Trench drain in Terminal 2 West dumpster area is connected to sanitary sewer.
 Triturator area is covered and sloped to prevent contact with storm water.
 Located within the Airport are below grade box structures, drain inserts, curb inlet screen covers, oil water separators, infiltration structures or surfaces, media filters, bioswales, hydrodynamic separators, porous pavement, porous pavers, and modular wetland treatment systems.

Materials Storage Area

- Maintenance shop 1
- Maintenance shop 2
- Bone Yard (north ramp)
- Rain proof shelters in generator area
- Flammable materials storage locker at facilities maintenance

Materials Storage Amounts

Oil and grease stored in:

- 1 3000 gallon grease receptacle at Terminal 1
- 1 6000 gallon grease receptacle at Terminal 2 East
- 1 5000 gallon grease receptacle at Terminal 2 West
- 4 grease receptacles between 100 and 1000 gallons (2 at the old Commuter Terminal, 3 in Terminal 1)
- 6 smaller grease traps in Terminal 1 and 2

Rubber particulates stored in covered lowboy in north ramp, emptied every 6-8 weeks

Shipping/Receiving Area

- Bradford and/or Facilities Maintenance shop



PROJECT NO.:
5025-13-0031
DATE: JUNE 2015
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SDCRAA
Operating Areas
San Diego International Airport

FIGURE
E-25

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SeaPort Airlines

SIC Codes 4512
 Primary Activity Passenger Carrier
 Drainage Areas 6
 Nearest MS4 Inlet 200 - 1000 ft.
 Address 3225 North Harbor Dr.
 San Diego, CA 92101

Contact Information
 Michael Miskel Manager - Station
 P 9016204400 C 8584137974
 mmiskel@seaportair.com

Facility Description and Activities

*Effective July 2015, Seaport will be moving to Gate 11C in T

1. 1) Four flights per day from the commuter terminal. Plans to add 4 flights daily to Burbank as of October 1, 2014 and 4 flights weekly to San Felipe as of November, 2014. 2) One hand push and one electric carts (no gas) and ramp work will only be done by SeaPort employees. 3) ASIG will be performing fueling. 4) Flights will not have catering or lav service. 5) No washing will be performed at SAN 6) No Hazmat carrier 7) It is projected to have a 55 gallon drum on site for sump fluid (containing fuel) at Burbank Airport. Currently this does not exist at SAN. 8) Employees receive basic safety training and captains receive spill response training. 9) Visual checks on done on ramp for FOD. 10) Any necessary maintenance will be performed by Pacific Aircraft Maintenance.

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant Sources

Aircraft deicing
 Equipment storage
 Fluid leaks
 Fuel spills, Fuel transfer
 Fuel storage
 Outdoor waste storage
 Trash collection

Potential Pollutants

Fuel
 Hydraulic Fluids
 Oil & Grease
 Solvents
 Trash

Best Management Practices Applicable to Facility

Activities

Non-Storm Water Management
 Aircraft, Ground Vehicle & Equipment Maintenance
 Aircraft, Ground Vehicle & Equipment Fueling

BMPs

SC01 - 1, 2, 4
 SC02B - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13
 SC03 - 1, 2, 3, 4, 5, 6, 8, 9

	Tenant Summaries
Aircraft Deicing/Anti-Icing	SC05 - 1, 2, 3, 4
Waste Handling & Disposal	SC08 - 1, 2, 3, 4, 5, 8, 9, 10, 11, 12, 14
Housekeeping	SC18 - 1, 2, 3, 4, 5, 6, 8, 9
Safer/Alternative Products	SC19 - 1, 2
Spill Prevention, Control & Clean Up	SR01 - 1, 2, 3, 4, 5, 6, 7, 8

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

Materials Storage Area

Operates out of Gate 11C, but no significant materials storage recorded

Materials Storage Amounts

No materials recorded over 55 gallons

Shipping/Receiving Area

Not recorded



0 50 100 200 300 Feet

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

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SeaPort
Operating Areas
San Diego International Airport

FIGURE
E-26

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Siemens

SIC Codes 4581
 Primary Activity Facility Maintenance
 Drainage Areas 8
 Nearest MS4 Inlet
 Address 3225 North Harbor Dr.
 San Diego, CA 92101

Contact Information
 Jonathan Culpepper Unknown
 P 6193169653
 jonathan.culpepper@siemens.com

 Matt LeBrun Supervisor - Site
 P 7604455386
 matt.lebrun@siemenscs.com

Facility Description and Activities

1. Siemens operates baggage claim and conveyor belt areas in Terminal
2. 2. Siemens maintains all baggage conveyors in T2W outbound and inbound 7 and 8.
3. Siemens also maintains ticket counters and bag rooms. 5. Training is carried out by the corporate office, based out of Dallas, TX.

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant Sources

Equipment storage
 Fluid leaks
 Outdoor waste storage
 Trash collection

Potential Pollutants

Cleaning Solutions
 Lubricants
 Metals
 Oil & Grease
 Paints
 Sediment
 Solvents
 Trash

Best Management Practices Applicable to Facility

Activities

Non-Storm Water Management
 Outdoor Equipment Ops Maintenance Areas
 Aircraft, Ground Vehicle & Equipment Maintenance
 Waste Handling & Disposal

BMPs

SC01 - 1, 2, 4
 SC02A - 1, 2
 SC02B - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11
 SC08 - 1, 2, 3, 4, 5, 8, 9, 11, 12, 14
 SC10 - 1, 2, 3, 4

Employee Training	SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9
Housekeeping	SC19 - 1, 2
Safer/Alternative Products	SR01 - 1, 2, 3, 4, 5, 6, 7, 8
Spill Prevention, Control & Clean Up	

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

Materials Storage Area

All materials stored inside Terminal 2 West baggage area

Materials Storage Amounts

No materials stored over 55 gallons

Shipping/Receiving Area

Not recorded



0 50 100 200 300 Feet

PROJECT NO.:
5025-13-0031
DATE: JUNE 2015
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Siemens
Operating Areas
San Diego International Airport

FIGURE
E-27

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SkyWest Airlines

<p>SIC Codes 4512, 4522</p> <p>Primary Activity Passenger Carrier</p> <p>Drainage Areas 6, 12</p> <p>Nearest MS4 Inlet 200 - 1000 ft.</p> <p>Address 3225 North Harbor Dr. #104 San Diego, CA 92101</p>	<p>Contact Information</p> <p>Toby Steele Environmental Contact</p> <p>P 3103867839</p> <p>TSteele@skywest.com</p> <hr/> <p>Steve Terry Manager - Station</p> <p>P 6192317202</p> <p>steve.terry@aa.com</p>
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Facility Description and Activities

***SkyWest should only receive inspection notifications if there is a stormwater issue that come directly from the plane itself. Sky West does not hold lease space at the San Diego airport; however, their aircrafts still land at the San Diego Airport. Envoy currently holds the ground handling contract, and any storm water concerns associated with Sky West's ground operations should be assigned to Envoy. SkyWest is a contractor of regional services for United. SkyWest's does not have a lease with the Airport Authority and has no onsite staff at SAN except for the pilots and flight crew.

1. SkyWest does not have a permanent gate in T2 assigned to their operations. Operates out of United Express, Delta, American Eagle, and Alaska gates depending on gate availability.
2. SkyWest is part of the Delta and United group.
3. Envoy (fka American Eagle) is contracted by United Express to handle ground services and the ticket counter at the Commuter Terminal and baggage reloading at Terminal 2W for SkyWest. United Express is operated by Skywest.
4. American Eagle uses its own ground equipment to service SkyWest. Most GSE is electric.
5. ASIG fuels aircraft on ramp.
6. All aircraft washing activities take place offsite.
7. One eyewash station and shower, which are rarely used. There are 2 additional stations which are just bottles.
8. Electrical charger used for push back tugs is located outdoors.
9. There is a hose bib on the ramp that is used for filling wet cell batteries. American Eagle does not operate this hose bib.
10. Honeybee cleaner is stored inside American Eagle's baggage loading area. No other significant materials are stored onsite.
11. Lavatory activities are performed by American Eagle on request only.

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant Sources

Potential Pollutants

Aircraft sanitary services
 Fluid leaks
 Potable water flushing

Tenant Summaries
 Anti Freeze
 Cleaning Solutions
 Fuel
 Lavatory Chemical Wastes
 Lavatory Chemicals
 Lavatory Wastes
 Lubricants
 Oil & Grease
 Trash

Best Management Practices Applicable to Facility

Activities

Non-Storm Water Management
 Aircraft, Ground Vehicle & Equipment
 Maintenance
 Aircraft, Ground Vehicle & Equipment Fueling
 Lavatory Service Operation
 Potable Water System Flushing
 Spill Prevention, Control & Clean Up

BMPs

SC01 - 1
 SC02B - 1, 2, 5, 6
 SC03 - 1, 2, 6
 SC11 - 3, 7
 SC14 - 1, 2
 SR01 - 1, 3, 4, 5, 6, 7, 8, 9

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

Materials Storage Area

SkyWest does not lease space at SAN; only planes present, no storage

Materials Storage Amounts

No materials stored over 55 gallons

Shipping/Receiving Area

Not recorded



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JUNE 2015

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RMH

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AJA



**Sky West
Operating Areas**
San Diego International Airport

FIGURE
E-28

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Southwest Airlines

SIC Codes	4512, 4522	Contact Information	
Primary Activity	Passenger Carrier	Thomas Starr	Manager - Station
Drainage Areas	7, 8	P 6192317345	C 9093226105
Nearest MS4 Inlet	< 200 ft.	Thomas.Starr@wnco.com	
Address	3665 North Harbor Dr. T1 San Diego, CA 92101	George Parker	Supervisor - Maintenance
		P 6192983005	
		george.parker@wnco.com	

Facility Description and Activities

1. Most ground support equipment and vehicle maintenance (including painting) is conducted inside the Maintenance Shop. Some minor vehicle and ground support equipment maintenance is performed on ramp.
2. Aircraft maintenance is performed on ramp by Pacific Aircraft Maintenance, a subtenant to Southwest.
3. ASIG fuels aircraft, vehicles, and ground support equipment.
4. There is a hose at the hose bib near Gate 9. It is used only to fill up containers for watering plants in the office.
5. Potable water is allowed to run for 1 minute then turned off and linked to aircraft. This is performed as far away from the storm drains as possible, and the water evaporates before reaching storm drain.
6. Southwest has spill bins at Gates 2 and 10. These bins contain absorbents, brooms, shovels, and disposal drums.
7. Aircraft cleaning is performed offsite (Phoenix, Oakland, and Dallas).
8. Significant materials are stored in flammable materials storage lockers.
9. Wastes are stored in Hazardous Waste Accumulation Areas in the gate area and inside the Maintenance Shop.
10. Hazardous wastes are picked up every 3 months. Evergreen recycles oil, Toxguard recycles antifreeze, and Nexeo Solutions collects all other hazardous wastes.
11. ABM Services, a subtenant to Southwest, performs cabin services for Southwest and other airlines.
12. Pacific Aircraft Maintenance, a subtenant to Southwest, performs aircraft maintenance for various airlines at the gate areas.
13. Southwest is at Gates 1A through 10 at T1.
14. Southwest performs deicing at the gates. At gates 4, 5, 9, and 10 they push back from the gate to get past the storm drains. Air Operations is notified every time deicing is performed. Monthly usage is sent to EAD. A zamboni is used to vacuum up the excess liquid that falls onto the ramp and is disposed of. Deicing is not performed in the rain. All deicing mixing is conducted at the triturator.

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant Sources

Aircraft deicing
 Aircraft sanitary services
 Cargo handling
 Equipment storage
 Fluid leaks
 Fuel spills,Fuel transfer
 Material loading/unloading
 Outdoor waste storage
 Potable water flushing
 Tank fuel transfer
 Trash collection
 Vehicle parking

Best Management Practices Applicable to Facility

Activities

Non-Storm Water Management
 Outdoor Equipment Ops Maintenance Areas
 Aircraft, Ground Vehicle & Equipment
 Maintenance
 Aircraft, Ground Vehicle & Equipment Fueling
 Aircraft Deicing/Anti-Icing
 Outdoor Loading/Unloading of Materials
 Outdoor Material Storage
 Waste Handling & Disposal
 Employee Training
 Lavatory Service Operation

Tenant Summaries

Potential Pollutants

Anti Freeze Battery
 Acid Carburetor
 Cleaner
 Cleaning Solutions
 Deicing/Anti-Icing Fluids
 Food Waste
 Fuel
 Hydraulic Fluids
 Lavatory Chemicals
 Lavatory Wastes
 Lubricants
 Metals
 Oil & Grease
 Paints
 Recyclables
 Solvents
 Transmission Fluid
 Trash

BMPs

SC01 - 1, 2, 3, 4
 SC02A - 1, 2
 SC02B - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
 SC03 - 1, 2, 4, 5, 6, 8
 SC05 - 1, 2, 3, 4
 SC06 - 1, 2, 3, 4, 6, 7
 SC07 - 1, 2, 3, 7, 11, 12
 SC08 - 1, 2, 3, 4, 5, 8, 9, 10, 11, 12, 14
 SC10 - 1, 2, 3, 4
 SC11 - 3, 4, 5, 6, 7, 8, 9, 10
 SC14 - 1, 2, 3

Potable Water System Flushing	SC16 - 1, 2, 6, 11
Parking Lots Housekeeping	SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9
Safer/Alternative Products	SC19 - 1, 2
Spill Prevention, Control & Clean Up	SR01 - 1, 2, 3, 4, 5, 6, 7, 8, 9

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

Materials Storage Area

Hazwaste accumulation areas in Maintenance shop and Terminal 1
Other materials stored in maintenance shop/cargo area

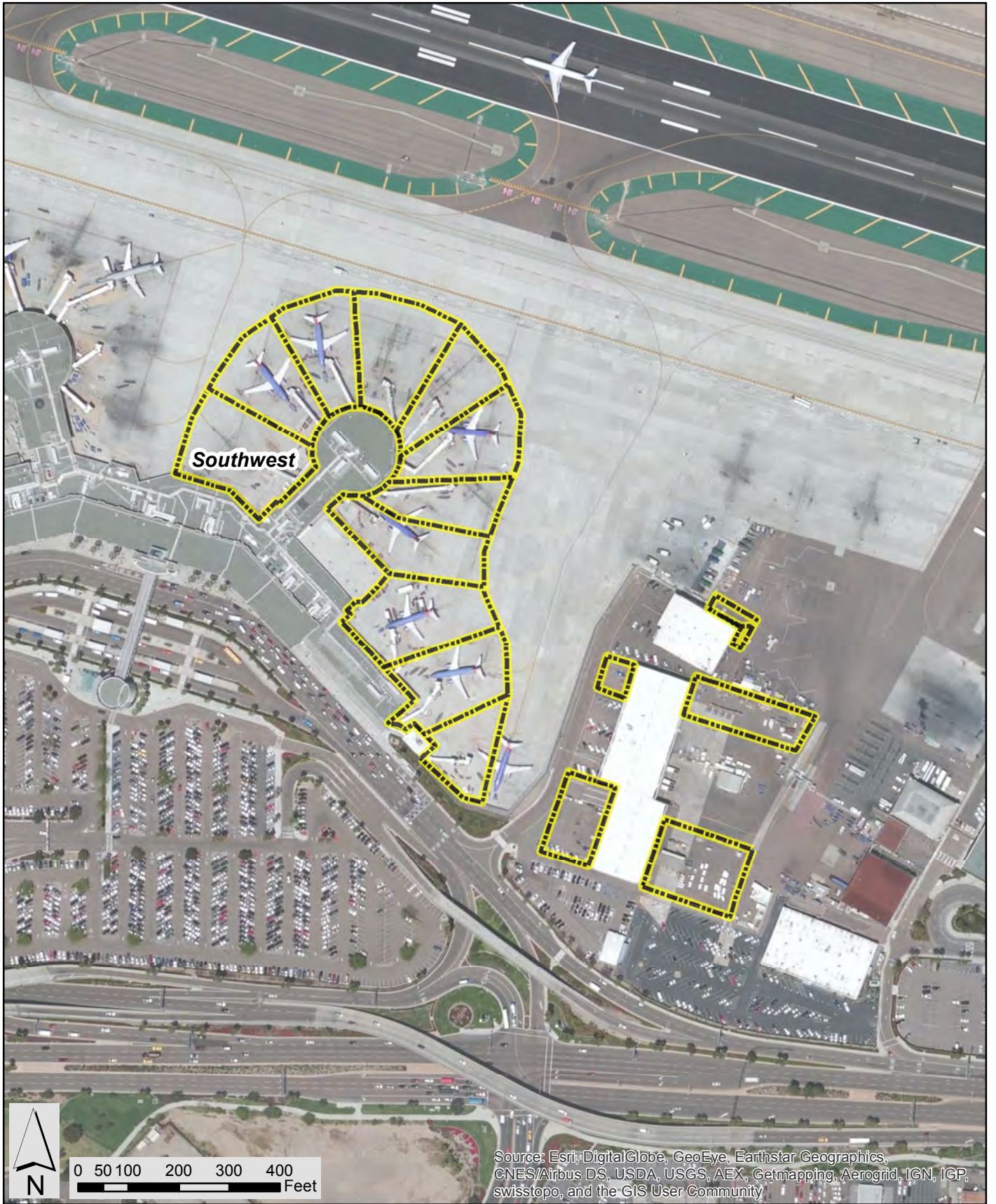
Materials Storage Amounts

Waste oil and absorbent may be stored in quantities above 55 gallon
Deicing fluid may be stored in quantities above 55 gallon
Waste deicing fluid may be stored in quantities above 55 gallon
No other materials recorded in quantities above 55 gallon

Shipping/Receiving Area

Maintenance shop/cargo area

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PROJECT NO.:
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DATE: JUNE 2015
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**Southwest
Operating Areas**
San Diego International Airport

FIGURE
E-29

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Spirit Airlines

SIC Codes 4512, 4581
 Primary Activity Passenger Carrier
 Drainage Areas 8, 9, 12
 Nearest MS4 Inlet < 200 ft.
 Address 3707 North Harbor Dr. #227
 San Diego, CA 92101

Contact Information
 Patricia Delgado Manager - Station
 P 6192970529 C 6197543163
 patricia.delgado@spirit.com

 Kyle Wurtele Unknown
 P 6192942107
 Kyle.wurtele@gatags.com

Facility Description and Activities

1. FOD walks are performed before and after each flight and a FOD bucket is kept on the stairs. FOD walks are performed before, during, and after each flight.
2. Operate out of Gate 30 or domestic flights and Gate 22 for international flights. Temporarily operating out of gate 26 for domestic flights. Once gate 32 becomes a common use gate, it will be used as the preferential gate. International flights can be operated out of 20, 21, or 22.
3. GAT is the ground handler who handles above and below wing, as well as storing all significant materials. GAT also provides all equipment (loaders and tugs). GAT has a spill kit.
4. Pacific Aircraft Maintenance is contracted for maintenance on planes which is sometime performed at the gate.
5. Spirit has 6 daily flights 5 days of the week, and 5 daily flights 2 days of the week.
6. ASIG does fueling and handles any spills.
7. No washing, deicing, hazmat, or cargo.
8. Spirit has required training (which is done at headquarters or online) that covers spill prevention. GAT also has their own training program.
9. One GAT cart is stored at Gate 26 with supplies for on the plane (tp, paper towels, cleaning supplies) and one tow bar is also stored at Gate 26.
10. Only one Spirit employee at San Diego location.
11. Gate Gourmet collects trash from GAT's collection for international flights, and disposes via incineration. This occurs on a daily frequency.

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant Sources

Aircraft sanitary services
 Equipment storage
 Fluid leaks

Potential Pollutants

Anti Freeze
 Cleaning Solutions
 Fuel

Fuel spills,Fuel transfer
 Outdoor waste storage
 Potable water flushing
 Trash collection

Tenant Summaries
 Hydraulic Fluids
 Lavatory Chemicals
 Lavatory Wastes
 Lubricants
 Oil & Grease
 Trash

Best Management Practices Applicable to Facility

Activities

Non-Storm Water Management
 Outdoor Equipment Ops Maintenance Areas
 Aircraft, Ground Vehicle & Equipment
 Maintenance
 Aircraft, Ground Vehicle & Equipment Fueling
 Outdoor Material Storage
 Waste Handling & Disposal
 Employee Training
 Lavatory Service Operation
 Potable Water System Flushing
 Housekeeping
 Spill Prevention, Control & Clean Up

BMPs

SC01 - 1, 2, 4
 SC02A - 1, 2
 SC02B - 1, 2, 3, 4, 5, 6, 10, 12, 13
 SC03 - 1, 2, 4, 5, 6, 8, 9, 10
 SC07 - 1, 2, 3
 SC08 - 1, 2, 3, 4, 5, 6, 8, 9, 10, 12
 SC10 - 1, 2, 3, 4
 SC11 - 3, 4, 5, 6, 7, 8, 9, 10
 SC14 - 1, 2, 3
 SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9
 SR01 - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

Materials Storage Area

One materials storage cart storage at Gate 26

Materials Storage Amounts

No recorded materials stored in quantities above 55 gallon

Shipping/Receiving Area

Not recorded



PROJECT NO.:
5025-13-0031
DATE: JUNE 2015
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Spirit
Operating Areas
San Diego International Airport

FIGURE
E-30

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SSP

SIC Codes 5812
 Primary Activity Food & Beverage
 Drainage Areas 8
 Nearest MS4 Inlet
 Address 3225 North Harbor Dr.
 San Diego, CA 92101

Contact Information
 Ed Hartless Manager - General
 P 6192970095 C 6193460860
 ed.hartless@foodtravelexperts.com

 Michael Meacham Manager - Ops
 P 6192970095
 Michael.meacham@foodtravelexperts.com

Facility Description and Activities

1. Currently operates out of T1 West and T2 East and West, but will be expanding operations to T1 E/W and T2 E/W once construction is complete.
2. Has one outdoor refrigeration unit by Virgin America's Gate 21, but this will be removed by the end of October, 2014.
3. Operates one battery operated golf cart which is dry washed.
4. Flagship picks up waste, recycle, and compost directly from stores. SSP uses 2 dumpsters for trash and cardboard at T2 East and T1 West.
5. Bradford picks up grease directly from the stores 1-2 times per week.
6. Participates in airport's composting program. The first three compost loads (monitored under an initial probationary period) taken to the dump were free of contamination.
7. One outdoor loading area located by Gate 22 will be moved to Gate 35 once construction is complete.

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant Sources

Cargo handling
 Equipment storage
 Fluid leaks
 Material loading/unloading
 Outdoor waste storage
 Tank fuel transfer
 Trash collection

Potential Pollutants

Cleaning Solutions
 Degreasers
 Food Waste
 Oil & Grease
 Recyclables
 Trash

Best Management Practices Applicable to Facility

ActivitiesBMPs

	Tenant Summaries
Non-Storm Water Management	SC01 - 1, 2, 4
Outdoor Equipment Ops Maintenance Areas	SC02A - 1, 2
Aircraft, Ground Vehicle & Equipment Maintenance	SC02B - 1, 2, 3, 4, 5, 6, 10
Aircraft, Ground Vehicle & Equipment Cleaning	SC04 - 1, 2
Outdoor Loading/Unloading of Materials	SC06 - 1, 2, 3, 4, 6, 7
Outdoor Material Storage	SC07 - 1, 2, 3, 7, 12
Waste Handling & Disposal	SC08 - 1, 2, 3, 4, 5, 7, 9, 10, 11, 12, 14
Employee Training	SC10 - 1, 2, 3, 4
Housekeeping	SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9
Safer/Alternative Products	SC19 - 1, 2
Spill Prevention, Control & Clean Up	SR01 - 1, 2, 3, 5, 6, 7, 8, 9

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

Materials Storage Area

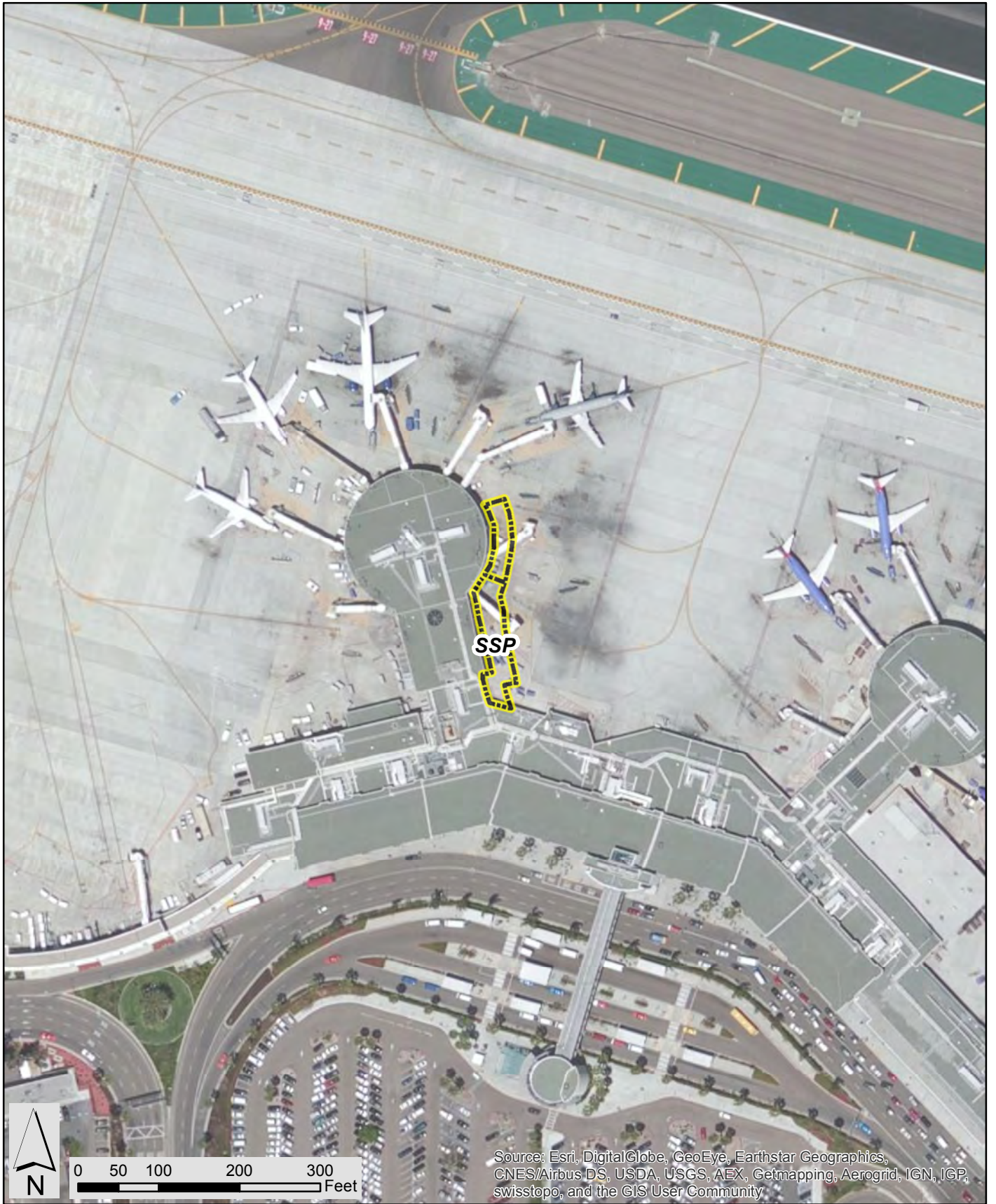
One outdoor refrigeration unit at Gate 21 (may have been removed October 2014)

Materials Storage Amounts

No recorded materials stored in quantities above 55 gallon

Shipping/Receiving Area

Bradford



PROJECT NO.:
5025-13-0031

DATE:
JUNE 2015

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SSP
Operating Areas
San Diego International Airport

FIGURE
E-31

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Sun Country Airlines

SIC Codes	4512, 4522	Contact Information	
Primary Activity	Passenger Carrier	Darwin Schussler	Manager - Station
Drainage Areas	15	P 6194912885	C 6198076846
Nearest MS4 Inlet	< 200 ft.	darwain.schussler@suncountry.com	
Address	3835 North Harbor Dr. #107 San Diego, CA 92101	Jeff Rasor	Manager - Station
		P 6194912885	
		jeff.rasor@delta.com	

Facility Description and Activities

1. Sun Country does not have on-site contacts, and rely on Delta to handle all operations. Environmental contact at Delta is Craig Birke.
2. All operations are performed the same as Delta flights.
3. Fueling performed by ASIG.
4. Tenant uses Delta's Storm Water Pollution Prevention Plan, Hazardous Materials Business Plan, Hazardous Waste Emergency Plan, Hazardous Waste Management Plan, and FOD Plan.
5. Sun Country conducts two flights per week (mostly night flights).

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant Sources

Aircraft sanitary services
Fluid leaks
Fuel spills, Fuel transfer
Outdoor waste storage
Trash collection

Potential Pollutants

Anti Freeze
Battery Acid
Cleaning Solutions
Fuel
Fuel (Diesel)
Lavatory Chemical Wastes
Lavatory Chemicals
Lavatory Wastes
Lubricants
Oil & Grease
Paints
Solvents
Trash

Best Management Practices Applicable to Facility

ActivitiesBMPs

Non-Storm Water Management	SC01 - 1, 2, 4
Outdoor Equipment Ops Maintenance Areas	SC02A - 1, 2
Aircraft, Ground Vehicle & Equipment Maintenance	SC02B - 1, 2, 3, 4, 5
Aircraft, Ground Vehicle & Equipment Fueling	SC03 - 1, 2, 4, 5, 6, 8, 9, 10
Waste Handling & Disposal	SC08 - 1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14
Employee Training	SC10 - 1, 2, 3, 4
Lavatory Service Operation	SC11 - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10
Housekeeping	SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9
Safer/Alternative Products	SC19 - 1, 2
Spill Prevention, Control & Clean Up	SR01 - 1, 2, 3, 4, 5, 6, 7, 8, 9

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

Materials Storage Area

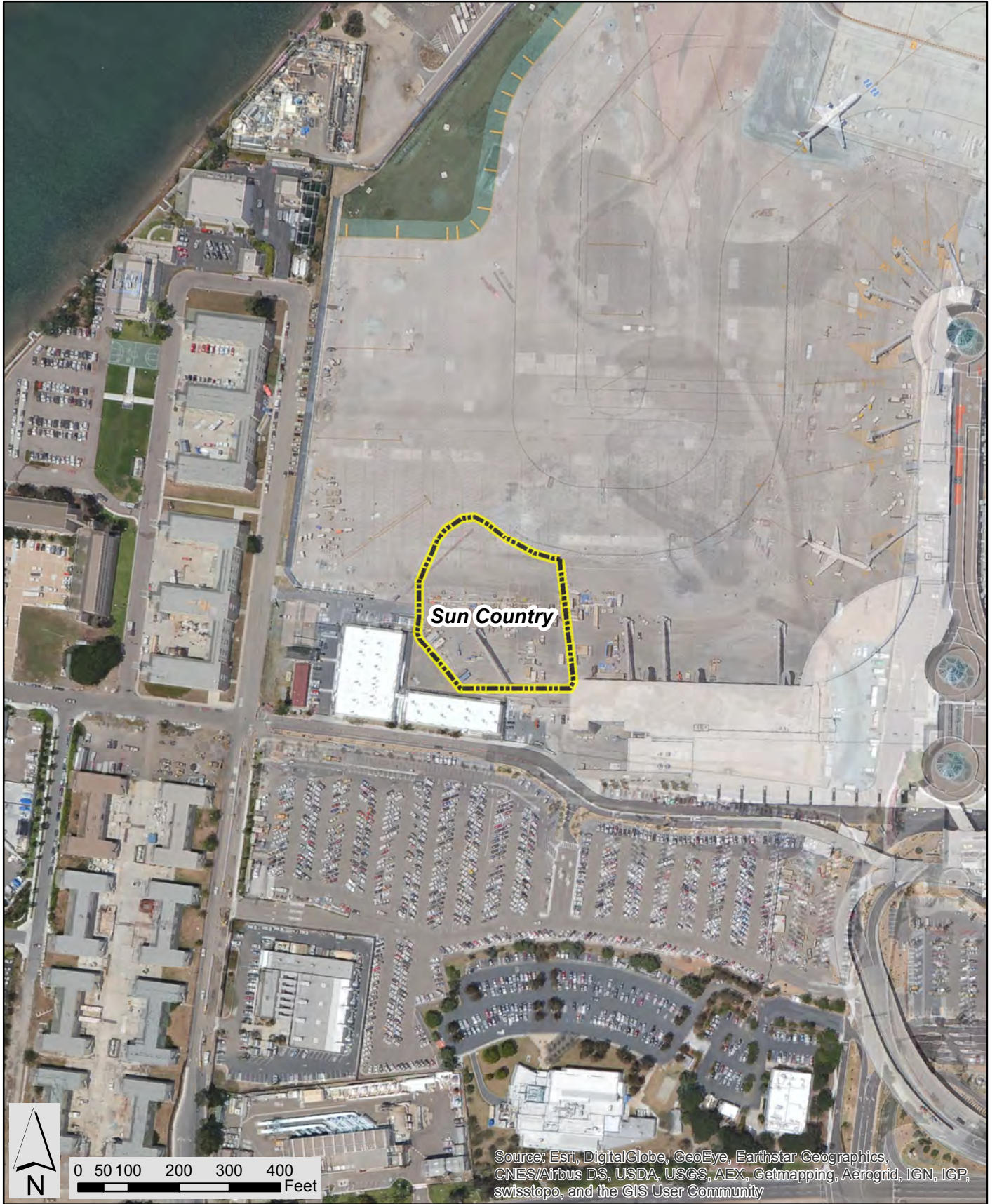
Utilizes Delta material storage areas; no on-site storage or operations

Materials Storage Amounts

No recorded materials stored in quantities above 55 gallon

Shipping/Receiving Area

Delta maintenance/cargo area



PROJECT NO.:
5025-13-0031

DATE:
JUNE 2015

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**Sun Country
Operating Areas**

San Diego International Airport

FIGURE

E-32

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United Airlines

SIC Codes 4512, 4522
 Primary Activity Passenger Carrier
 Drainage Areas 6, 7, 8, 12, 15
 Nearest MS4 Inlet < 200 ft.
 Address 3855 N. Harbor Suite #115
 San Diego, CA 92101

Contact Information
 John Woodard Supervisor - Air Ops
 P 6197855523 C 2026692757
 john.woodard@united.com

 Dan Young Supervisor - Ops
 P 6197855546 C 9493001338
 dan.young@united.com

Facility Description and Activities

*Effective July, 2015, United Express (formerly operated out of commuter terminal) will be relocated to United gates and ticket counters in Terminal 2.

1. United performs maintenance of its own GSE equipment at their maintenance shop located next to the cargo loading/unloading building. Aircraft maintenance is now performed by United.
2. Jetstream, a subtenant to United, conducts air freight processing. Loading and unloading is done by United.
3. U.S. Aviation, a subtenant to United, is responsible for cleaning of aircraft interior and dumping lavatory waste.
4. AccuFleet, a subtenant to United, performs aircraft washing at the gates or remote parking at night. All wash water is vacuumed up and disposed of at the Triturator. AccuFleet equipment is parked by United GSE maintenance shop.
5. Waste is stored in a Hazardous Waste Accumulation Area outside United's maintenance shop.
6. Lavatory deodorant is stored outdoors, at GSE shop with secondary containment.
7. Lavatory deodorant is added to the lavatory truck at the GSE shop and water iwithin the Triturator Area.
8. Safety Kleen collects and disposes of hazardous waste and waste oil.
9. Gate Gourmet provides food service for United.
10. ASIG provides aircraft and equipment fueling at the gates or remote parking areas where the vehicles are parked.
11. As of August 2013 United and Continental operate under on operational plans.
12. Gates 41 and 42 are occasionally used, but are not permanently part of United's operations.

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant Sources

Aircraft sanitary services
 Cargo handling

Potential Pollutants

Anti Freeze
 Battery Acid

Equipment storage
 Fluid leaks
 Fuel spills,
 Fuel transfer Material
 loading/unloading Outdoor
 waste storage Potable
 water flushing
 Tank fuel transfer
 Trash collection

Cleaning Solutions
 Coolant
 Degreasers (Citrus based)
 Fuel
 Lavatory Chemicals
 Lavatory Wastes
 Lubricants
 Metals
 Oil & Grease
 Paints
 Radioactive Goods
 Solvents
 Trash

Best Management Practices Applicable to Facility

Activities

Non-Storm Water Management
 Outdoor Equipment Ops Maintenance Areas
 Aircraft, Ground Vehicle & Equipment
 Maintenance
 Aircraft, Ground Vehicle & Equipment Fueling
 Aircraft, Ground Vehicle & Equipment Cleaning
 Outdoor Loading/Unloading of Materials
 Outdoor Material Storage
 Waste Handling & Disposal
 Employee Training
 Lavatory Service Operation
 Potable Water System Flushing
 Housekeeping
 Safer/Alternative Products
 Spill Prevention, Control & Clean Up

BMPs

SC01 - 1, 2, 4
 SC02A - 1, 2
 SC02B - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
 SC03 - 1, 2, 4, 5, 6, 8
 SC04 - 1, 2
 SC06 - 1, 2, 3, 4, 6, 7
 SC07 - 1, 2, 3, 5, 7, 10, 11, 12
 SC08 - 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 14
 SC10 - 1, 2, 3, 4
 SC11 - 3, 4, 5, 6, 7, 8, 9, 10
 SC14 - 1, 2, 3
 SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9
 SC19 - 1, 2
 SR01 - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

Portable booms are used during washing to funnel water to collection point where it is removed before entering MS4.

Materials Storage Area

United maintenance/cargo area

Materials Storage Amounts

Lavatory deodorant stored in 55gallon drums in secondary containment at maintenance shop

Waste oil and hazardous waste stored at maintenance shop; may be over 55 gallons

No other materials recorded over 55 gallons

Shipping/Receiving Area

United maintenance/cargo area

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PROJECT NO.:
5025-13-0031
DATE: JUNE 2015
DRAWN BY: RMH
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United
Operating Areas
San Diego International Airport

FIGURE
E-33

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UPS

SIC Codes 4513
 Primary Activity Cargo Handling
 Drainage Areas 5, 6
 Nearest MS4 Inlet < 200 ft.
 Address 3140 E Jurupa St. #G105
 Ontario, CA 91761

Contact Information
 James Bailey Environmental Coordinator
 P 7142760950 C 8589670950
 jhbailey@ups.com

 Will Esquer Supervisor
 P 8585412336 C 9492894381
 wesquer@ups.com

Facility Description and Activities

1. UPS loads and unloads its aircraft at the north ramp next to IAS.
2. A spill kit, located next to the loading/unloading area, contains absorbent pads, booms, and a spill response manual.
3. UPS's own technicians perform maintenance of aircraft and equipment.
4. Most maintenance of tugs and loading equipment occurs outside, including oil changes for tugs. Aircraft maintenance is performed outside.
5. ASIG fuel UPS aircraft, vehicles, and ground support equipment.
6. Integrated Airline Services (IAS) is a vendor that provide man power for loading/unloading services.
7. Asbury picks up hazardous wastes, waste oil and antifreeze.
8. GAT performs lavatory services twice a week.

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant Sources

Aircraft sanitary services
 Cargo handling
 Equipment storage
 Fluid leaks
 Fuel spills, Fuel transfer
 Fuel storage
 Material loading/unloading
 Outdoor waste storage
 Tank fuel transfer
 Trash collection

Potential Pollutants

Anti Freeze
 Battery Acid
 Cleaning Solutions
 Degreasers (Citrus based)
 Fuel
 Hydraulic Fluids
 Lubricants
 Metals
 Oil & Grease
 Sediment
 Solvents

Trash

Best Management Practices Applicable to Facility

Activities

Non-Storm Water Management
 Outdoor Equipment Ops Maintenance Areas
 Aircraft, Ground Vehicle & Equipment Maintenance
 Aircraft, Ground Vehicle & Equipment Fueling
 Aircraft, Ground Vehicle & Equipment Cleaning
 Outdoor Loading/Unloading of Materials
 Outdoor Material Storage
 Waste Handling & Disposal
 Employee Training
 Lavatory Service Operation
 Housekeeping
 Safer/Alternative Products
 Spill Prevention, Control & Clean Up

BMPs

SC01 - 1, 2, 4
 SC02A - 1, 2
 SC02B - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
 SC03 - 1, 2, 3, 4, 5, 6, 8, 9, 10
 SC04 - 1, 2
 SC06 - 1, 2, 3, 4, 6, 7
 SC07 - 1, 2, 3, 7, 11, 12
 SC08 - 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 14
 SC10 - 1, 2, 3, 4
 SC11 - 3, 4, 5, 6, 7, 8
 SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9
 SC19 - 1, 2
 SR01 - 1, 2, 3, 4, 5, 6, 7, 8, 9

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

Materials stored outdoors are covered and contained in sealed storage containers.

Materials Storage Area

UPS trailer, north ramp
 UPS storage shed, north ramp

Materials Storage Amounts

55 gallons antifreeze (stored in quart jugs) in spill pallets inside shed
 55 gallons used oil and grease in spill pallet inside shed

Shipping/Receiving Area

UPS trailer, north ramp



0 50 100 200 300 400 Feet

PROJECT NO.:
5025-13-0031
DATE: JUNE 2015
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UPS
Operating Areas
San Diego International Airport

FIGURE
E-34

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US Airways

SIC Codes 4512, 4522
 Primary Activity Passenger Carrier
 Drainage Areas 6, 12
 Nearest MS4 Inlet 200 - 1000 ft.
 Address 3835 North Harbor Dr. #128
 San Diego, CA 92101

Contact Information
 Faith Ikeda Manager - General
 P 6192315452
 Faith.Ikeda@aa.com

 Kyle Benton Environmental Contact
 P 6193588896
 Kyle.benton@aa.com

Facility Description and Activities

1. Maintenance of GSE is done on the ramp.
2. New oils and some tires are stored under the breezeway between Gates 33 and 34.
3. One flammable material storage locker contains small amount of paint, oil, lubricant, cleaning solutions.
4. US Airways contracts CAS, a subtenant of United Airlines, to handle cargo as of October 20, 2014.
5. A spill cart is located by Gate 33. It contains absorbent towels, litter, brooms, and dust pans.
6. There are two hazardous waste and waste oil accumulation areas; one is inside the maintenance shop, the other is under the breezeway between gates 33 and 34.
7. Heritage collects and recycles hazardous wastes and waste oil as needed.
8. ASIG fuels vehicles and airplanes.
9. DGS cleans interior of planes.
10. GES provides maintenance of equipment.
11. American provides on call maintenance for USAirways.
12. USAirways and American operations are expected to completely merge in April 2015.
13. USAirways and American currently have two separate Hazardous Business Plans. Plan to merge into mostly American's plan, policies, and procedures in April 2015.
14. Operations at gate 35 are expected to move to gate 25 by November, 2014.
15. GAT performs lavatory services. Lavatory is serviced every night. Preventative maintenance is conducted on lavatory vehicles quarterly.

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant Sources

Equipment storage
 Fluid leaks

Potential Pollutants

Anti Freeze
 Battery Acid

Fuel spills,Fuel transfer
 Outdoor waste storage
 Potable water flushing
 Tank fuel transfer
 Trash collection

Tenant Summaries
 Cleaning Solutions
 Fuel
 Hydraulic Fluids
 Lubricants
 Oil & Grease
 Trash

Best Management Practices Applicable to Facility

Activities

Non-Storm Water Management
 Outdoor Equipment Ops Maintenance Areas
 Aircraft, Ground Vehicle & Equipment
 Maintenance
 Aircraft, Ground Vehicle & Equipment Fueling
 Outdoor Material Storage
 Waste Handling & Disposal
 Employee Training
 Potable Water System Flushing
 Housekeeping
 Safer/Alternative Products
 Spill Prevention, Control & Clean Up

BMPs

SC01 - 1, 2, 4
 SC02A - 1, 2
 SC02B - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
 SC03 - 1, 2, 4, 5, 6, 8
 SC07 - 1, 2, 3, 7, 11, 12
 SC08 - 1, 2, 3, 4, 5, 8, 9, 10, 11, 12, 14
 SC10 - 1, 2, 3, 4
 SC14 - 1, 2, 3
 SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9
 SC19 - 1, 2
 SR01 - 1, 2, 3, 5, 6, 7, 8, 9

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

Concrete curbing is used to direct stormwater away from covered storage area.

Materials Storage Area

Gate 33 and US Airways maintenance/cargo area

Materials Storage Amounts

55 gallon containers hazardous waste and waste oil in maintenance area and Gate 33 under breezeway

100 gallons lubricating oil (Exxon)

Up to 304 cu feet nitrogen gas and 300 cu feet oxygen gas

Shipping/Receiving Area

US Airways maintenance/cargo area



PROJECT NO.:
5025-13-0031

DATE:
JUNE 2015

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**US Airways
Operating Areas**
San Diego International Airport

FIGURE
E-35

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Virgin America Airlines

SIC Codes	4512, 4522	Contact Information	
Primary Activity	Passenger Carrier	Ron Cook	Environmental Contact
Drainage Areas	12	P 6192206770	C 6505206309
Nearest MS4 Inlet	< 200 ft.	ron.cook@virginamerica.com	
Address	3707 North Harbor Dr. #104 San Diego, CA 92101	Nadya Benitez	Supervisor
		P 6192206771	
		nadya.benitez@virginamerica.com	

Facility Description and Activities

**Expected to move from Gate 25 to gate 35 by Nov 15, 2014, check with tenant for move status. Gates, offices, ramps are all planned to move. No longer operates out of Gate 26.

1. DAL Global Services (DGS) performs ground handling and equipment maintenance.
2. Pacific Aircraft Maintenance performs minor aircraft maintenance at gate. 2. ASIG performs aircraft fueling.
3. A small amount of universal waste collected by airport security checks is stored in a flammable locker inside the bag room outside Virgin America's office. Ocean Blue picks up as needed.
4. One spill cart is located by Gate 2
5. SDCRAA spill kit is located at Gate 26, which is also used in case of an emergency. 5. Virgin performs a monthly stormwater prevention assessment of operational area.
6. No lavatory and catering services are performed in San Diego.
7. ELS is contracted to maintain the jet bridge and belts.
8. Virgin America owns one vehicle. It is kept in very good condition. Fueling and maintenance is performed offside.

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant Sources

Drainage system maintenance
Equipment storage
Fluid leaks
Fuel spills,Fuel transfer
Outdoor waste storage
Potable water flushing
Trash collection

Potential Pollutants

Anti Freeze
Cleaning Solutions
Food Waste
Fuel
Lubricants
Oil & Grease
Recyclables
Trash

Best Management Practices Applicable to Facility

ActivitiesBMPs

Non-Storm Water Management	SC01 - 1, 2, 4
Outdoor Equipment Ops Maintenance Areas	SC02A - 1, 2
Aircraft, Ground Vehicle & Equipment Maintenance	SC02B - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Aircraft, Ground Vehicle & Equipment Fueling	SC03 - 1, 2, 4, 5, 6, 8
Aircraft, Ground Vehicle & Equipment Cleaning	SC04 - 1, 2
Outdoor Loading/Unloading of Materials	SC06 - 6, 7
Outdoor Material Storage	SC07 - 1, 2, 3
Waste Handling & Disposal	SC08 - 1, 2, 3, 4, 5, 8, 9, 10, 11, 12, 14
Employee Training	SC10 - 1, 2, 4
Potable Water System Flushing	SC14 - 1, 2, 3
Drainage System Maintenance	SC17 - 2, 7
Housekeeping	SC18 - 1, 2, 3, 4, 5, 6, 7, 9
Safer/Alternative Products	SC19 - 1, 2
Spill Prevention, Control & Clean Up	SR01 - 1, 2, 3, 4, 5, 6, 7, 8, 9

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

Materials Storage Area

Gate 35 office

Materials Storage Amounts

No materials recorded over 55 gallons

Small amount of universal waste stored in flammable locker at Gate 35 office

Shipping/Receiving Area

Not recorded



PROJECT NO.:
 5025-13-0031
DATE:
 JUNE 2015
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 AJA



Virgin America
Operating Areas
San Diego International Airport

FIGURE
E-36

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Volaris Airlines

SIC Codes 4512, 4581
 Primary Activity Passenger Carrier
 Drainage Areas 8, 9, 12
 Nearest MS4 Inlet < 200 ft.
 Address 3225 North Harbor Dr.
 San Diego, CA 92101

Contact Information
 Javier Romero Manager - Station
 P 6192945826
 javier.romero@volaris.com

 Lina Bustamante Assistant Manager
 P 6192945826
 lina.bustamante@volaris.com

Facility Description and Activities

1. Volaris has 1 flight two times a week (Friday and Sunday) and no RON. During the high season they are expecting to operate daily. Operate mainly out of Gate 22, although in some occasions, use Gate 20 and 21.
2. Only two onsite Volaris employees.
3. Matrix employees handle ticket counter as well as help with the operations coordination when manager is not onsite (ex. reporting spill procedures).
4. APS loads bags, cleans the interior of the plane, and performs the lavatory services. APS is also in charge of maintaining gate area during operations.
5. Master Lightning provides security at ticket counter, baggage area, and during boarding (above ground and below ground).
6. Maintenance service is provided by CAS.
7. LSG Sky Chef removes garbage from the planes and disposes of at an incinerator off SAN Property. Ice brought from their facility.
8. ASIG does the fueling.
9. Volaris provides training for ramp workers, from APS, that covers spill response and materials handling.
10. No cargo.

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant Sources

Aircraft sanitary services
 Equipment storage
 Fluid leaks
 Fuel spills, Fuel transfer
 Outdoor waste storage

Potential Pollutants

Anti Freeze
 Cleaning Solutions
 Fuel
 Lavatory Chemicals
 Lavatory Wastes

Potable water flushing
Trash collection

Tenant Summaries
Oil & Grease
Trash

Best Management Practices Applicable to Facility

Activities

Non-Storm Water Management
Outdoor Equipment Ops Maintenance Areas
Aircraft, Ground Vehicle & Equipment Maintenance
Aircraft, Ground Vehicle & Equipment Fueling
Aircraft, Ground Vehicle & Equipment Cleaning
Outdoor Material Storage
Waste Handling & Disposal
Employee Training
Lavatory Service Operation
Potable Water System Flushing
Housekeeping
Spill Prevention, Control & Clean Up

BMPs

SC01 - 1, 2, 4
SC02A - 1, 2
SC02B - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
SC03 - 1, 2, 4, 5, 6, 8, 9, 10
SC04 - 1, 2, 3, 4, 5
SC07 - 1, 2, 3
SC08 - 1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12
SC10 - 1, 2, 3, 4
SC11 - 3, 4, 5, 6, 7, 8, 9, 10
SC14 - 1, 2, 3
SC18 - 1, 2, 3, 4, 5
SR01 - 1, 2, 3, 4, 5, 6, 7, 8, 9

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

Materials Storage Area
Gate 22 office

Materials Storage Amounts
No materials recorded over 55 gallons

Shipping/Receiving Area
Not recorded



PROJECT NO.:
5025-13-0031

DATE:
JUNE 2015

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RMH

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AJA



Volaris
Operating Areas
San Diego International Airport

FIGURE
E-37

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West Jet Airlines

SIC Codes	4512, 4522	Contact Information	
Primary Activity	Passenger Carrier	Ken Sturgill	General Manager
Drainage Areas	12	P 6192200164	C 7757710699
Nearest MS4 Inlet	200 - 1000 ft.	ksturgill@atsstl.com	
Address	3707 North Harbor Dr. T2E San Diego, CA 92101	Mike Ehrentraut	Manager - Regional
		P 4035397450	C 4034700817
		mehrentraut@westjet.com	

Facility Description and Activities

1. All equipment maintenance is done in the GES maintenance shop area by GES. Daily vital fluid checks are performed by ATS staff and monthly Preventive Maintenance Inspections are conducted by Tom Masarenas of GES.
2. Fueling is conducted by ASIG at the Gate. ATS conducts monthly station safety audits which include observing fueling. ATS requests a poundage of fuel to be put into the aircraft prior to each fueling.
3. Cleaning of vehicles is done at the triturator facility. No aircraft cleaning is performed at SIDA.
4. All ground handling activities are performed by ATS.
5. All aircraft maintenance is performed by Pacific Aircraft Maintenance.
6. West Jet operates out of Gate 22 (a shared gate with Hawaiian and Air Canada) on Monday, Wednesday, Friday, and Sunday and gate 26.
7. West Jet does not have or use a FOD bucket at gate 22. Any FOD buckets present belong to other tenants. ATS uses their ramp tool kit as a FOD bucket, and is emptied nightly.
8. No potable water flushing occurs at the airport, all flushing and cleaning is done offsite. 7. ATS is a subtenant and performs services below the wing for West Jet.

Significant Materials/Activities Potentially Exposed to Storm Water

Potential Pollutant Sources

Aircraft sanitary services
Equipment storage
Fluid leaks
Fuel spills, Fuel transfer
Material loading/unloading
Trash collection

Potential Pollutants

Anti Freeze
Battery Acid
Cleaning Solutions
Fuel
Lavatory Chemicals
Lavatory Wastes
Lubricants

Metals

Oil & Grease

Sediment

Trash

Best Management Practices Applicable to Facility

Activities

Non-Storm Water Management
 Outdoor Equipment Ops Maintenance Areas
 Aircraft, Ground Vehicle & Equipment Maintenance
 Aircraft, Ground Vehicle & Equipment Fueling
 Aircraft, Ground Vehicle & Equipment Cleaning
 Outdoor Loading/Unloading of Materials
 Waste Handling & Disposal
 Employee Training
 Lavatory Service Operation
 Housekeeping
 Safer/Alternative Products
 Spill Prevention, Control & Clean Up

BMPs

SC01 - 1, 2, 4
 SC02A - 1, 2
 SC02B - 1, 2, 3, 4, 5, 6, 10, 11, 12, 13
 SC03 - 1, 2, 4, 5, 6, 8
 SC04 - 1, 2
 SC06 - 1, 2, 3, 6, 7
 SC08 - 1, 2, 3, 4, 8, 9, 12
 SC10 - 1, 2, 4
 SC11 - 3, 4, 5, 6, 7, 8, 9, 10
 SC18 - 1, 2, 3, 4, 5, 9
 SC19 - 1, 2
 SR01 - 1, 2, 3, 5, 6, 7, 8, 9

* Appendix B provides descriptions for each BMP category.

Structural Control measures used by facility:

Materials Storage Area

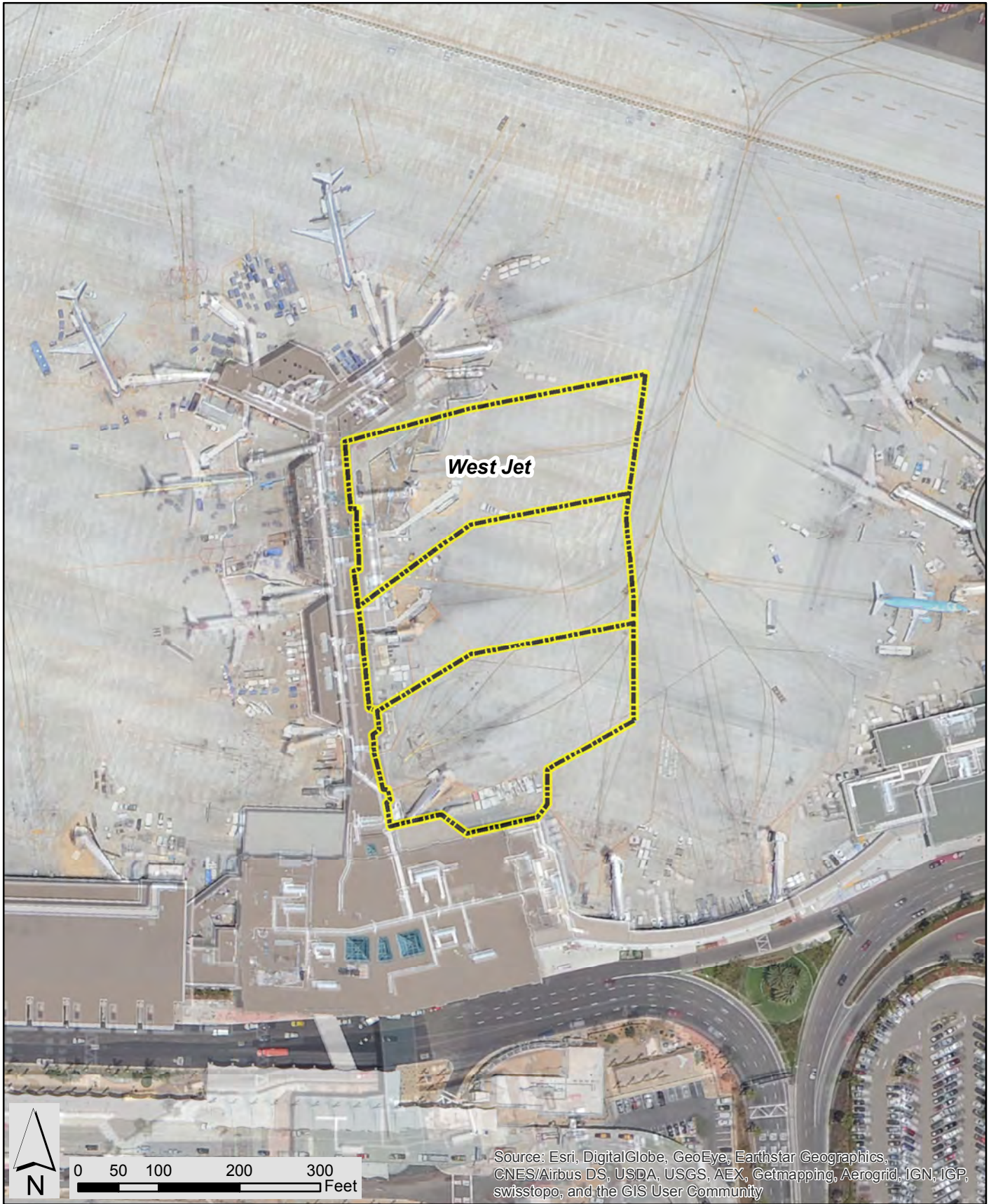
Gate 22 office

Materials Storage Amounts

No materials recorded over 55 gallons

Shipping/Receiving Area

Not recorded



PROJECT NO.:
5025-13-0031

DATE:
JUNE 2015

DRAWN BY:
RMH

CHECKED BY:
AJA



**West Jet
Operating Areas
San Diego International Airport**

FIGURE
E-38

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APPENDIX F
AUTHORITY RULES & REGULATIONS

Appendix F - Authority Rules & Regulations



RULES & REGULATIONS

at San Diego International Airport



MASTERING THE ART OF AIRPORTS

SAN DIEGO COUNTY REGIONAL AIRPORT AUTHORITY
3225 NORTH HARBOR DR., SAN DIEGO, CA 92101
619.400.2404 | SAN.ORG

San Diego International Airport Rules and Regulations



The statements contained herein express the policy of the San Diego County Regional Airport Authority, duly adopted as the Rules and Regulations, and are intended to ensure the safe and efficient operations of the San Diego International Airport.

These Rules and Regulations govern the general conduct of the public, tenants, employees and commercial users of the San Diego International Airport as their activities relate to the possession, management, supervision, operation and control of the airport by the San Diego County Regional Airport Authority.

Issued and Approved by:

San Diego County Regional Airport Authority

3225 North Harbor Drive, San Diego, CA 92101 (619) 400-2400 | www.san.org

All amendments to this document require document owner review and approval. Other approvals may be required.		
REVISION NUMBER	EFFECTIVE DATE	SUMMARY OF AMENDMENTS:
Original	January 2003	Original Document
v1.0	March 2003	Revised
v2.0	October 2010	Complete Revision
v2.1	April 2011	1) 2.21 Solicitation and Expressive Activities. 2) 2.22 Commercial, Filming and Recording. 3) 5.3 Parking Areas. 4) 7.3 Enforcement.
v2.2	July 2011	1) 3.2.5.C.1.e (3) Ground Operations, Starting and Running Engines, Starting Engines. 2) 5.4.B.1 Commercial Transportation Vehicles, Ground Transportation Permits, Vehicle Restrictions. 3) 5.4.D Commercial Transportation Vehicles, Transferability of Permits. 4) 5.4.X Commercial Transportation Vehicles, Lost Property and Luggage.
v3.0	October 2011	1) 3.2.5.F.5.b & c (2.) Ground Operations, Aircraft Parking. 2) 5.4.B.1 (5) Commercial Transportation Vehicles, Ground Transportation Permits, Vehicle Restrictions. 3) 5.4.N Commercial Transportation Vehicles, Driver Appearance.
v3.1	January 2012	1) 3.4.5 Fueling Operations. 2) 3.2.5.A Ground Operations, Ramp Operations. 3) 3.2.10.A Aircraft Washing. 4) 3.2.10.B Aircraft De-icing. 5) 3.3.4.A Vehicle Operations, Motor Vehicle and Equipment Operation around Aircraft. 6) 3.3.4.B Parking. 7) 3.3.4.C Speed Limits and Operations on the Air Operations Area (AOA). 8) 3.3.4.D Cleaning, and Maintenance of Vehicles.
v3.1	April 2012	No amendments for Quarter Ending March 31, 2012

All amendments to this document require document owner review and approval. Other approvals may be required.		
REVISION NUMBER	EFFECTIVE DATE	SUMMARY OF AMENDMENTS
v3.2	July 2012	<ul style="list-style-type: none"> 1) 2.9 Obstructions and Roadway Use 2) 7.7 Schedule of Administrative Penalties 3) 3.3.4.C.2.a Vehicle Operations, Speed Limits and Operations on Air Operations Area (AOA). 4) 5.4.Z.3 & 5.4.Z.4 Commercial Transportation Vehicles, Conversion Incentives and Non-Conversion Fees.
v3.3	Oct 2012	<ul style="list-style-type: none"> 1) Definitions and Acronyms. 2) 5.4.B.1.4 Commercial Transportation Vehicle, Ground Transportation Permits, Vehicle Restrictions. 3) 5.4.Z.1.a Commercial Transportation Vehicles, Ground Transportation Vehicle Conversion Incentive-based Program, Standard Age Replacement Policy.
v4.0	January 2013	<ul style="list-style-type: none"> 1) 5.4.S. (4.) Commercial Transportation Vehicles, Taxicabs and Vehicles for Hire, Background Check Procedures for Vehicle for Hire Drivers, Acceptable Identification Documents. 2) 5.4.Z. (3.) Commercial Transportation Vehicles, Ground Transportation Vehicle Conversion Incentive-Based Program, Conversion Incentives. 3) 5.4.Z. (4.) Commercial Transportation Vehicles, Ground Transportation Vehicle Conversion Incentive-Based Program, Non-Conversion Incentives. 4) 6.2.B., Added New Regulation 6.2.B. (2.) General Safety Duties, Fire Extinguishers; includes applicable cross references to 3.2.5.A. (1.) Ground Operations, Ramp Operations, Section 3.2.5.C.1.d Ground Operations, Starting and Running Engines, Section 3.4.5 (A.) Fueling Operations. 5) 7.7 Schedule of Administrative Penalties – added violation for 6.2.B.(2.) Ramp Fire Extinguishers.
v4.1	July 2013	<ul style="list-style-type: none"> 1) 7.3 (d) Enforcement

All amendments to this document require document owner review and approval. Other approvals may be required.		
REVISION NUMBER	EFFECTIVE DATE	SUMMARY OF AMENDMENTS
v5.0	January 2014	<ul style="list-style-type: none"> 1) 2.8 Signage 2) 5.4 (M) Driver’s Examination 3) 1.3 Enforcement 4) 2.16 Restricted Areas 5) 2.17.D.3 Badges, Unauthorized Uses of Badges 6) 5.4.S.3.a.1, Commercial Transportation Vehicles, Taxicabs and Vehicles for Hire, Spare Taxicab Use Policy. 7) 7.6.A.1 Appeals, Administrative Penalties and Suspension or Revocation of SAN ID Badges and Privileges.
v5.1	April 2014	<ul style="list-style-type: none"> 1) Reviewer’s and Approver’s – Historical Document 2) 1.6 Technical Content, Revisions and Access to Airport Rules and Regulations 3) 1.7 Department Contact Information by Section 4) 2.21 Solicitation and Expressive Activities 5) 2.22 Commercial Photography, Filming and Recording 6) 4.2.E Business Conduct, Occupancy, Lock and Keys 7) 4.4.A Improvements, Approval Required 8) 4.4.B Improvements, Approval Process 9) 4.5.B.1 Security, Construction, Ensuring Compliance 10) 4.9.C Signage and Tenant Advertising, Banners 11) 4.9.D Signage and Tenant Advertising, Digital Corporate Welcome Signs 12) 4.9.E Signage and Tenant Advertising, Community Outreach Program, Regional Non-Profit Organizations 13) 4.9.F Signage and Tenant Advertising, Holiday Decorations 14) 5.2.I Regulations Applicable to All Motor Vehicles, Accidents 15) 5.2.J Regulations Applicable to All Motor Vehicles, Towed Vehicles 16) 5.4.S.3 Commercial Transportation Vehicles, Taxicabs and Vehicles for Hire, Spare Taxicab Use Policy 17) 6.2.D General Safety Duties, Safety Inspections 18) 7.3 (d) Enforcement 19) 7.7 Schedule of Administrative Penalties

All amendments to this document require document owner review and approval. Other approvals may be required.		
REVISION NUMBER	EFFECTIVE DATE	SUMMARY OF AMENDMENTS
v5.2	July 2014	<ul style="list-style-type: none"> 1) 1.7 Department Contact Information 2) 2.21 Solicitation and Expressive Activities 3) 2.22 Commercial Photography, Filming and Recording 4) 3.3.4.A.7 Vehicle Operations, Motor Vehicle and Equipment Operation around Aircraft 5) 3.4.9.A, Foreign Object Debris (FOD), General 6) 4.2.E Business Conduct, Occupancy, Lock and Keys 7) 4.4.A Improvements, Approval Required 8) 4.4.B Improvements, Approval Process 9) 4.5.B.1 Security, Construction, Ensuring Compliance 10) 4.9.C Signage and Tenant Advertising, Banners 11) 4.9.E Signage and Tenant Advertising, Community Outreach Program, Regional Non-Profit Organizations 12) 4.9.F Signage and Tenant Advertising, Holiday Decorations
v5.3	October 2014	<ul style="list-style-type: none"> 1) Definitions and Acronyms 2) 5.4 Commercial Transportation Vehicles 3) 5.4 Commercial Transportation Vehicles, B. Ground Transportation Permits, 1. Vehicle Restrictions, 2. Permit Terms and Fees, 3. Automated Vehicle Identification (AVI) Program, 4. Vehicle Inspections 4) 5.4 Commercial Transportation Vehicles, C. Driver's Permits, 1. Restrictions on Issuance and Exceptions, 3. Term and Fees 5) 5.4 Commercial Transportation Vehicles, F. Insurance 6) 5.4 Commercial Transportation Vehicles, D. Issuance and Transfer of Permits 7) 5.4 Commercial Transportation Vehicles, A. Conformance with Laws, I. Vehicle Condition, J. Identification, K. Pickup Areas, M. Driver's Examination, N. Driver's Appearance, O. Duty to Transportation, P. Non-Discrimination, Q. Fares and Receipts. 8) 5.3 Parking Areas 9) 5.2 Regulations Applicable to all Motor Vehicles, B. Traffic Signs, Markers and Devices
v5.4	January 2015	<ul style="list-style-type: none"> 1) Section Definitions and Acronyms 2) Section 3.2.5.F Ground Operations, Aircraft Parking 3) Section 3.3.1.D Air Operations Area (AOA) Driver's Permits (Informational Section)

San Diego International Airport
Rules and Regulations

		<p>4) Section 5.3 Parking Areas</p> <p>5) Section 5.4 Commercial Transportation Vehicles, U. Courtesy Vehicles (Hotel, Off-Airport Parking, Rental Car and others), 1. Rules of Operation</p> <p>6) Section 5.4 Commercial Transportation Vehicles, Z. Ground Transportation Vehicle Conversion Incentive-Based Program</p> <p>7) Section 5.4 Commercial Transportation Vehicles, Z. Ground Transportation Vehicle Conversion Incentive-Based Program, 2. Hotel/Motel Shuttle Consolidation Incentive Program</p> <p>8) Section 7.6.A. Appeals, Administrative Penalties and Suspension or Revocation of SAN ID Badges and Privileges</p>
v5.5	April 2015	<p>1) Section Definitions and Acronyms</p> <p>2) Section 3.2.5 Ground Operations, B. Push Back/Tow Out Procedures</p> <p>3) Section 3.2.5 Ground Operations, D. Aircraft Taxiing</p> <p>4) Section 3.2.5 Ground Operations, E. Aircraft Towing</p> <p>5) Section 3.2.5 Ground Operations, F. Aircraft Parking</p>

Contents

SECTION 1	1
1.0 INTRODUCTION	1
1.1 SCOPE, PURPOSE AND APPLICABILITY	1
1.2 AUTHORITY	1
A. Ownership and Operation	1
B. Delegation of Authority	1
C. Emergency Conditions	1
D. Compliance	2
E. Governance	2
F. Severability	2
1.3 ENFORCEMENT	3
1.4 SPECIAL NOTICES, ADVISORIES AND DIRECTIVES	4
1.5 RATES, FEES AND CHARGES	4
1.6 TECHNICAL CONTENT, REVISIONS AND ACCESS TO AIRPORT RULES AND REGULATIONS	4
1.7 DEPARTMENT CONTACT INFORMATION	5
SECTION 2	6
2.0 GENERAL CONDUCT	6
2.1 SCOPE AND APPLICABILITY	6
2.2 SMOKING	6
2.3 LITTER AND REFUSE	6
2.4 POLLUTION PREVENTION AND CONTROL AND DUMPING	7
2.5 ILLEGAL DISCHARGES AND ILLICIT CONNECTIONS	7
2.6 ABANDONMENT	7
2.7 DAMAGE OR ADDITIONS TO AIRPORT PROPERTY	8
2.8 SIGNAGE	8
2.9 OBSTRUCTIONS AND ROADWAY USE	8
2.10 USE OF BAGGAGE CARTS	9
2.11 ANIMALS	9
2.12 LOST AND FOUND PROPERTY	10
2.13 REQUESTS FOR LAW ENFORCEMENT ASSISTANCE	10

San Diego International Airport
Rules and Regulations

2.14 WEAPONS	10
2.15 TRESPASSING	11
2.16 RESTRICTED AREAS	12
2.17 BADGES	13
A. Display of SAN Identification (ID) Badge	13
B. Visitor Badges.....	13
C. Issuance of SAN Identification (ID) Badge	13
D. Unauthorized Uses of Badges.....	13
E. Badge Inspection	13
F. Invalidation of Badge.....	14
G. Lost or Stolen Badge.....	14
H. Revocation or Surrendering a SAN Identification (ID) Badge.....	14
2.18 SECURITY EQUIPMENT AND DIRECTIVES	14
2.19 VENDING MACHINES	15
2.20 STORAGE OF EQUIPMENT, FIXTURES AND CARGO.....	15
2.21 SOLICITATION AND EXPRESSIVE ACTIVITIES	15
2.22 COMMERCIAL PHOTOGRAPHY, FILMING AND RECORDING	16
SECTION 3	17
3.0 AIRFIELD OPERATIONS.....	17
3.1 SCOPE AND APPLICABILITY	17
3.2 AERONAUTICAL OPERATIONS ON THE AIR OPERATIONS AREA (AOA).....	17
3.2.1 GENERAL RULES	17
A. Compliance	17
B. Negligent Aircraft Operations	17
C. Damage to Authority Property.....	18
D. Commercial Aircraft Operations.....	18
E. Radio Communications.....	18
F. Air Operations Area (AOA) Smoking.....	19
G. Unauthorized Use of Aircraft.....	19
H. Use of Commercial Space on the Air Operations Area (AOA)	19
I. Storm Water Compliance	19

San Diego International Airport
Rules and Regulations

J.	Construction Activity on the Air Operations Area (AOA)	21
K.	Special Events on the Air Operations Area (AOA)	21
L.	Minimizing Bird-Strike Potential	21
3.2.2	AIR TRAFFIC RULES	22
A.	Flight Tests and Practice Operations	22
B.	Aircraft Operations	22
C.	Parachute Operations	23
3.2.3	AIRPORT USE REGULATIONS	23
3.2.4	AIRCRAFT ACCESS AUTHORIZATION	23
3.2.5	GROUND OPERATIONS	23
A.	Ramp Operations	23
B.	Push Back/Tow Out Procedures	24
C.	Starting and Running Engines	25
1.	Starting Engines	25
2.	Engine Run-ups	26
D.	Aircraft Taxiing	26
E.	Aircraft Towing	27
F.	Aircraft Parking	28
3.2.6	GATE USAGE AND ASSIGNMENTS	29
A.	General	29
B.	Usage of Gates Assigned to Other Airlines	30
C.	International Gate Usage	30
D.	Remain Overnight Aircraft (RON)	30
E.	Parts Delivery Aircraft Parking	30
3.2.7	CHARTER FLIGHT AND ITINERANT OPERATIONS	31
3.2.8	HELICOPTER OPERATIONS	31
A.	Arrival	31
B.	Departure	32
C.	Noise Abatement	32
3.2.9	AIRCRAFT INCIDENTS AND ACCIDENTS	32
A.	Emergency Response	32

San Diego International Airport
Rules and Regulations

- B. Notification/Coordination 33
 - 1. Air Carriers 33
 - 2. Air Carriers not based at the Airport 33
 - 3. General Aviation 33
- C. Aircraft Accident Reports 33
- D. Disabled Aircraft 34
- 3.2.10 AIRCRAFT WASHING AND DE-ICING 34
 - A. Aircraft Washing 34
 - B. Aircraft De-icing 35
- 3.2.11 MAINTENANCE AND REPAIR OF AIRCRAFT 36
 - A. Designated Locations 36
 - B. Gates 36
 - C. Hangars 37
 - D. Containers 37
- 3.2.12 STORAGE OF GROUND SERVICE EQUIPMENT 37
- 3.2.13 STORAGE OF AIRCRAFT AND PARTS 38
- 3.3 VEHICLE OPERATIONS ON THE AIR OPERATIONS AREA (AOA) 38
 - 3.3.1 AIR OPERATIONS AREA (AOA) DRIVER’S PERMITS 38
 - 3.3.2 REGISTERING OF VEHICLES 38
 - A. Air Operations Area (AOA) Vehicle Permits – Vehicles Licensed by the State of California
38
 - B. Air Operations Area (AOA) - Vehicles Not Licensed by the State of California 39
 - C. Air Operations Area (AOA) Vehicle Identification 40
 - D. Large Vehicles 40
 - 3.3.3 AUTHORIZED AIR OPERATIONS AREA (AOA) AREAS FOR MOTOR VEHICLES 40
 - 3.3.4 VEHICLE OPERATIONS 41
 - A. Motor Vehicle and Equipment Operation around Aircraft 41
 - B. Parking 42
 - C. Speed Limits and Operations on the Air Operations Area (AOA) 43
 - D. Cleaning, and Maintenance of Vehicles 43
 - E. Cleaning and Servicing of Lavatory Equipment 44

San Diego International Airport
Rules and Regulations

F. Alcohol and Drugs.....	45
G. Accidents	45
H. Emergency Vehicles.....	45
I. Ensuring Security	45
3.3.5 VEHICLES OPERATING ON MOVEMENT AREAS	45
3.3.6 ABANDONMENT.....	46
3.4 FUELING OPERATIONS AND SPILL PROTECTION ON THE AIR OPERATIONS AREA (AOA)	47
3.4.1 GENERAL	47
3.4.2 COMPLIANCE.....	47
3.4.3 INSPECTIONS.....	47
3.4.4 STORAGE FACILITIES	48
3.4.5 FUELING OPERATIONS	48
3.4.6 FUEL SERVICE VEHICLES	49
A. General	49
B. Vehicle Parking	50
3.4.7 FUEL SPILLS	51
A. Prevention	51
B. Reporting	51
C. Safety and Clean Up Procedures	52
3.4.8 LAVATORY CHEMICAL AND/OR LAVATORY WASTE SPILLS	54
A. Reporting	54
B. Safety and Clean Up Procedures	54
3.4.9 FOREIGN OBJECT DEBRIS (FOD)	55
A. General	55
B. Foreign Object Debris (FOD) Containers	55
SECTION 4	56
4.0 TERMINAL AND TENANT OPERATIONS.....	56
4.1 SCOPE AND APPLICABILITY	56
4.2 BUSINESS CONDUCT/OCCUPANCY	56
A. Conducting Business in Common Areas	56
B. Prohibited Uses of Premises.....	56

San Diego International Airport
Rules and Regulations

C.	Damage to Fixtures and/or Facilities.....	57
D.	Theft	57
E.	Locks and Keys.....	57
4.3	CLEANLINESS.....	57
4.4	IMPROVEMENTS	58
A.	Approval Required.....	58
B.	Approval Process	58
C.	Hot Work	58
D.	Tenant and their Contractors.....	59
4.5	SECURITY.....	59
A.	General	59
B.	Construction	60
1.	Ensuring Compliance	60
2.	Briefing.....	60
3.	Perimeter Fence and Gate Security	60
4.	Doorway Security.....	61
5.	Airport SAN Identification (ID) Badge Requirements for Contractors.....	62
4.6	STORM WATER COMPLIANCE.....	62
4.7	CARE OF BUILDING.....	64
A.	Covering or Obstructing Windows and Doors.....	64
B.	Baggage Storage Cases	64
C.	Tenant Restrooms.....	64
D.	Defacing Exterior Surfaces.....	65
E.	Utility Systems	65
F.	Painting and Battery Work.....	65
G.	Hot Work	65
4.8	CLOSURE OF ENTRANCES.....	65
4.9	SIGNAGE AND TENANT ADVERTISING	66
A.	Permanent Signage.....	66
B.	Signage Content.....	66
C.	Banners.....	66

San Diego International Airport
Rules and Regulations

D.	Digital Corporate Welcome Signs.....	67
E.	Community Outreach Program – Regional Non-Profit Organizations	67
F.	Holiday Decorations	68
G.	Solicitation of Business.....	68
4.10	TERMINAL PAGING SYSTEM.....	68
4.11	DELIVERIES	68
A.	Use of Public Areas.....	68
B.	Use of Escalators	69
4.12	NOISE	69
4.13	VERMIN AND PESTS	69
4.14	ELECTRONIC EQUIPMENT	70
4.15	QUEUING LINES AND STANCHIONS	70
SECTION 5	.....	71
5.0	MOTOR VEHICLE AND GROUND TRANSPORTATION OPERATIONS.....	71
5.1	SCOPE AND APPLICABILITY	71
5.2	REGULATIONS APPLICABLE TO ALL MOTOR VEHICLES	71
A.	Speed Limits	71
B.	Traffic Signs, Markers and Devices.....	71
C.	Pedestrian Right of Way	72
D.	Vehicle Condition	72
E.	Permission	72
F.	Repairs.....	72
G.	Loading and Unloading of Vehicles	72
H.	Airport Temporary Curbside Parking Permit Rules	72
I.	Accidents	74
J.	Towed Vehicles.....	74
5.3	PARKING AREAS	74
A.	Public Parking	75
B.	Reserved Parking	76
C.	Airport Employee Parking Facilities.....	76
5.4	COMMERCIAL TRANSPORTATION VEHICLES	77

San Diego International Airport
Rules and Regulations

A.	Conformance with Laws	77
B.	Ground Transportation Permits	77
1.	Vehicle Restrictions.....	78
2.	Permit Terms and Fees	79
3.	Automated Vehicle Identification.....	79
4.	Vehicle Inspections	80
5.	Temporary Ground Transportation Service Permit	80
6.	Complaints	81
C.	Driver’s Permits	81
1.	Restrictions on Issuance and Exceptions	81
2.	Application Procedures.....	83
3.	Term and Fees.....	83
4.	Replacement	84
D.	Issuance and Transfer of Permits	84
E.	Suspension, Revocation, Denial and Fine of Permits and Services	87
F.	Insurance	89
G.	Vehicle Registration.....	90
H.	Financial Ownership and Operating Records	90
I.	Vehicle Condition	92
J.	Personal Identification	92
K.	Pickup Areas	93
L.	Hold Lot and Shuttle Island Procedures	95
M.	Driver’s Examination	97
N.	Driver Appearance.....	98
O.	Duty to Transport Passengers	99
P.	Non-Discrimination.....	99
Q.	Fares and Receipts.....	99
R.	Disabled Passenger Services.....	100
1.	Mobility Impaired Demonstration Project.....	100
S.	Taxicabs and Vehicles for Hire.....	101
1.	Taxicab Permit Requirement	101

San Diego International Airport
Rules and Regulations

2.	Taxicab Driver Rules.....	101
3.	Spare Taxicab Use Policy.....	102
4.	Background Check Procedures for Vehicle for Hire Drivers	103
5.	Vehicle Markings for Taxicabs and Vehicles for Hire.....	105
6.	Commercial Credit Card Requirements for Taxicabs and Vehicles for Hire	106
7.	Vehicle Condition of Taxicabs and Vehicles for Hire	106
T.	Vehicle for Hire (PSC Shuttles) – Passenger Stage Carriers.....	107
1.	Shuttle Trainee Ride-Along Policy.....	107
U.	Courtesy Vehicles (Hotel, Off-Airport Parking, Rental Car and others)	108
1.	Rules of Operation	108
2.	Temporary Ground Transportation Service Decals	109
V.	Operation Rules for Charter Vehicles (Charter Party Carriers/TCP).....	109
W.	Subcarriers of Vehicle for Hire (PSC) or Passenger Stage Carriers	110
1.	Approval of Sub-carriers	110
2.	Passenger Stage Corporation (PSC) Prime Carrier Requirements	110
3.	Requirements for a Dedicated Sub-Carrier of a Vehicle for Hire(PSC) Passenger Stage Corporation.....	111
X.	Lost Property and Luggage	112
Y.	Smoking	113
Z.	Ground Transportation Vehicle Conversion Incentive-Based Program	113
1.	Standardized Age Replacement.....	113
2.	Hotel/Motel Shuttle Consolidation Incentive Program	114
3.	Conversion Incentives.....	114
4.	Non-Conversion Fees	114
	SECTION 6	115
	6.0 FIRE, SAFETY AND HAZARDOUS MATERIALS	115
	6.1 SCOPE AND APPLICABILITY	115
	6.2 GENERAL SAFETY DUTIES	115
	A. Fire Alarms.....	115
	B. Fire Extinguishers	116
	C. Cleanliness.....	116

San Diego International Airport
Rules and Regulations

6.3	FIRE HAZARDS	117
A.	Storage of Materials and Equipment	118
1.	General.....	118
2.	Outdoor Storage	118
3.	Flammable Materials	118
4.	Oil-Stained Materials	118
B.	Indoor Work Areas	118
C.	Open Flames.....	119
1.	Approval and Compliance Required	119
2.	Aircraft Storage Areas.....	119
3.	Required Distance.....	120
4.	Operations Restricted to Maintenance Areas	120
5.	Safety Equipment and Training.....	120
D.	Paint Spraying/Stripping, Battery Work and Doping.....	120
E.	Cleaning Fluids.....	121
6.4	ELECTRICAL HAZARDS	121
A.	Portable Lighting	121
B.	Cabling.....	121
6.5	HAZARDOUS MATERIAL AND WASTE	122
A.	Management Plan	122
B.	Business Plan	123
C.	Training.....	123
D.	Damages Due to Non-Compliance	123
6.6	HANGAR SAFETY	123
A.	Motor Vehicles	124
B.	Aircraft.....	124
C.	Spills and Leaks.....	124
D.	Aircraft, Ground Radar and Radio Equipment.....	124
SECTION 7	.....	125
7.0	ADMINISTRATIVE PROCEDURES AND PENALTIES.....	125
7.1	SCOPE AND APPLICABILITY	125

San Diego International Airport
Rules and Regulations

7.2	PENALTIES AND OTHER CONSEQUENCES OF VIOLATION	125
7.3	ENFORCEMENT	125
7.4	NOTICE OF VIOLATION	126
7.5	RESPONSIBILITY AND LIABILITY	126
7.6	APPEALS	127
	A. Administrative Penalties and Suspension or Revocation of SAN ID Badges and Privileges 127	
	B. Suspension, Revocation and Denial of Ground Transportation Permits and Services.....	128
7.7	SCHEDULE OF ADMINISTRATIVE PENALTIES.....	131

DEFINITIONS AND ACRONYMS

Definitions

“Air operations area” (AOA) means the area of the Airport situated within the perimeter fence line which is used primarily for aircraft parking, taxiing, refueling, landing, take off and surface maneuvering; includes the airfield, aprons, ramps, taxiways and aircraft movement areas.

“Air traffic control tower” (ATCT) means the facility operated by the Federal Aviation Administration (FAA) which controls the air and ground movement of aircraft and ground vehicles operating on the movement areas of the Airport.

“Aircraft parking area” means the defined areas of the Airport intended exclusively for parking of aircraft and loading or unloading of passengers and cargo.

“Airport” means the San Diego International Airport, Lindbergh Field (SDIA).

“Airport service equipment” means the vehicles and equipment routinely used for service, maintenance or construction.

“Alternative fuel vehicle” (AFV) means a vehicle that runs on an energy source, fuel or blend of fuels; acceptable fuels and energy sources include, but are not limited to, compressed natural gas, biodiesel from a waste product and electricity that achieves a reduction of at least 10 percent (10%) carbon intensity relative to petroleum fuel, as contained in Governor Schwarzenegger’s Executive Order S-01-07.

“Apron” means the defined area of the Airport intended to accommodate aircraft for the purposes of loading or unloading passengers or cargo, refueling, parking or maintenance. See “Ramp.”

“Authority” means the San Diego County Regional Airport Authority (SDCRAA).

“Automatic vehicle identification system” (AVI) means the system for the automatic tracking of vehicle movement on the Airport roadways and parking facilities; includes the placement of a transponder or other device upon a vehicle.

“Best management practices” (BMPs) means storm water management practices employed to prevent or reduce storm water and surface water pollution; includes, without limitation, the use of tarps or covers for the outdoor storage of materials, the use of spill-containment pallets for the storage of liquids, and the prompt cleanup of spills.

“Charter vehicle” means any vehicle issued a Charter-Party Carrier of Passengers Certificate by the California Public Utilities Commission.

San Diego International Airport Rules and Regulations

“Clean Air Vehicle” (CAV) means a vehicle that meets the criteria for a low emission vehicle as defined in the California Vehicle Code §5205.5, Low Emission Vehicle Identification for High-Occupancy Vehicle Lane Use. A CAV qualifies as an “alternative fuel vehicle” (AFV) under the Airport Authority’s Ground Transportation Vehicle Conversion Incentive-Based Program.

“Commercial ground transportation operator” or “operator” includes any business that provides ground transportation services to Airport patrons for compensation or as a courtesy service; includes, but is not limited to, taxicabs, charter vehicles (TCP), vehicles for hire (PSC), and courtesy vehicles.

“Commercial ground transportation vehicle” means a motor vehicle of a type required to be registered with the Department of Motor Vehicles of the State of California that is used or maintained for the transportation of persons for hire, compensation or profit; includes, but is not limited to, all passenger stage corporations, charter party carriers, taxicabs, and courtesy vehicles.

“Courtesy vehicle” means any vehicle used by a hotel, rental car company, off-airport parking lot, or any other service transporting passengers where there is no charge for said services.

“Driver” includes any employee, agent or independent contractor of a commercial ground transportation operator or Airport tenant who drives or operates a motor vehicle or equipment upon the Airport.

“Emergency vehicle” includes aircraft rescue and fire fighting vehicles, ambulances, and other authorized vehicles approved and routinely operated for response to emergency situations, including mutual aid.

“Executive Director” means the President/CEO of the Airport.

“Fire Code” means the 2007 California Fire Code. [Code of Regulations, Title 24, Part 9]

“Foreign object debris” (FOD) means any type of debris on aircraft ramps, aprons or aircraft movement areas; includes, without limitation, nuts, bolts, plastic, cans, rocks, baggage pieces and parts.

“Ground service equipment” (GSE) means vehicles and equipment approved and used on the aircraft aprons or parking areas in support of airport operations.

“Hazardous material” means any substance or material capable of posing an unreasonable risk to health, safety and/or property; includes gasoline, diesel fuel, other petroleum hydrocarbons, natural gas liquids, antifreeze, chemical de-icing materials, lavatory chemicals, and any

San Diego International Airport Rules and Regulations

substance whether solid, liquid, or gaseous in nature which is defined as a hazardous substance or hazardous waste under any federal, state, or local statute, regulation, rule or ordinance, including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act, the Resource Conservation and Recovery Act, the Clean Air Act, and the Clean Water Act, or the Hazardous Materials Transportation Act.

“Hazardous waste” includes any waste or combination of wastes as defined in the Code of Federal Regulations, 40 CFR Part 261.3, 49 CFR Part 171.9 or the California Code of Regulations, 22 CCR § 66261, *et seq.*

“Hearing officer” means the individual or individuals appointed by the Authority to hear the evidence and information regarding parties facing administrative action.

“Improvement” means any upgrade or change made to the original condition; compare “Maintenance.”

“Instrument landing system (ILS) critical area” means the area established near the glide slope antenna that is protected from vehicular and aircraft intrusion in order to prevent the disruption of aircraft navigation equipment on approach to landing. This area is marked and identified by various methods, including signage. Vehicles are not authorized to maneuver through this area without clearance from the air traffic control tower (ATCT) when the area is active.

“Maintenance” means maintaining the existing property/leasehold in the original condition; compare “Improvement.”

“Material safety data sheet” (MSDS) means a document containing basic product information related to the safe handling, storage and disposal of a chemical or material.

“Motor Vehicle”: *Generally, as defined by the California Vehicle Code.* However, ramp vehicles that are not licensed to operate under state provisions shall be subject to the same limitations and regulations governing the operation of a motor vehicle within the confines of the air operations area (AOA).

“Movement area” includes the runways, taxiways, safety areas, instrument landing system (ILS) critical areas, height restrictive areas and other areas of the Airport which are normally under the control of the ATCT by reason of their function to support the landing, take-off and ground maneuvering of aircraft.

“Non-dedicated streets” means streets under the control and jurisdiction of the Authority and not dedicated to any other governmental agency.

San Diego International Airport Rules and Regulations

“Non-movement area” means the areas at the Airport that are used for the parking of aircraft that are not under the direct control of the air traffic control tower (ATCT); includes aprons and ramps.

“Non-peak hours” includes the hours between 11:30 p.m. and 5:00 a.m.

“Non-storm water” includes any runoff or discharge to the storm drain system not composed entirely of storm water.

“Notice to airmen” (NOTAM) means a notice containing information concerning the establishment, condition or change in any component of the National Airspace System (including facilities, services, procedures and hazards) of which the timely knowledge is essential to personnel concerned with flight operations.

“Operator”: See “Commercial Ground Transportation Operator.”

“Permittee” includes any individual, company, organization, entity or affiliate permitted to operate ground transportation service vehicles within the Airport.

"Person" includes any individual, corporation, association, partnership (general or limited), joint venture, trust, estate, limited liability company, governmental body, or other legal entity or organization.

“Pre-arranged transportation” includes any provision of commercial ground transportation services from the Airport, where such transportation was contracted or arranged for, by, or on behalf of the passenger either (1) in advance of the passenger’s arrival at the Airport, or (2) after the passenger’s arrival at the Airport by communicating with a ground transportation service provider; includes transportation provided by a courtesy vehicle where the passenger is not directly charged for such transportation.

“President/CEO”: The powers and duties of the President/CEO may be exercised or performed by an assistant or such person as the President/CEO may designate. The President/CEO is also referred to as “Executive Director” with no change in meaning.

“Public Parking Facilities” includes all parking facilities provided specifically for the public while at the Airport.

“Ramp” means the areas where aircraft are parked, unloaded, loaded, refueled or boarded. See “Apron.”

“Ramp Control Facility” (RCF) is where contracted personnel provide ramp control services in the form of traffic sequencing, separation and issue pushback control instructions within

San Diego International Airport Rules and Regulations

designated non-movement areas. The Ramp Control Facility is located on the roof of Terminal Two West between Gate 38 and Gate 45.

“Restricted area” includes any area of the Airport where access is restricted to use by the tenants or the Authority for its operations only.

“Runway” means the area designed for the landing or taking off of aircraft, identified by a broken white centerline, solid white edge lines and white edge lights.

“Scheduled Operations” includes aircraft operations conducted in accordance with a published schedule between points within the continental United States (domestic), or into or out of the continental United States (flag).

“Security Identification Display Area” (SIDA) means the area identified in the Airport Security Program (ASP) which requires increased security and a continuous display of Airport-issued or approved identification media.

“Solicitation” includes any uninvited initiation of a conversation or other uninvited contact by a driver, other employees, representative or agent (whether formal or informal) of any ground transportation service provider with any person, for the purpose of enticing or persuading said person to use any service or facilities provided by the ground transportation service provider or any affiliate thereof.

“Sterile Concourse” means that portion of the passenger terminal used exclusively by persons who have successfully passed through the security screening process and have been screened according to TSA standards as set forth in Parts 1540 and 1544 of the Transportation Security Regulations (TSRs).

“Storm Water” means runoff which originates from precipitation events, whether rain or snow. Storm water runoff is that portion of precipitation that flows across a surface and into the storm drain system or directly into receiving water (e.g., San Diego Bay).

“Storm Water Code” means the Authority Code prescribing uniform requirements and prohibitions related to the management and control of storm water or non-storm water discharges into any storm water conveyance system on airport property or into any receiving water from airport property. Also known as the "San Diego County Regional Airport Authority Storm Water Management and Discharge Control" and “Storm Water Ordinance.” [Authority Code §§ 8.70 to 8.79].

“Storm Water Management Plan” (SWMP) means the written plan prepared by the Authority that outlines a comprehensive program to reduce and eliminate pollutants from entering the

San Diego International Airport Rules and Regulations

storm drain system and receiving waters (e.g., San Diego Bay). The SWMP describes potential pollutant sources at the Airport and the management programs in place or required for use to reduce or eliminate impacts to storm water or receiving water quality. Also known as the “SAN Storm Water Management Plan.”

“Storm Water Pollution Prevention Plan” (SWPPP) means a written plan that outlines the steps and procedures to be taken to prevent, reduce, and/or eliminate the pollutants potentially generated by a specific tenant or operation or construction project from entering the storm drain system and/or a receiving water (e.g., San Diego Bay).

“Taxicab” means a passenger vehicle for hire designed to carry no more than eight persons, excluding the driver, used to transport passengers on public streets, and where the charges for use of said vehicle are determined by a taximeter.

“Taxicab and vehicle for hire stand” means the areas on Airport property designated and reserved for parking only while waiting to pick up passengers for hire.

“Taxicab or vehicle for hire line” means the areas on or about the Airport designated by sign or other suitable means which are reserved for taxicabs or vehicles for hire only while waiting to advance in turn to a vacancy at the taxicab or vehicle for hire stand.

“Taxicab services provider” means a ground transportation service provider who transports passengers in a taxicab.

“Taxiway” means the areas designed for the passage of aircraft between the non-movement areas and the runway. Taxiways are identified by a solid painted yellow centerline and blue edge lights.

“Tenant” means any person holding any right to use the Airport terminal buildings or airfield under any type of agreement with the Authority and the agents, employees, contractors and subcontractors of such person; includes, but is not limited to, airlines, licensees, permittees, and badge holders.

“Transportation Network Company” is an organization, whether a corporation, partnership, sole proprietor or other form, operating in California providing transportation services for compensation using an online-enabled application (app) or platform to connect passengers with drivers using their personal vehicles. All TNC transportation services must be prearranged through the use of the app or online enabled device.

“TNC Vehicle” means any passenger vehicle engaged in providing Transportation Network Company services and issued a Transportation Network Company permit by the California Public Utilities Commission.

San Diego International Airport
Rules and Regulations

“Trip” includes each instance a ground transportation vehicle enters onto a transportation plaza at the Commuter Terminal, Terminal 1 or Terminal 2 at the Airport.

“Trip fee” means a fee payable to the Authority for each trip of a permittee’s vehicle.

“Vehicle for hire” means any vehicle issued a Passenger Stage Corporation (PSC) certificate by the California Public Utilities Commission (CPUC).

“Vehicle identification decal” means a decal issued by the Authority to be placed on each permitted ground transportation service provider’s vehicle to identify those vehicles approved to operate on Airport premises.

“Vehicle service road” means the roadway used for vehicle movement about the perimeter of the aircraft movement areas.

“Waybill” means a document containing a charter operator’s TCP number, driver’s name, vehicle number, passenger name(s), number of persons in party, location of pick up, and airline and flight number on which the passenger(s) arrived or will arrive. See Public Utilities Code § 5381.5.

Acronyms

AC	Advisory Circular, issued by the Federal Aviation Administration (FAA)
ACM	Airport Certification Manual
ACS	Access Control System
ADA	Americans with Disabilities Act of 1990
AFV	Alternative Fuel Vehicle
AGL	Above Ground Level
AOA	Air Operations Area
API	American Petroleum Institute
APU	Auxiliary Power Unit
ARFF	Aircraft Rescue and Firefighting
ASP	Airport Security Program
ASTM	American Society of Testing Materials
ATCT	Air Traffic Control Tower
ATO	Airport Traffic Officer
AVI	Automatic Vehicle Identification System
BMP	Best Management Practices
CAD	Computer Aided Drafting
Cal EMA	California Emergency Management Agency
Cal OSHA	California Occupational Safety and Health Act
CAV	Clean Air Vehicle
CCTV	Closed Circuit Television

San Diego International Airport
Rules and Regulations

CPUC	California Public Utilities Commission
CSR	Customer Service Representative
CT	Commuter Terminal
CVC	California Vehicle Code
CVRB	Curfew Violation Review Board
DBA	Doing Business As
DHS	Department of Homeland Security
DMV	Department of Motor Vehicles
DOD	Department of Defense
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulation
FAA FAR's	Federal Aviation Administration Federal Aviation Regulations
FBO	Fixed Base Operator
FEDEX	FedEx Corporation
FOD	Foreign Object Debris
GA	General Aviation
GIS	Geographical Information System
GSE	Ground Service Equipment
GPU	Ground Power Unit
HVAC	Heating, Ventilating and Air Conditioning
ID	Identification
ILS	Instrument Landing System
LAMC	Lindbergh Airline Managers Council

San Diego International Airport
Rules and Regulations

MS4s	Municipal Separate Storm Sewer Systems
MSDS	Material Safety Data Sheet
MTDB	Metropolitan Transit Development Board
NAS	Naval Air Station
NFPA	National Fire Protection Association
NOAA	National Oceanic and Atmospheric Administration
NOTAM	Notice to Airmen
NPDES	National Pollutant Discharge Elimination System
NTSB	National Transportation Safety Board
PIN	Personal Identification Number
PPR	Prior Permission Required
PSC	Passenger Stage Corporation
RCF	Ramp Control Facility
RON	Remain Overnight
SDCRAA	San Diego County Regional Airport Authority
SDIA	San Diego International Airport
SIDA	Security Identification Display Area
SOC	Security Operations Center
SPCC	Spill Prevention, Control and Countermeasures
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
TCP	Transportation Charter Party
TIPR	Tenant Improvement Project Review

San Diego International Airport
Rules and Regulations

TNC	Transportation Network Company
TSA	Transportation Security Administration
TSR	Transportation Security Regulations
UL	Underwriters Laboratories
UPS	United Parcel Service of America, Inc.
USDA	United States Department of Agriculture
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
USPS	United States Postal Service

San Diego International Airport Rules and Regulations



Sections 1 – Section 7

Authority Codes are italicized

Regulations appear in regular font

Informational material appears in gray font

SECTION 1

1.0 INTRODUCTION

1.1 SCOPE, PURPOSE AND APPLICABILITY

These Rules and Regulations of the San Diego County Regional Airport Authority (“Authority”) govern the conduct, use, actions and operations of tenants, lessees, concessionaires, airlines, permittees, licensees, commercial users of San Diego International Airport (Lindbergh Field) (“Airport”) and such entities’ contractors, subcontractors and invitees. The Rules and Regulations are equally applicable to the employees of the above identified entities and the employees of the Authority. The Rules and Regulations are promulgated by the President/CEO under the powers enumerated in Board Policy 1.40, Board Code 6.01 and California Public Utilities Code §§ 170013(b) and 170026(b). The Rules and Regulations are intended to ensure the safe, secure, efficient and environmentally sound operation of the Airport. Incorporated within the Rules and Regulations, as a helpful reference, are citations to various relevant Authority Codes duly adopted by the Board of Directors which are applicable to all persons using or visiting the Airport.

1.2 AUTHORITY

A. Ownership and Operation

The Airport, certificated by the Federal Aviation Administration (“FAA”) and the State of California, is operated by the Authority. The Authority is governed by a nine-member board composed of appointed and elected officials representing the entire San Diego County (“Board”).

B. Delegation of Authority

Authority Code § 1.10 (a). Whenever a power is granted to, or a duty is imposed upon the President/CEO by the provisions of this Code, such power or duty may be exercised or performed by an assistant or such person as the President/CEO may designate.

C. Emergency Conditions

Authority Code § 7.20 (a). In the event of a disaster or emergency, the President/CEO of the Authority may: (1) utilize city and county departments, law enforcement agencies, local medical resources and disaster preparedness groups for assistance; and (2) issue such directives and take such action as necessary to protect people, property and assets, and promote the safe operation of the facilities and airports under the jurisdiction of the Authority.

(b). The President/CEO, in the event of a disaster or emergency, may order all occupants to leave the facilities and airports under the jurisdiction of the Authority,

or portions thereof, and prevent access to such areas for such time as may be necessary to assure the safety of the public and employees.

(c). The President/CEO, in the event of a disaster or emergency may close or restrict the use of all airport roadways to vehicular traffic in the interest of public safety.

(d). For purposes of this section, “disaster” or “emergency” includes, without limitation, the actual or threatened existence of conditions such as any hurricane, tornado, storm, high water, earthquake, landslide, mudslide, drought, fire, explosion, civil disturbance, war and other catastrophe or threats that cause or may cause substantial damage or injury to persons or property within the Authority’s area of jurisdiction.

D. Compliance

The use of or entry into the Airport by any person or entity for any commercial or business purpose shall be deemed to constitute an agreement to comply with these Rules and Regulations. Compliance with the Rules and Regulations includes compliance with the Airport Security Program (“ASP”). For more information, contact the Manager, Aviation Security and Law Enforcement.

Successful compliance depends to a great extent on the full and active cooperation of all tenants and commercial users and their employees. This requires a thorough knowledge and understanding of applicable Rules and Regulations through ongoing education and training.

E. Governance

Regulation.

1. All persons shall be governed by the applicable laws of the United States, the State of California, the City and County of San Diego, and any other rules, regulations and ordinances as adopted by the Authority while upon the properties owned and operated by the Authority. No person shall use Airport property or facilities for any act deemed illegal by any applicable law.

These Rules and Regulations shall in no way supersede or abrogate regulations set forth by the Transportation Security Administration (“TSA”) or in the Federal Aviation Administration Federal Aviation Regulations (“FAA FARs”) by which this airport is governed.

F. Severability

Regulations:

1. If any section, subsection, subdivision, paragraph, sentence, clause or phrase of these Rules and Regulations or any part thereof, is for any reason held to be unconstitutional or invalid or ineffective by any court of competent jurisdiction, or other competent agency, such decision shall not affect the validity or

- effectiveness of the remaining portions of these Rules and Regulations or any part thereof.
2. The Authority hereby declares that it would have promulgated each section, subsection, subdivision, paragraph, sentence, clause or phrase thereof, irrespective of the fact that any one or more sections, subsections, subdivisions, paragraphs, sentences, clauses or phrases be declared unconstitutional or invalid or ineffective.
 3. If the application of any provision or provisions of these Rules and Regulations to any lot, building, sign or other structure, or parcel of land is found to be invalid or ineffective in whole or in part by any court of competent jurisdiction, or other competent agency, the effect of such decision shall be limited to the property or situation immediately involved in the controversy, and the application of any such provision to other properties and situations shall not be affected.
 4. This section shall apply to every portion of these Rules and Regulations as it has existed in the past, as it now exists and as it may exist in the future, including all modifications thereof and additions and amendments thereto.

1.3 ENFORCEMENT

Authority Code § 6.01. Any person subject to the Rules and Regulations who violates or fails to comply with the Rules and Regulations will be deemed to be in violation of this Code. The President/CEO of the San Diego County Regional Airport Authority or his or her designee may promulgate a schedule of fines and penalties for any violation of the Rules and Regulations.

Authority Code § 1.17. Whenever in this Code any act or omission is made unlawful, it shall include causing, permitting, aiding or abetting, such act or omission.

The President/CEO (President/CEO) has the overall responsibility for enforcing compliance with these Rules and Regulations. On a day-to-day basis, this responsibility and commensurate authority is delegated to the Authority's designated representatives and to the Harbor Police Department, the law enforcement agency assigned to the Airport.

Any person in violation of the Rules and Regulations or failing to comply with any requirements of these Rules and Regulations may be subject to an administrative fine or penalty, and/or be denied use of the Airport. Violations of these Rules and Regulations shall include but are not limited to causing, permitting, aiding or abetting, or attempting such act or omission.

The safety of patrons and the security of the Airport are of primary importance and are protected and supported by the full powers of the Authority Code, state and federal

San Diego International Airport Rules and Regulations

law. Persons involved in criminal activities may be detained, arrested and prosecuted to the full extent of the law.

Airport tenants, permittees, licensees, concessionaires and others holding Authority agreements, when leasing or controlling portions of the Airport, are responsible for ensuring that their employees, sub-tenants, contractors, sub-contractors and visitors using their facilities understand and comply with these Rules and Regulations. Each additionally shall be responsible for compliance with all requirements of the Airport Security Program (ASP) delegated to them for their exclusive or other used areas and shall be held liable for any fines, penalties or other monetary assessments imposed upon the Airport by any agency having jurisdiction with respect to any violations involving these areas.

1.4 SPECIAL NOTICES, ADVISORIES AND DIRECTIVES

Special notices, advisories or directives of an urgent or short-term operational nature shall be issued under the authority of these Rules and Regulations.

1.5 RATES, FEES AND CHARGES

Regulation.

A. All persons, including without limitation tenants, permittees, lessees, licensees, concessionaires, car rental agencies, and invitees, shall pay all applicable fees, rates, licenses and charges that may be established by the Board.

New charges may be established from time to time. Accounts not paid shall incur overdue billing charges. Any permission granted by the Authority under the Rules and Regulations is conditioned upon the payment of any and all applicable fees and/or charges established by the Authority.

All funds are payable to the San Diego County Regional Airport Authority (“SDCRAA” or “Authority”).

1.6 TECHNICAL CONTENT, REVISIONS AND ACCESS TO AIRPORT RULES AND REGULATIONS

The technical content and accuracy of information in these Rules and Regulations are provided by each department that has authority over the subject matter. The Authority’s Talent, Culture & Capability Department is responsible for working with Authority departments and other stakeholders to maintain, revise, and publish the Rules and Regulations.

These Rules and Regulations include sections of the Authority Code where relevant. In some instances, words and phrases in the Authority Code have been abbreviated to increase readability; however, in all cases, the original language of the Code controls and is not superseded by the version provided herein. The Airport Code in its entirety is available online at:

http://www.san.org/sdcraa/about_us/codes_policies.aspx

San Diego International Airport
Rules and Regulations

The Rules and Regulations are subject to change. In this update, information previously contained in annexes and miscellaneous Authority documents have been incorporated. The current contents of the Rules and Regulations can be accessed from the Authority's website www.san.org.

1.7 DEPARTMENT CONTACT INFORMATION

Department Name:	Department Telephone Number
Access Control Office (Badging)	(619) 400-2765
Airside Operations	(619) 400-2710
Aviation Security and Public Safety	(619) 400-2762
Business & Financial Management	(619) 400-2575
Environmental Affairs	(619) 400-2782
Ground Transportation	(619) 400-2685
Noise Mitigation	(619) 400-2781
Terminals & Tenants	(619) 400-2694
Vision, Voice & Engagement	(619) 400-2871

SECTION 2

2.0 GENERAL CONDUCT

2.1 SCOPE AND APPLICABILITY

This section prescribes general conduct throughout the San Diego International Airport (“Airport”).

2.2 SMOKING

Authority Code § 7.03. No person shall smoke any tobacco products inside any of the facilities and airports under the jurisdiction of the Authority in violation of California state law, including, without limitation, any airport passenger terminal buildings or in any outdoor area within five feet of any entrance or exit to any such buildings. There shall be no designated smoking area anywhere inside of the terminal buildings at an airport. Smoking is strictly prohibited within the air operations area at an airport.

Regulation.

No person shall smoke any tobacco product in any outdoor area within twenty (20) feet of any entrance or exit to any passenger terminal building, office building, or other business facility at the Airport.

2.3 LITTER AND REFUSE

Authority Code § 7.41 (a). It shall be unlawful for any person to dump any material or throw garbage, offal, rubbish, litter, sewage, refuse or foreign material of any kind upon any lot, tract of land, street, alley, lane, court, sidewalk or place under the jurisdiction of the Authority without the written permission of the President/CEO.

Authority Code § 7.41 (b). It shall be unlawful for any occupant, lessee, tenant or licensee of any premises within said area to place, or allow to be placed, or allow to remain on any premises within said area such garbage, offal, rubbish, litter, sewage, refuse or foreign material of any kind without the written permission of the President/CEO.

Nothing in this section shall be construed to limit the operation of any duly ordained regulation of any city whose corporate limits extend into the facilities and airports under the jurisdiction of the Authority.

Regulations:

- A. No person shall transport litter or refuse without covering the materials being transported.
- B. All tenants providing receptacles for litter or refuse shall provide adequate covers to ensure against any leaking, dripping, sifting or otherwise escaping of any materials.

- C. Every person depositing garbage, debris or refuse in any unauthorized location shall clean up the deposited material immediately in an effective manner.

2.4 POLLUTION PREVENTION AND CONTROL AND DUMPING

Authority Code § 8.72 (a). No person shall Discharge, cause, permit or contribute to the Discharge of any of the following to the Storm Water Conveyance System or Receiving Waters (capitalized terms used in this Section are defined in Section 8.71 of this Code):

- (1) Any liquids, solids or gases which by reason of their nature or quantity are flammable, reactive, explosive, corrosive or radioactive, or by interaction with other materials could result in fire, explosion or injury;*
- (2) Any solid or viscous materials that could cause obstruction to the flow or operation of the Storm Water Conveyance System or Receiving Waters;*
- (3) Any noxious or malodorous liquid, gas or solid in sufficient quantity, either singly or by interaction with other materials, which creates a public nuisance, hazard to life, or inhibits authorized entry of any person into the Storm Water Conveyance System or Receiving Waters;*
- (4) Any medical, infectious, toxic or hazardous material or waste; or*
- (5) Other Pollutants that injure or constitute a hazard to human, animal, plant, or fish life, or create a public nuisance.*

2.5 ILLEGAL DISCHARGES AND ILLICIT CONNECTIONS

Authority Code § 8.73 (a). No person shall Discharge Non-Storm Water to the Storm Water Conveyance System, unless authorized by a separate or general NPDES Permit or if the Discharge is exempted or conditionally exempted by the Municipal Storm Water and Urban Runoff NPDES Permit, as provided or as subsequently amended or if granted as a special waiver or exemption by the Regional Board.

2.6 ABANDONMENT

Authority Code § 7.10 (a). No person shall willfully abandon any personal property on the facilities and airports under the jurisdiction of the Authority. Any items left unattended for distribution is prohibited and shall be considered an abandoned item.

Regulation.

All persons shall remove their unattended personal property on the Airport when notified by an Authority representative. Should such person fail or refuse to remove the unattended personal property, after thirty (30) days such property shall be considered abandoned and disposed of without cost or liability to the Authority. If the Authority incurs expenses to have said item disposed of, the person shall reimburse the Authority.

2.7 DAMAGE OR ADDITIONS TO AIRPORT PROPERTY

Authority Code § 7.04. No person shall destroy, injure, deface or disturb in any way, any building, sign, equipment, marker or other structure, trees, flowers, lawn or any other properties on the facilities and airports under the jurisdiction of the Authority, including, without limitation, the Airport; nor alter, make additions to, erect any building or sign, or make any excavations at such facilities and airports without the Authority's prior written authorization.

Regulation.

Every person damaging Airport property shall repair such damage at their sole cost and expense, or, if the damage is repaired by the Authority, shall reimburse the Authority for incurred costs.

2.8 SIGNAGE

Regulation.

No person shall post or distribute any sign, advertisement or circular upon Airport property without the prior written permission of the President/CEO or responsible Authority Department.

2.9 OBSTRUCTIONS AND ROADWAY USE

Authority Code § 7.12 (a). No person shall travel on any portion of the facilities and airports under the jurisdiction of the Authority except upon the designated roads, sidewalks or other places provided for the particular class of traffic, nor occupy those roads and walks in such a manner that would hinder or obstruct their proper use.

Authority Code § 7.12 (b). No person shall obstruct access to the use of building, grounds, roads, walks or other facilities located upon the facilities and airports under the jurisdiction of the Authority.

Authority Code § 7.12 (c). No person shall erect any table, chair, easel or other mechanical device or structure that would obstruct access within or outside the facilities and airports under the jurisdiction of the Authority, including, without limitation, the terminal buildings of the Airport, without prior authorization from the President/CEO.

Regulations.

- A. No person shall operate any wheeled vehicle in or on any portion of the facilities principally designed for the movement of pedestrian traffic except designated Authority representatives, law enforcement officers acting in the performance of official duties, tenant employees acting in accordance with their respective lease provisions, or any passenger or member of the public needing such device for mobility or medical reasons (i.e. stroller, wheelchair, or gurney). Such areas include but are not limited to; sidewalks, terminal frontage, unpaved pedestrian walkways, and the interior of any building.

B. A wheeled vehicle includes but is not limited to; unicycles, bicycles, tricycles, skateboards, roller skates, roller blades, wheeled footwear, and wheeled motor vehicles.

2.10 USE OF BAGGAGE CARTS

Authority Code § 7.11 (a). Use of baggage carts is restricted to persons who have rented the units for transporting their baggage, packages or similar items. No person shall use baggage carts without paying the appropriate fee through the rental device. No person shall tamper with the rental device.

Authority Code § 7.11 (b). Baggage carts are not allowed on escalators.

Authority Code § 7.11 (c). Baggage carts may not be removed from the facilities and airports under the jurisdiction of the Authority.

Authority Code § 7.11 (d). Employees, tenants and contractors of the Authority are not allowed to keep nor stow baggage carts.

Authority Code § 7.11 (e). No unauthorized persons shall dispense or sell baggage carts. It shall be prohibited for any person to come to the facilities and airports under the jurisdiction of the Authority for the express purpose of returning or otherwise using such carts for financial benefits.

Regulation.

Baggage cart concessionaires shall promptly collect baggage carts and return them to the cart dispensers.

2.11 ANIMALS

Authority Code § 8.20 (a). No person shall bring or allow an animal on the facilities and airports under the jurisdiction of the Authority, except as follows:

(1) Service animals;

(2) Animals properly crated for shipment by air; and

(3) Domestic animals if restrained by a leash or confined in such a manner as to be under the positive control of the owner or handler; provided, however, that such domestic animals shall not be allowed in airport terminal buildings or passenger loading areas.

Authority Code § 8.20 (b). No person shall enter any terminal or the air operating area of any facility or airport under the jurisdiction of the Authority with a dog or other animal except a guide dog permitted under federal, state or local laws, or one properly confined in a suitable container for shipment.

Authority Code § 8.20 (c). No person shall permit any animal to urinate or defecate upon the sidewalks or upon the floor of any facilities or airports under the jurisdiction of the Authority.

Authority Code § 8.20 (d). No person shall feed or perform any other act to encourage the congregation of birds or other animals on any facility or airport under the jurisdiction of the Authority.

Authority Code § 8.20 (e). No person shall hunt, pursue, trap, catch, injure or kill any animal on any facility or airport under the jurisdiction of the Authority other than in the conduct of their official duties.

2.12 LOST AND FOUND PROPERTY

Authority Code § 7.13 (a). Any person finding a lost article in the common areas of the facilities and airports under the jurisdiction of the Authority shall surrender such property to the Authority.

Regulation.

Any person finding any lost article in the common areas of the Airport shall surrender such property to the Airport Lost and Found.

Articles found by tenants in their exclusive leasehold areas may be held in their lost and found areas.

For Lost and Found Office assistance call:

Phone: 619-400-2140

Fax: 619-400-2141

The office is open from 7:00 AM until 11:00 PM, and can also be reached online at www.san.org.

2.13 REQUESTS FOR LAW ENFORCEMENT ASSISTANCE

The Harbor Police Communications Center should be notified of any medical incident requiring assistance by calling (619) 686-8000. Such incidents include calls originally directed toward 911.

Requests for any type of law enforcement assistance (Harbor Police, Customs & Border Patrol, narcotics task force, etc.) should be made directly to the Harbor Police Communications Center. Although dialing 911 is acceptable, by dialing the Harbor Police Department directly persons requesting assistance can be assured of the quickest response by police officers and paramedics. The request should include the nature of the problem and type of assistance desired.

2.14 WEAPONS

Authority Code § 7.02 (a). No person, except a peace officer or a member of the Armed Forces on official duty, shall carry any weapon, explosive, or inflammable material on or about his or her person, openly or concealed, on the facilities and airports under the jurisdiction of the Authority, without the permission of the President/CEO.

Authority Code § 7.02 (b). No person may furnish, give, sell or trade a weapon on Authority property.

Authority Code § 7.02 (c). For the purposes of this section, the term "weapon" includes, but is not limited to, firearms, explosive devices, dirks, bowie knives, blackjacks, switch blade knives, slingshots, metal knuckles or similar devices or instruments.

Authority Code § 7.02 (d). This section shall not apply to persons transporting for lawful purposes any weapons which are carried in said person's luggage in accordance with the Authority's codes, policies, rules and regulations and applicable federal, state and local laws.

Regulations:

A. No person shall carry any weapon or explosive on the Airport except Harbor Police officers, authorized law enforcement officers, authorized active duty members of the U. S. military on official duty, or others designated by the President/CEO.

Additional restrictions may apply for entry into sterile concourses or onto the AOA.

B. All persons, except those described in A, above, shall surrender weapons, explosives and other prohibited objects in their possession to any Harbor Police officer currently on duty or other authorized Authority representative.

2.15 TRESPASSING

Authority Code § 7.05 (a). It shall be unlawful for any person, to remain within a passenger terminal at the Airport between the hours of 11:00 p.m. and 6:00 a.m. of the following day after having been requested to leave the terminal by a representative of the Authority or by a duly appointed law enforcement officer. This section does not apply to:

(1) Any person holding a valid airline ticket for travel within 24 hours;

(2) Any person in the terminal meeting a specific and identifiable arriving passenger or accompanying a departing ticketed passenger;

(3) Any Airport employee;

(4) Any employee of a government entity or an approved business located or doing business within the Airport terminal; and

(5) Any person whose presence in the terminal is substantially and directly related to the air transportation of passengers or property.

Authority Code § 7.05 (b). It shall be unlawful for any person, whose actions at the Airport constitute a proximate and cognizable threat to the safety of personnel or to Airport security, to remain on Airport property after having been requested to leave the property by a duly appointed law enforcement officer.

Authority Code § 7.05 (c). It shall be unlawful for any person to remove any food item, including a beverage, from an unattended table within a food-serving concession area at

the Airport and thereafter consume said item where the person neither originally purchased the food item nor received permission from the purchaser of the food item to consume the food item. For the purpose of this section, "food-serving concession area" means any area adjacent to a food-serving business or concession within which are located dining tables for the convenience of the customers of the food-serving business or concession.

Regulations:

- A. All persons who refuse to comply with these Rules and Regulations after being requested to do so by Authority personnel may be considered a trespasser and be subject to applicable laws.
- B. No person shall make use of or loiter on or near any shop, building, equipment or facility of any tenant, permittee or licensee of the Airport without the specific permission of the tenant, permittee or licensee. Violators may be deemed trespassers.

2.16 RESTRICTED AREAS

Regulation.

No person shall enter or attempt to enter any sterile, restricted, or limited access area of the Airport; any security identification display area (SIDA); or any other restricted area of the Airport or terminal facilities that is identified as being closed to the public, except persons in compliance with one or more of the following provisions:

- 1. Persons who enter in accordance with a security clearance pursuant to the Authority Airport Security Program (ASP) and authorized by the Transportation Security Administration (TSA);
- 2. Persons assigned duties in the AOA or other restricted areas and bearing a proper Airport security identification badge;
- 3. Employees or authorized representatives of the Authority or other federal, state or local governmental agencies having proper business on the AOA or restricted areas and bearing a proper Airport security identification badge, or under direct escort of an authorized Authority representative or Airport tenant who is validly badged in accordance with the ASP; or
- 4. Passengers under appropriate supervision of an air carrier or authorized Authority personnel, entering upon the aircraft apron for the purpose of enplaning or deplaning an aircraft.

Cross-reference: See Authority Code § 7.01 (b) – Personal Conduct.

2.17 BADGES

A. Display of SAN Identification (ID) Badge

Regulation.

1. All persons wearing a SAN Identification (ID) badge must wear the ID badge at or above the waistline on the outermost garment and display the ID badge such that the front of the ID badge is visible to approaching persons.

B. Visitor Badges

Regulations:

1. All tenants shall ensure that each of their visitors is issued and wears a SAN visitor's badge, and that an appropriate log is maintained of issued visitor's badges.
2. All tenants shall ensure that their visitors relinquish issued visitor's badges before leaving the Airport.
3. All tenants shall ensure that any visitors who require access to restricted areas are escorted at all times by an authorized person who possesses a valid ID badge indicating "escort authority" in accordance with these regulations. All persons conducting such an escort shall accompany the escorted person at a distance no greater than 25 feet and control the activities of the visitor at all times. No authorized escort shall escort more than five visitors at a time.

Visitor's badges are valid for a maximum period of 24 hours.

C. Issuance of SAN Identification (ID) Badge

The Authority does not issue ID badges to any person under eighteen (18) years of age at the time of application.

D. Unauthorized Uses of Badges

Regulations:

1. No person shall wear an ID badge issued to a different person.
2. No person shall use any badge outside of the areas described by the restrictions listed upon the badge.
3. No person shall use any form of Airport-issued identification or access media for the purpose of bypassing the passenger screening process and boarding or attempting to board an aircraft.

E. Badge Inspection

Regulations:

1. All persons wearing an ID badge shall submit the badge for inspection by any other person wearing such a badge when so requested.
2. All persons discovering that a badge holder has used a badge in any area in violation of the restrictions listed on that badge shall immediately report the violation to the Harbor Police Department or the Aviation Security and Public Safety Department.

F. Invalidation of Badge

Regulation.

1. No person shall mutilate or alter any Authority-issued badge, identification card or access media.

Mutilation or alteration of a SAN identification (ID) badge shall render it invalid.

Mutilation or alteration of any Airport-issued identification/access media may be punishable as a criminal offense pursuant to California Penal Code § 594.

G. Lost or Stolen Badge

Regulation.

1. All persons who lose or determine that their badge has been stolen or lost shall immediately notify the Harbor Police Department and the Access Control Office.

The Access Control Office can be reached at (619) 400-2765.

H. Revocation or Surrendering a SAN Identification (ID) Badge

Regulations:

1. All tenants shall ensure that the badge of any agent, employee or other person acting on the tenant's behalf who is terminated, transferred or resigns employment at the Airport is immediately returned to the Access Control Office.
2. All persons failing to comply with the provisions outlined herein and of the Airport Security Program (ASP) may have their ID badge revoked.

2.18 SECURITY EQUIPMENT AND DIRECTIVES

Authority Code § 7.01 (b).

(5) No person willfully shall tamper, alter, move or otherwise affect any security device, CCTV camera, PIN pad coding box, electromagnetic locking device or other such device, or perimeter fence, gate, or gate tracking device.

(6) No person willfully shall activate any security device or cause a security alarm, when no threat to security or emergency condition exists.

Authority Code § 7.07 (a). No person shall tamper, alter, move or otherwise affect any security device, sign, CCTV camera, PIN pad coding box, electromagnetic locking device or other such implement, or perimeter fence gate or gate tracking device located on the facilities or airports under the jurisdiction of the Authority. No person may place any object within five feet of the perimeter fence of any facilities or airports under the jurisdiction of the Authority or at any distance that would obscure that portion of such fence.

Authority Code § 7.07 (b). No person shall activate any security device or cause a security alarm, when no threat to security or emergency condition exists.

Authority Code § 7.07 (c). Any person inadvertently activating a security alarm or other device shall remain at the location of the activation until an authorized officer of the Authority or other security representatives arrive, determine the cause of the activation and verify the individual's authority to access that portion of such facilities or airports.

Regulations:

- A. No person shall in any way attempt to bypass or test any security screening procedures for the purposes of exposing inadequacies of such systems, unless authorized by law to do so. For this part, authorized personnel shall include Harbor Police, Airport security representatives, authorized airline employees, and agents of the Federal Aviation Administration (FAA) and Transportation Security Administration (TSA) authorized to perform such tests.
- B. No unauthorized person shall breach or violate any TSA Security Directive applicable to the Airport.

2.19 VENDING MACHINES

Regulation.

No tenant shall install any vending machine for the sale of goods in the Airport without the Authority's permission.

2.20 STORAGE OF EQUIPMENT, FIXTURES AND CARGO

Regulation.

No person shall use any area of the Airport outside of that person's leased premises for the storage of equipment, fixtures, cargo or other property without prior written permission from the Authority. Any person using such areas for storage without first obtaining Authority permission shall have sole liability for any damage arising from or out of removal or storage of those goods, including the payment of rent for the use of the premises.

2.21 SOLICITATION AND EXPRESSIVE ACTIVITIES

Regulation.

No person shall solicit funds for any purpose at the Airport without the prior permission of the Authority. Any person engaging in solicitation or expressive activities shall conform to the guidelines that the Authority's Board or President/CEO may from time to time adopt prescribing the location and manner in which such activities may be conducted.

For more information, contact the Terminals & Tenants Department at (619) 400-2694.
Cross-reference: See Authority Code § 8.40 – Expressive Activities.

2.22 COMMERCIAL PHOTOGRAPHY, FILMING AND RECORDING

Authority Code § 7.14 (a). No person shall take a still, motion or sound motion picture, photograph or video on the Airport for commercial purposes without prior written permission of the President/CEO. This prohibition does not apply to an official representative of an accredited news organization photographing, filming or video recording an event on the Airport.

Authority Code § 7.14 (b). No person shall take a still, motion or sound picture, photograph or video on the Airport in a manner which is intended to or does:

- (1) Interfere with the safe operation of the Airport;
- (2) Obstruct or impede any screening or inspection process of passengers, luggage or cargo; or
- (3) Disrupt the operation or activities of the Airport, or of any tenant, licensee or permittee of the Authority.

Regulation.

No person shall take a still, motion or sound motion picture, photograph or video on the Airport for commercial purposes without the permission of the President/CEO.

Subject to Authority Code §7.14(b), an official representative of an accredited news organization is authorized to take a still, motion or sound motion picture, photograph or video of events on the Airport; however, advance notification to the Department of Terminals & Tenants is strongly advised.

For more information or to contact the Department of Terminals & Tenants call (619) 400-2694.

SECTION 3

3.0 AIRFIELD OPERATIONS

3.1 SCOPE AND APPLICABILITY

This section prescribes required procedures for aeronautical operations, vehicle operations and fueling operations on the air operations area (AOA).

3.2 AERONAUTICAL OPERATIONS ON THE AIR OPERATIONS AREA (AOA)

3.2.1 GENERAL RULES

A. Compliance

Authority Code § 8.10 (a). Federal aviation regulations pertaining to aircraft operations shall be observed at all times.

Authority Code § 8.10 (k). The President/CEO shall have the authority to detain any aircraft for nonpayment of any charges due the Authority, or for the violation of any codes, rules or regulations of the Authority contained herein.

Regulation.

1. Every person conducting aeronautical activities at the Airport shall conform to the regulations of the Federal Aviation Administration (FAA), Transportation Security Administration (TSA) or any successor agency, the directives of the Authority, and these Rules and Regulations.

B. Negligent Aircraft Operations

Authority Code § 8.10 (g). No person may run an engine of, or taxi, an aircraft on the airports under the jurisdiction of the Authority in a manner that endangers any person or property or so as to compromise or diminish the safety of operations on such airports.

Regulations:

1. No person shall operate an aircraft at the Airport in a careless or negligent manner, in disregard to the rights and safety of others, without due caution and circumspection, or at a speed or in a manner which endangers, or is likely to endanger, persons or property.
2. No person shall operate an aircraft constructed, equipped or loaded in such a manner as to endanger, or to be likely to endanger, persons or property.

3. All persons using any part of the Airport shall be liable for any property damage, personal injury or death caused by their carelessness or negligence on or over the Airport.
4. Any aircraft operated so as to cause property damage; personal injury or death on or at Airport may be retained in the custody of the Authority. The Authority shall have a lien placed on the aircraft until all charges for damages are paid.

C. Damage to Authority Property

Authority Code § 8.10 (i). Airport property that is damaged or destroyed by an accident or otherwise shall be paid for by parties responsible therefore.

Regulations:

1. Any person who damages Airport property including but not limited to, light fixtures, buildings or other assets, shall be responsible to the Authority for such damages, and the amount thereof shall be paid within 30 days or such reasonable time as is approved by the President/CEO, or his or her designated representative.
2. Any person damaging any Airport property as a result of operating an aircraft or other motorized equipment shall report such damage immediately to the Airside Operations Department. Failure to do so shall constitute grounds for the Authority to prohibit further use of any Airport facility including the runway and taxiways in addition to other remedies available under other applicable law.

The Airside Operations Department can be reached at (619) 400-2710.

D. Commercial Aircraft Operations

Regulation.

1. All persons conducting business on the Airport shall have the appropriate written agreement, license or permit with the Authority and shall be responsible to pay all applicable use fees, charges, permit fees and/or landing fees. Failure to do so may cause a lien to be placed against the aircraft as provided by applicable law.

E. Radio Communications

Regulation.

1. All persons landing or taking off at the Airport shall ensure that their aircraft has a properly functioning two-way radio capable of communicating with the Airport's Federal Aviation Administration (FAA) Air Traffic Control Tower (ATCT).

F. Air Operations Area (AOA) Smoking

Authority Code § 8.11 (k). Smoking is prohibited throughout any airport operating area under the jurisdiction of the Authority.

G. Unauthorized Use of Aircraft

Regulation.

1. No person shall interfere or tamper with any aircraft, put in motion the engine of such aircraft, or use any aircraft, aircraft parts, instruments or tools without the permission of the owner or by specific direction of the President/CEO, or his or her designated representative.

H. Use of Commercial Space on the Air Operations Area (AOA)

Regulations:

1. No person shall use or occupy any Airport air operations area for any commercial purpose except a purpose pertaining to the servicing of one or more tenants, concessionaires, or airlines; activities associated with an airline or governmental agency; or an authorized purpose connected with maintenance and operation of the Airport.
2. Every person so authorized shall carry and/or display personal identification of the type and in the manner specified by the Authority's Aviation Security and Public Safety Department.

I. Storm Water Compliance

The Airport Authority Board has adopted Authority Code Sections 8.70 to 8.79, known as the "San Diego County Regional Airport Authority Storm Water Management and Discharge Control" ("Storm Water Code"). The Storm Water Code sets forth uniform requirements and prohibitions for dischargers and places of discharge to the storm water conveyance system and receiving waters necessary to adequately enforce and administer all laws and lawful standards and orders or special orders that provide for the protection, enhancement and restoration of water quality. The Storm Water Code applies to all persons and places located on property within the Authority's jurisdiction that discharge storm water or non-storm water into any storm water conveyance system or receiving water. Any person violating any of the provisions or failing to comply with the mandatory requirements of the Storm Water Code is subject to enforcement action. The President/CEO shall administer, implement and enforce the provisions of the Storm Water Code.

There are a wide variety of airport-, airline-, aircraft-, and ground support-related activities conducted at the Airport that are subject to the requirements of one or both of the following National Pollutant Discharge Elimination System (NPDES) storm water permits:

San Diego International Airport Rules and Regulations

- State Water Resources Control Board Water Quality Order No. 97-03-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000001, Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities, as amended, modified, revised, or re-issued (the “General Industrial Permit”); and
- California Regional Water Quality Control Board, San Diego Region, Order No. R9- 2007-0001, National Pollutant Discharge Elimination System (NPDES) No. CAS0108758, Waste Discharge Requirements for Discharges of Urban Runoff from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds of the County of San Diego (County), the incorporated cities of San Diego County, the San Diego Unified Port District, and the San Diego County Regional Airport Authority, as amended, modified, revised, or re-issued (the “Municipal Permit”).

The Authority has prepared a Storm Water Management Plan (SWMP) that outlines a comprehensive program to reduce and eliminate pollutants from entering the storm water conveyance system and receiving waters. The Storm Water Management Plan (SWMP) describes potential pollutant sources at the Airport and the management programs in place to reduce or eliminate them.

Regulations:

1. All persons at the Airport shall comply with the current National Pollutant Discharge Elimination System (NPDES) Permit No. CAS000001 (“General Industrial Permit”) and NPDES No. CAS0108758 (“Municipal Permit”) regarding stormwater discharges and shall respond to all Authority requests for pertinent information regarding facilities, operations, and activities.
2. Each Airport tenant, service provider and other commercial user shall be fully aware of federal, state and local storm water pollution prevention laws and regulations, the Storm Water Code, the National Pollutant Discharge Elimination System (NPDES) permits applicable to the Airport, the Storm Water Management Plan (SWMP) and the requirement to comply with each. Airport tenants, service providers and other commercial users are also responsible for ensuring that their contractors or sub-contractors comply with these requirements.
3. Any spillage or release of gasoline, jet fuel, oil, grease, lavatory chemicals, lavatory waste, waste water of any kind, or any other material or pollutant which may degrade the environment or may be unsightly or detrimental to the pavement in any area of the Airport shall be removed immediately by the party or operator responsible, using suitable procedures in a manner acceptable to the President/CEO, or his or her designated representative. The failure of the responsible party to act promptly to immediately remedy the spill or release may

result in a determination by the President/CEO or his or her designated representative to expend Authority resources to protect public health and safety, property and the environment and to seek reimbursement for such expenditures from the party responsible.

Cross-references: See Rules and Regulations Sections 3.4.7 Fuel Spills, and 3.4.8 Lavatory Chemical and/or Lavatory Waste Spills.

J. Construction Activity on the Air Operations Area (AOA)

Regulation.

1. No person shall engage in construction activity on the AOA until and unless all provisions of the Airport's Operational Safety and Security Requirements are met.

The Airport's Operational Safety and Security Requirements are available by contacting the Airside Operations Department at (619) 400-2710.

K. Special Events on the Air Operations Area (AOA)

Regulations:

1. No person shall conduct any special or non-standard event on the AOA, including, but not limited to a cookouts or barbecue, without written authorization from the Airside Operations Department prior to each occurrence.
2. Every request to conduct a special or non-standard event shall be submitted to the Authority and include the date, time, place, nature, hosting organization, number of participants and other operational information as requested by the Authority.
3. Every special or non-standard event shall be conducted in compliance with the security measures established by the Authority and the TSA.

The Airside Operations Department can be reached at (619) 400-2710.

L. Minimizing Bird-Strike Potential

Regulation.

1. All persons conducting any activity on the AOA shall ensure that:
 - a. There is no bird-feeding activity;
 - b. Unsecured trash bags containing foodstuffs are not to be left on the ramp or AOA;

- c. Food containers, whether full, empty or nearly empty, are not discarded on the ramp, in baggage carts, on flatbed vehicles or on other uncovered vehicles; and
- d. The lids of all dumpsters and trash containers are closed when not actually being loaded or unloaded.

3.2.2 AIR TRAFFIC RULES

A. Flight Tests and Practice Operations

Authority Code § 8.10 (c). Practice instrument approaches and touch and go landings are prohibited at the SDIA.

Regulations:

1. Prior to conducting any aircraft flight test or maneuver within the Airport traffic area, the aircraft operator shall make all necessary arrangements and receive all clearances in advance from the Federal Aviation Administration (FAA) and the Authority's Airside Operations duty manager on duty.
2. No person in an aircraft shall conduct any type of practice low approach at the Airport.

B. Aircraft Operations

Regulations:

1. All persons conducting aircraft surface operations shall do so only upon hard-surfaced runways, taxiways, taxi lanes and aprons.
2. No person shall use any taxiway for the takeoff or landing of an aircraft.
3. No person shall pass over any Airport building, structure or any adjacent motor vehicle parking area or bridge during an aircraft landing or takeoff unless landing at Naval Air Station (NAS) North Island, or otherwise instructed by the Air Traffic Control Tower (ATCT).
4. No person shall conduct any formation flight, takeoff or landing.
5. No person shall conduct any acrobatic maneuver.
6. No person shall land or launch any motorless aircraft, hot air balloon, ultra-light aircraft, hang glider, or other device not licensed or certified by the Federal Aviation Administration (FAA) without prior authorization of the President/CEO.
7. The operator of any United States Department of Defense (DOD) aircraft intending a flight operation into the Airport shall notify the Airside Operations Department prior to the operation. This notification procedure applies to

operations conducted with any United States Department of Defense (DOD) aircraft having a military registration or call sign with the exception of United States Coast Guard flights to and from the United States Coast Guard facility on North Harbor Drive.

C. Parachute Operations

Regulation.

1. No person shall parachute over or into the Airport or within the Airport Traffic Area without prior written permission from the FAA Air Traffic Control Tower (ATCT) and the President/CEO.

3.2.3 AIRPORT USE REGULATIONS

All operators of aircraft must comply with Authority Code § 9.40 - Airport Use Regulations.

3.2.4 AIRCRAFT ACCESS AUTHORIZATION

Regulation.

- A. No person shall enter any aircraft without the consent of the owner or person in charge thereof.

3.2.5 GROUND OPERATIONS

Authority Code § 8.10 (I). No person shall park or stand an aircraft or load or unload aircraft passengers on a public landing area, public ramp and apron area, public passenger ramp and apron area, public cargo ramp and apron area, public aircraft parking and storage area or operational area at the airports under the jurisdiction of the Authority except at such places as may be permitted by the President/CEO.

A. Ramp Operations

Regulations:

1. Every person operating an aircraft shall ensure that the aircraft is operated so as not to blast, injure or damage any person, property, equipment, building, or other aircraft.

Cross-reference: See Regulations; Section 6.2.B Fire Extinguishers.

2. Every tenant shall police and keep their ramp areas clean and free of all debris.
 - a. All tenants shall provide clearly marked foreign object debris (FOD) containers for collecting material that is picked up from the aprons. Containers shall be present in sufficient quantities to facilitate disposal of picked up materials. Containers shall have a cover and be small enough to be easily emptied, but heavy enough to resist spillage.

San Diego International Airport
Rules and Regulations

- b. All tenants shall empty their FOD containers at least daily or more frequently, if necessary.
 - c. All tenants shall ensure that outside trash containers (e.g., cans, dumpsters and compactors) are covered, checked frequently, and emptied as necessary to prevent spillover of trash.
3. No person shall leave any ground service equipment (GSE), including but not limited to, chocks and airstairs, on the east, west or north remain overnight (RON) ramps when such ramps are not being used for RON aircraft.
 4. All tenants shall ensure that lavatory service equipment is well-maintained and compatible with the waste receptacles provided by the Authority. No tenant shall dump lavatory waste directly into the sewerage system except at the alternate dump site when the triturator is out of service or when directed by the Airside Operations Department. All tenants shall report any spillage of lavatory waste to the Airside Operations Department and shall immediately clean up such spillage.

The Airside Operations Department can be reached at (619) 400-2710.

Cross-reference: See Rules and Regulations Section 3.4.8 Lavatory Chemical and/or Lavatory Waste Spills

5. No person shall erect or position any light on a terminal, ramp or apron area so as to interfere with an aircraft operator's ability to see while operating an aircraft.
6. Every person scrubbing an aircraft ramp or apron shall use an approved vacuum-type scrubber. The waste water picked up from any ramp shall be disposed of in a triturator or approved designated opening to the sanitary sewer system.

B. Push Back/Tow Out Procedures

Regulations:

1. Every person conducting an aircraft movement on a terminal ramp shall coordinate such operation with the Air Traffic Control Tower (ATCT) for Gates 1-18, 20, 21, 22, 24, 26, 28, 30, 32 and the Ramp Control Facility (RCF) for Gates 23, 25, 27, 29, 31, and 33-51.
2. Every person operating an aircraft shall exercise extreme caution when maneuvering the aircraft in any terminal ramp area.
3. Prior to the pushback or tow out of an aircraft, the person operating the aircraft shall contact the ATCT ground controller for traffic advisories for Gates 1-18, 20, 21, 22, 24, 26, 28, 30, 32 and the RCF for Gates 23, 25, 27, 29, 31 and 33-51.

4. Any person pushing an aircraft back from or towing an aircraft out a terminal gate from a parking ramp shall give way to other aircraft already being taxied, towed or pushed back on the ramp.
5. No person operating an aircraft shall delay taxiing from a ramp for a period of time that would cause undue delay to subsequent taxiing aircraft.
6. No person operating an aircraft shall conduct power back or power out procedures from the terminal gate areas except at the Commuter Terminal. No person shall taxi into or out of positions N1, N2, N9 or N10 on the North Ramp without the express permission of the Airside Operations duty manager.

C. Starting and Running Engines

1. Starting Engines

Regulations:

- a. No person shall operate any aircraft engine within a hangar, within fifty (50) feet of a hangar, or so close to the hangar that it creates a hazard to persons or property.
- b. No person shall operate any aircraft engine until ground personnel grant clearance and all standard safety procedures have been met.
- c. No person shall start or run any aircraft engine unless a licensed pilot or licensed mechanic is in the aircraft attending the engine controls.
- d. No person shall start any aircraft engine unless there are fire extinguishers provided nearby in accordance with National Fire Protection Association (NFPA) Code 407.

Cross-reference: See Regulations; Section 6.2.B Fire Extinguishers.

- e. All persons conducting engine cross bleed starts shall:
 - (1) advise the Air Traffic Control Tower (ATCT) ground control of the request to push back all the way onto Taxiway Bravo and intent to conduct an engine cross bleed start;
 - (2) after receipt of clearance from the Air Traffic Control Tower (ATCT) to push back to Taxiway Bravo, push the aircraft back until it is lined up over the taxiway centerline; and
 - (3) not start the cross bleed until the aircraft is positioned as described in (2) above and until the ground crew confirms that the procedure can be initiated without adverse impact to other aircraft, vehicles or personnel and without creating any other unsafe conditions.

2. Engine Run-ups

Authority Code § 8.10 (b). No person shall perform any engine run up at a power setting above idle power between 11:30 p.m. and 6:30 a.m. (2330 - 0630 hours) (local time) at the San Diego International Airport (the "SDIA").

Regulations:

- a. No person conducting any propeller engine run-up at the Commuter Terminal shall exceed normal breakaway power.
- b. No person conducting any jet engine run-up shall exceed idle power except on Taxiway C, facing west, between C4 and C6.

D. Aircraft Taxiing

Authority Code § 8.10 (j). No aircraft shall be taxied into or out of any hangar.

Regulations:

1. No person shall taxi any aircraft on the Airport when there is any danger of collision with any person or object.
2. All persons taxiing aircraft shall taxi at a safe speed and in a reasonable manner. Pilots shall use minimum power while taxiing on the ramps and taxi lanes adjacent to any terminal building.
3. No person shall taxi any aircraft onto any portion of the Airport without first establishing radio communication with and coordinating the operation through the ATCT or the RCF. This requirement includes taxiing on both the controlled movement areas and the uncontrolled non-movement areas.
4. No person shall operate an aircraft on the Airport unless the aircraft is equipped with wheel brakes in proper working order.
5. No person taxiing shall taxi an aircraft between the main terminal gates and any aircraft parked or being repositioned on the terminal apron.
6. Every person taxiing an aircraft will taxi expeditiously after landing and clear the runway as promptly as possible, consistent with safety.
7. No person shall taxi an aircraft into or out of any hangar.
8. All persons taxiing aircraft on the Airport shall proceed with navigation lights illuminated during the hours between sunset and sunrise.
9. All persons taxiing aircraft on the Airport shall yield to other aircraft taxiing on the right, unless otherwise instructed by the ATCT or the RCF.

E. Aircraft Towing

Regulations:

1. No person shall engage in the towing of any aircraft unless and until that person has received movement area training as required by the Authority.
2. No person shall tow any aircraft onto a movement area without prior clearance from the ATCT and the RCF.
3. No person responsible for the operation of aircraft towing equipment shall operate or permit the operation of the equipment unless it is equipped with an operable radio transceiver capable of two-way communications with the ATCT on the ground-control frequency and the RCF on ramp frequency and operated by a person trained in aeronautical radio communications technique, terminology, phraseology and procedures.
4. Every person towing an aircraft shall comply at all times with all ATCT and RCF instructions.
5. No person shall operate an aircraft towing vehicle (e.g., tug or tractor) unless it is equipped with functioning and operable lights and brakes per the manufacturer's specifications.
6. Every person operating a towing vehicle at night shall operate the equipment with the lights on and ensure that any towed aircraft is either lighted (i.e., all aircraft position lights are on) or illuminated (i.e., external lights are shining onto the aircraft to make its fuselage, wingtips and tail visible).
7. No person towing an aircraft shall stop en route unless specifically directed otherwise by the ATCT, RCF or an Airside Operations duty manager.
8. Unless directed otherwise by the ATCT or RCF, every person operating an aircraft tow vehicle shall use the following towing procedures:
 - a. Contact "Lindbergh Ground" on the ground frequency (123.90 MHz) for Gates 1-18, 20, 21, 22, 24, 26, 28, 30 and 32.
 - (1) Identify yourself with your radio call sign.
 - (2) Indicate your present location, your intention and your destination.
 - b. Contact "Lindbergh Ramp Control" on the ramp control frequency (129.775 MHz) for Gates 23, 25, 27, 29, 30, and 33-51.
 - (1) Identify yourself with your radio call sign.

- (2) Indicate your present location, your intention and your destination.
- c. Do not proceed until positive clearance is received from ATCT or the RCF. Strictly comply with ATCT and RCF instructions.
- d. Upon receiving clearance from the ATCT and RCF, tow the aircraft from its departure location directly onto the nearest taxiway, using caution not to collide with any structures such as taxiway edge lights, signs, markers, or other fixed or moving objects (e.g., vehicle, aircraft, ground service equipment, etc.).
- e. Contact the ATCT and RCF upon clearing the movement area after entering the intended aircraft parking area.

F. Aircraft Parking

Authority Code 8.10 § (d). No aircraft shall be parked, stored or repaired on airports under the jurisdiction of the San Diego County Regional Airport Authority (the "Authority") except in the areas designated for such use.

Authority Code 8.10 § (e). At the direction of the President/CEO of the Authority or his or her designee (the "President/CEO"), the operator, owner or pilot of any aircraft on the airports under the jurisdiction of the Authority shall move the aircraft from the place where it is parked or stored to any other place designated on the airports under the jurisdiction of the Authority. In event of the failure or refusal to comply with such directions, the Authority may cause the aircraft to be moved to such place at the operator's expense and without liability for damage that may result from such moving.

Regulations:

1. No person shall park any aircraft on the Airport except in areas, and in the manner, designated by the President/CEO.
2. No person shall position unscheduled or non-air carrier aircraft on a main terminal ramp, the commuter ramp or any overnight parking ramp without prior direction from the President/CEO or his or her designee in coordination with the Lindbergh Airline Manager's Council (LAMC) Remain Overnight (RON) Committee.
3. No person operating or responsible for the operation of a general aviation aircraft shall park or enplane/deplane passengers or cargo on any terminal apron or designated commercial cargo area.
4. The operator of any aircraft at the Airport shall move the aircraft from the place where it is parked or stored to any other place designated on the Airport at the direction of the President/CEO. In event of the failure or refusal to comply with

such direction, the President/CEO may cause the aircraft to be moved to such place at the operator's expense.

5. The operator of any aircraft using the North Ramp shall comply with the following procedures:
 - a. Positions N1 to N11, are administered by the Remain Overnight (RON) Committee.
 - b. Aircraft may not taxi into or out of positions N1, N2, N9 or N10. On being towed off the ramp, aircraft at these positions may not use any engine power setting higher than "idle" until the aircraft is positioned parallel to and on the centerline of Taxiway C.
 - c. Aircraft may taxi into or out of positions N3, N4, N5, N6, N7, N8, and N11 only under all of the following conditions:
 - (1) When there is sufficient clearance for the unobstructed and safe maneuvering of the aircraft; and
 - (2) When the aircraft movement is guided by qualified personnel; and when there is certainty that the aircraft engine exhaust will not cause property damage, bodily injury, or interference with other aircraft using the ramp or Taxiway C.
 - d. Aircraft must park tail to north except for position N11, unless otherwise authorized by the Airside Operations Department.
 - e. Ground Service Equipment (GSE) may be staged between the north edge of the ramp and the ramp lighting poles.
 - f. Aircraft parked on positions N8, N9 or N10 must have a tow bar and tug attached at all times and have personnel available to immediately relocate aircraft, if required.
 - g. No aircraft larger than Group V shall be parked on the North Ramp without special coordination with the Airside Operations Department.
 - h. Operation of aircraft auxiliary power unit (APU) or ground power unit (GPU) is restricted to the minimum necessary to complete required maintenance.

3.2.6 GATE USAGE AND ASSIGNMENTS

A. General

Authority Code § 8.10 (m). No person shall use an air terminal building gate position at the airports under the jurisdiction of the Authority without permission from the President/CEO.

Regulations:

1. No person shall park an aircraft or leave an aircraft parked and unattended on the movement area or non-movement areas, except as permitted by the President/CEO.
2. No person shall use an aircraft gate except on a pre-assigned and reserved basis under conditions approved by the President/CEO.

B. Usage of Gates Assigned to Other Airlines

Regulations:

1. No airline may use a gate assigned to another airline without prior permission from the leasehold airline, unless authorized by the President/CEO.
2. Every airline authorizing use of its own preferential gate facilities by another airline shall assume full responsibility for such usage and shall ensure usage is in accordance with all agreements with the Authority.

C. International Gate Usage

Regulation.

1. No person shall conduct an international flight operation requiring the use of the Federal Inspection Service Facility (including, but not limited to, Customs, Border Protection, United States Department of Agriculture (USDA)) at Gate 20, 21 and 22 without first obtaining the prior approval and schedule through the U. S. Customs Service, Border Protection, and the President/CEO.

D. Remain Overnight Aircraft (RON)

Regulation.

1. No person shall conduct an overnight operation without complying with the guidelines and procedures of the Remain Overnight (RON) Plan.

The process of assigning remain overnight (RON) aircraft parking positions at the Airport is the administrative responsibility of the Lindbergh Airline Managers Council (LAMC) Remain Overnight (RON) Committee in accordance with provisions contained in the Air Carrier Operating Agreements.

E. Parts Delivery Aircraft Parking

Regulations:

1. General aviation operators delivering any parts or maintenance equipment to any airline shall park at or near the appropriate leasehold gate only for the express purpose of unloading parts and equipment.

2. Every general aviation operator shall either reposition its aircraft to the fixed base operator (FBO) or depart the Airport immediately after doing so.
3. Every general aviation operator shall park its aircraft only in a tenant leasehold area or on an available parking ramp (North, East or West) as assigned by the Airside Operations Department without impacting any other operators.

3.2.7 CHARTER FLIGHT AND ITINERANT OPERATIONS

Regulations:

- A. Every person conducting a charter flight or itinerant air carrier operation shall comply with all existing safety and security procedures as directed by the Authority and outlined in the Airport Security Program (ASP).
- B. Every person engaged in ground handling shall submit a charter flight advisory form to the Airside Operations duty manager's office at least 24 hours prior to operation and shall notify the Airside Operations duty manager of any changes or follow-up information as such information becomes available.

Forms are available by telephoning (619) 400-2710.

- C. Every Person engaged in ground handling shall be responsible for all vehicle escorts and shall provide at least one escort for every two vehicles, with all vehicles in full view and under positive control of the escort at all times.
- D. Every person engaged in ground handling shall be responsible for maintaining positive control of all passengers per Transportation Security Administration (TSA) security requirements, with charter aircraft sponsor airlines being responsible to oversee the enplane/deplane procedures and to comply with TSA security requirements.
- E. Every person enplaning or deplaning passengers shall use either a loading bridge (jet-ways) or portable air stairs and shall not permit said passengers to use jet-way crew stairs.
- F. Every person who requires security at the location of any aircraft on the Airport due to the condition, kind, type or mission of the aircraft shall notify and receive permission from the Manager, Aviation Security and Law Enforcement, prior to placement of such personnel.

3.2.8 HELICOPTER OPERATIONS

A. Arrival

Regulation.

1. Every person operating a rotary wing aircraft arriving at the Airport shall follow Air Traffic Control Tower instructions, remaining on or north of taxiway C's centerline until reaching below 20 feet above ground level. The aircraft shall land

(landing wheels touching and resting on the pavement) then ground or air taxi to its final destination on the Airport in accordance with Air Traffic Control Tower instructions.

B. Departure

Regulation.

1. All persons operating any rotary wing aircraft departing the Airport shall contact the Air Traffic Control Tower for taxi clearance. The aircraft shall ground or air taxi at or below 20 feet above ground level, and depart the Airport in accordance with Air Traffic Control Tower instructions. During initial take-off and climb out, the aircraft shall remain on or north of Taxiway C's centerline until reaching a minimum altitude of 100 feet above ground level (AGL).

C. Noise Abatement

Regulation.

1. All helicopters are considered Stage 2 aircraft for noise abatement purposes (Federal Aviation Administration (FAA) AC36-1 (H)) and are subject to the daily Airport departure prohibition between 10:00 p.m. and 7:00 a.m. The only exceptions are aircraft operating under a life flight call sign. Noise abatement requirements and restrictions relevant to operating at the Airport can be found in the "Remarks" section of the Federal Aviation Administration (FAA)/National Oceanic and Atmospheric Administration (NOAA) Southwest United States version of the Airport Facility Directory.

3.2.9 AIRCRAFT INCIDENTS AND ACCIDENTS

Aircraft rescue and firefighting (ARFF) vehicles have priority over all other personnel and vehicles in response to an emergency. The Airside Operations duty manager continues to be in charge of the Airport while the aircraft rescue and firefighting (ARFF) units respond to the incident.

A. Emergency Response

Regulations.

1. No person shall interfere with any aircraft rescue and firefighting (ARFF) units responding to an emergency situation.
2. No person other than an aircraft rescue and firefighting (ARFF) unit shall enter the periphery of an incident scene until summoned or escorted into the area by the Airside Operations duty manager or aircraft rescue and firefighting (ARFF) units.

3. All personnel and equipment proceeding onto the Airport movement area during an emergency situation or incident shall receive prior clearance from the Air Traffic Control Tower (ATCT).

B. Notification/Coordination

Authority Code § 8.10 (h). The pilot of an aircraft involved in an accident on the airports under the jurisdiction of the Authority causing personal injury or property damage shall report it fully to the President/CEO within 24 hours of such accident. In the event that he or she is unable to do so, the owner or his or her agent and witnesses shall make such report.

1. Air Carriers

Regulation.

- a. All air carriers involved in any accident or incident while at the Airport shall immediately marshal their assets (personnel/equipment) and standby to be escorted to the appropriate site after the Airside Operations duty manager has notified the airline station manager or the Airline Operations office.

2. Air Carriers not based at the Airport

The Airside Operations duty manager will coordinate with the fixed base operator (FBO) or other air carriers to assist in the removal of disabled aircraft from the runway and/or taxiways.

3. General Aviation

Any general aviation or corporate aircraft owner/operator requiring assistance in the removal of disabled aircraft may contact the Airside Operations duty manager. The fixed base operator (FBO) may provide assistance if specifically requested by the aircraft owner/operator. The Airside Operations duty manager shall determine whether an escort is needed for any fixed base operator assistance provided.

C. Aircraft Accident Reports

Regulations:

1. All persons involved in any accident or incident at the Airport causing personal injury, death or property damage shall make a prompt and complete report concerning the accident to the office of the President/CEO in addition to all other reports required to be made to other agencies.
2. When a written report of an accident is required by the Federal Aviation Regulations (FARs), a copy of such report shall be submitted to the President/CEO.

D. Disabled Aircraft

Authority Code § 8.10 (f). The owner of an aircraft, or part thereof, that is disabled on the airports under the jurisdiction of the Authority shall have it promptly removed to an area designated by the President/CEO, unless he or she is required to delay it pending investigation of an accident. In the event such aircraft, or part thereof, is not removed as directed by the President/CEO, the Authority may remove it at the owner's expense and without liability for additional damage resulting from the removal.

Regulations:

1. No person may move any aircraft involved in an accident or incident when the matter falls within the jurisdiction of the National Transportation Safety Board (NTSB) or Federal Aviation Administration (FAA) until such federal officials have given permission for the removal, and such permission has been verified by the President/CEO, or his or her designated representative on the scene.
2. The operator of any disabled aircraft at the Airport shall be responsible for the prompt removal of their aircraft and any parts thereof as directed by the President/CEO.

3.2.10 AIRCRAFT WASHING AND DE-ICING

A. Aircraft Washing

Regulations:

1. No person shall wash any aircraft except in areas designated by and in a manner authorized in writing by the Authority's Environmental Affairs Department in coordination with the Airside Operations Department.

All requests for approval of the manner of aircraft washing at the Airport shall be submitted in writing to the Environmental Affairs Department, and must contain, at a minimum, the following information:

- a. name of airline, tenant, or aircraft owner or operator;
- b. the location where aircraft wash activities will be conducted;
- c. the general timeframe and/or frequency of proposed activities (for example, daily, weekly, seasonally in the fall/winter, occasionally, sporadically);
- d. the name of company or firm conducting aircraft wash activities, if other than the airline, tenant, or aircraft owner or operator;
- e. a description of the methods, materials, chemicals (including Material Safety Data Sheets (MSDS)), if any, and equipment used in the aircraft wash activities;
- f. the methods and means of storage and handling of material and equipment used in the aircraft wash activities;

San Diego International Airport
Rules and Regulations

- g. the methods and means to manage, contain, and dispose of contaminated materials resulting from or associated with the aircraft wash activities; and
- h. a list of the stormwater pollution prevention Best Management Practices (BMPs) used to control potential pollutants related to the activity.

See: SAN Storm Water Management Plan (SWMP), Appendix B, Best Management Practice (BMP) SC-04.

2. Any spillage or release of de-icing fluid must be promptly cleaned up by the responsible party in accordance with Section 3.2.1.1.3 (under Storm Water Compliance).

B. Aircraft De-icing

Regulations:

1. No person shall de-ice any aircraft except in areas designated by and in a manner authorized in writing by the Authority's Environmental Affairs Department in coordination with the Airside Operations Department.

All requests for approval of the manner of de-icing at the Airport shall be submitted in writing to the Environmental Affairs Department, and must contain, at a minimum, the following information:

- a. name of airline, tenant, or aircraft owner or operator;
- b. the location where aircraft de-icing activities will be conducted;
- c. the general timeframe and/or frequency of proposed activities (for example, daily, weekly, seasonally in the fall/winter, occasionally, sporadically);
- d. the name of company or firm conducting aircraft de-icing activities, if other than the airline, tenant, or aircraft owner or operator;
- e. a description of the methods, materials, chemicals (including Material Safety Data Sheets (MSDS)), if any, and equipment used in the aircraft de-icing activities;
- f. the methods and means of storage and handling of material and equipment used in the aircraft de-icing activities;
- g. the methods and means to manage, contain, and dispose of contaminated materials resulting from or associated with the aircraft de-icing activities; and
- h. a list of the stormwater pollution prevention Best Management Practices (BMPs) used to control potential pollutants related to the activity.

See: SAN Storm Water Management Plan (SWMP), Appendix B, Best Management Practice (BMP) SC-05.

2. Authorization of the manner in which de-icing is conducted may require the authorized party to provide reports in a form specified by the Authority regarding the number of de-icing operations conducted and/or the amount of de-icing fluids and/or waste water collected during a specified period and/or other operational aspects of the activity.
3. Any spillage or release of de-icing fluid must be promptly cleaned up by the responsible party in accordance with Section 3.2.1.1.3 (under Storm Water Compliance)
4. All persons using glycol shall adhere to stormwater pollution control Best Management Practices (BMPs). Proper technique shall be used when de-icing aircraft to ensure that only the amount of chemical needed to complete the operation is applied. To the extent possible, alternative de-icing and anti-icing techniques shall be used to minimize the use of glycol.

Techniques for minimizing glycol use are described in FAA advisory circulars (ACs).

3.2.11 MAINTENANCE AND REPAIR OF AIRCRAFT

A. Designated Locations

Regulation.

1. No person shall repair any aircraft, aircraft engine, propeller or other aeronautical equipment in any area of the Airport other than those specifically designated for such purposes by the Airside Operations Department, unless specifically permitted by the Airline Operating Agreement or exempted as follows:
 - a. Minor adjustments may be made while the aircraft is on a loading ramp preparing to depart.
 - b. Emergency repairs may be made to an aircraft that is located in an area not immediately posing a hazard to other aircraft movements, providing such repairs are made only to enable the aircraft to be moved to an approved service location.

B. Gates

Regulations:

1. No person shall make any adjustment or repair on or to any air carrier aircraft at a gate position on the terminal apron that interferes with the operations of another air carrier aircraft.

2. No person shall make any adjustment or repair to any air carrier aircraft at a gate position on the terminal apron without first coordinating them with the Airside Operations Department.
3. Any aircraft being repaired at a terminal gate position shall be moved immediately upon the request of the Airside Operations Department.

C. Hangars

Regulations:

1. No person shall repair any aircraft in a storage area of a hangar, other than inspecting and replacing minor parts not involving the use of open flames or heat.
2. No person shall start or operate any aircraft engine inside any hangar.

D. Containers

Regulations:

1. All tenants and parties responsible for aircraft maintenance shall inspect all containers used for the storage of aviation maintenance-related fuels, greases, oils, flammable liquids or waste products for leaks and proper integrity.
2. All such containers shall identify the type of material stored.
3. All such containers, as well as the location of the storage containers and equipment, shall be maintained in accordance with National Fire Protection Agency (NFPA) guidelines and the City of San Diego fire codes.

3.2.12 STORAGE OF GROUND SERVICE EQUIPMENT

Regulations:

- A. No person shall operate any ground service equipment (GSE) unless it is clearly identified with the name or logo of the responsible company.
- B. The operator of any equipment that is no longer being used or is unserviceable shall ensure it is transferred to an area designated or approved by the Airside Operations Department and a date for removal is provided.
- C. All operators shall regularly inspect all stored equipment for leaks of fluids.
- D. All operators shall immediately stop, control, clean up and report any leaks in accordance with these Rules and Regulations and other applicable laws.

3.2.13 STORAGE OF AIRCRAFT AND PARTS

Authority Code 8.10 § (d). No aircraft shall be parked, stored or repaired on airports under the jurisdiction of the San Diego County Regional Airport Authority (the "Authority") except in the areas designated for such use.

Authority Code 8.10 § (e). At the direction of the President/CEO of the Authority or his or her designee (the "President/CEO"), the operator, owner or pilot of any aircraft on the airports under the jurisdiction of the Authority shall move the aircraft from the place where it is parked or stored to any other place designated on the airports under the jurisdiction of the Authority. In event of the failure or refusal to comply with such directions, the Authority may cause the aircraft to be moved to such place at the operator's expense and without liability for damage that may result from such moving.

Regulation.

- A. No person shall use any area of the Airport for parking or storage of aircraft without the written permission of the Airside Operations Department.

3.3 VEHICLE OPERATIONS ON THE AIR OPERATIONS AREA (AOA)

3.3.1 AIR OPERATIONS AREA (AOA) DRIVER'S PERMITS

Regulations:

- A. Every person operating a motor vehicle or equipment on the AOA shall have a valid California Drivers license or an out-of-state driver's license valid in the State of California in their immediate possession.
- B. No person shall operate a motor vehicle or equipment on the AOA with a suspended or revoked driver's license. The suspension or revocation shall result in the automatic revocation of AOA driving privileges.
- C. All drivers on the AOA, except those driving emergency vehicles responding to emergencies, shall carry a valid airport-issued driver's permit.
- D. No person, except those driving an emergency vehicle responding to an emergency, shall drive on the AOA without having first passed an AOA driving test.

AOA driving tests are administered by the Aviation Security and Public Safety Department. An endorsement is placed on the SAN identification (ID) badge indicating a valid AOA driver.

3.3.2 REGISTERING OF VEHICLES

A. Air Operations Area (AOA) Vehicle Permits – Vehicles Licensed by the State of California

Regulations:

San Diego International Airport
Rules and Regulations

1. Prior to operating a motor vehicle with a valid California license plate on the AOA, all persons shall register with the Access Control Office and be issued a vehicle authorization permit, except emergency vehicles responding to emergencies and vehicles under proper escort.

Vehicle authorization permits are issued by Access Control Office as follows:

- a. Motor vehicle permits are classified into three different categories (permanent, temporary, and visitor) as determined by the President/CEO.
 - b. AOA vehicle permit applications must be fully completed and signed by the master leaseholder, vendor or contractor prior to submission to the Access Control Office for approval and issuance of permits.
 - c. Evidence of valid insurance must be submitted with each AOA vehicle permit application and proof of current coverage shall be filed with the Access Control Office annually.
2. All persons issued an AOA motor vehicle permit shall display such permit in the lower corner of the front windshield on the passenger or driver side. Permits shall not be covered by any device that obstructs the view of such permit.

Display of motor vehicle permits on the passenger side is preferred.

Failure to display any required permit may result in the removal of the vehicle from Airport property and the cancellation of any permit issued. Removal shall be at the vehicle owner's expense.

3. Every tenant sponsoring a vendor vehicle or equipment shall obtain a visitor AOA vehicle permit and provide an appropriate tenant escort for the vehicle/equipment and operator prior to such vehicle/equipment/operator entering or operating on the AOA. Every escort shall be conducted by a person holding a valid escort authorization and AOA driver endorsement. The escorted vehicle shall be in view and under the positive control of the person providing the escort at all times, in accordance with applicable escort requirements.

B. Air Operations Area (AOA) - Vehicles Not Licensed by the State of California Regulations:

1. All persons operating a motor vehicle on the AOA not licensed by the State of California shall ensure that such vehicle is equipped with at least two headlights and two red tail lights. All lights shall be kept illuminated during operation between sunset and sunrise.

2. All persons operating a motor vehicle on the AOA shall dim the headlights of the vehicle when meeting oncoming aircraft.
3. No person shall operate a vehicle not licensed by the State of California on the AOA other than authorized tenant employees who have been issued an airport driver's permit and only for the purpose of tenant business.

C. Air Operations Area (AOA) Vehicle Identification

Regulations:

1. Every person operating an unescorted motor vehicle or equipment on the AOA shall ensure that such vehicle or equipment displays a logo or sign which clearly identifies the entity responsibility for the operation of the vehicle.
2. The logo or sign identifying an unescorted motor vehicle or equipment on the AOA shall be of a contrasting color scheme, placed on both sides of the vehicle, and shall be identifiable at a distance of not less than 100 feet.

D. Large Vehicles

Regulations:

1. No person shall tow any trailer or semi trailer on the AOA unless it is equipped with a braking device or system that will adequately hold and stop such trailer in the event it becomes disengaged from the towing vehicle.
2. All persons moving, positioning or parking large, tall or slow vehicles (e.g., large cranes, vehicles carrying oversize loads, backhoes, earth movers, dump trucks) shall coordinate with and receive approval from the President/CEO prior to operating on the AOA.

3.3.3 AUTHORIZED AIR OPERATIONS AREA (AOA) AREAS FOR MOTOR VEHICLES

Regulations:

- A. No person shall operate any motor vehicle on the AOA other than on a vehicle service road, leasehold, airline terminal building ramp or overnight parking apron.
- B. No person shall operate any motor vehicle on any portion of the Airport movement area other than to tow an aircraft after having received proper clearance from the Air Traffic Control Tower (ATCT).
- C. No person shall operate any vehicle in the Instrument Landing System (ILS) Critical Area when that area is active.
- D. No person shall operate any contractor vehicle outside of the contractor's authorized work area, lay down area or prescribed travel/haul route.

3.3.4 VEHICLE OPERATIONS

A. Motor Vehicle and Equipment Operation around Aircraft

Regulations:

1. Every person operating a vehicle or equipment shall yield the right-of-way to aircraft at all times.
2. No person shall drive any vehicle or equipment in front of a taxiing aircraft.
3. No person shall drive any vehicle or equipment under the wing of an aircraft unless in the act of servicing the aircraft.
4. No person shall drive any vehicle or other equipment within fifty (50) feet of an aircraft during fuel servicing operations unless the vehicle or equipment is being used to service the aircraft.
5. All persons backing up any service vehicle or other equipment shall ensure safe clearance from all aircraft, equipment and vehicles.
6. No person shall drive a vehicle or equipment on the AOA if it is constructed, equipped or loaded so as to endanger persons or property.
7. No person shall operate any motorcycle, motorbike, three-wheeled motor vehicle, roller or inline skates, roller blades, skateboard, bicycle or scooter, or personal transporter (e.g., Segway-type vehicle) on the AOA, with the exception of harbor police officers performing their official duties.

Upon request, the Authority may approve exceptions to the prohibition on bicycles provided that the bicycles (two or three wheels) are equipped with an operating headlight, reflective tape or reflectors, orange flag, company logo or markings; and directly supports an operational need. The storage location of bicycles or bicycle racks on the AOA shall be approved in advance by the Airport Authority.

8. No person shall drive any vehicle on the terminal apron:
 - a. across any active passenger loading lane (i.e., between the aircraft and the terminal gate or bus when passengers are being boarded or are disembarking);
 - b. under any loading bridge that is moving or being repositioned; or
 - c. between the terminal and an aircraft during a pushback, with the exception of company service vehicles, Harbor Police, or the Airside Operations

Department. Such drivers shall follow the direction of the aircraft's ground crew when present.

9. No person shall operate a vehicle or equipment to tow an aircraft on the AOA without prior clearance from the Air Traffic Control Tower (ATCT).
10. No person shall tow an aircraft between sunset and sunrise unless the aircraft has navigation lights illuminated or other lighting that ensures the visibility of the moving aircraft.
11. No person shall tow more than four baggage carts or container carts.

B. Parking

Regulations:

1. No person shall park any aircraft service vehicle or equipment on the AOA without first engaging the emergency parking brake or using wheel chocks.
2. No person shall leave any vehicle or equipment parked on the AOA with a key in the ignition switch, with the motor running, or without the emergency brake engaged.
3. Every person operating a vehicle or equipment on the AOA that becomes disabled shall remain with the vehicle or equipment until such time as it can be removed for repair or until such time as Harbor Police directs otherwise.
4. No person shall park any vehicle or equipment on the AOA so as to become a hazard to any aircraft entering or departing a gate position.
5. No person shall park any vehicle or ground equipment near any aircraft in such a manner as to prevent the ground equipment from being readily driven or towed away from the aircraft in an emergency.
6. No person shall park any vehicle or equipment in a manner so as to block:
 - a. the fence barrier openings or emergency entrances to the AOA;
 - b. airport service equipment and aircraft rescue and fire fighting vehicles;
 - c. ambulances, emergency vehicles and equipment;
 - d. fire hydrants and fire lanes;
 - e. building entrances and exits;
 - f. loading bridges or any paved access ways, roadways, or vehicular traffic areas; or

- g. fuel spill response trailers and carts.
- 7. All vehicles and equipment on the AOA, including, but not limited to, carts, stands, trucks, and tugs, shall be parked in assigned positions.
- 8. All portable loading ramps, baggage trucks and other such equipment on the AOA shall be equipped with brakes or suitable locking devices which shall be securely set when the equipment is not in use.

C. Speed Limits and Operations on the Air Operations Area (AOA)

Regulations:

- 1. All persons driving any vehicle or equipment on the AOA shall obey all signs, lights and mechanical devices, unless specifically directed otherwise by Harbor Police or Airside Operations Department personnel.
- 2. In the absence of a posted speed limit, all persons driving on the AOA shall adhere to the following speed limits:
 - a. perimeter road between taxiway C6 and taxiway B10 (the instrument landing system (ILS) critical area) - 25 mph
 - b. perimeter road - 25 mph (except in the vicinity of the Least Tern Nesting Ovals during Least Tern Nesting Season, April 1 through September 15).
 - c. perimeter road in the vicinity of the Least Tern Nesting Ovals during Least Tern Season, April 1 through September 15 – 15 mph.
 - d. terminal apron - 20 mph
 - e. within 50 feet of any aircraft or in the tunnels and baggage claim areas – 5 mph

D. Cleaning, and Maintenance of Vehicles

Regulations:

- 1. All persons operating mobile service equipment on the AOA shall ensure that such equipment is in good repair at all times.
- 2. No person shall drive a vehicle or operate equipment on the AOA with any technical or mechanical defect which impairs its safe operation.
- 3. No person shall drive a vehicle or operate equipment on the AOA which causes the release of any fluid or material into the environment.

San Diego International Airport
Rules and Regulations

4. No person shall operate any vehicle on the AOA when any California Vehicle Code (CVC) safety item is malfunctioning or missing from such vehicle or causes the driver's view to be obstructed.
5. No person shall wash any vehicle or equipment except in areas designated and in a manner approved in writing by the Environmental Affairs Department in coordination with the Airside Operations Department.

All requests for approval of the manner of vehicle and/or equipment washing shall be submitted in writing to the Environmental Affairs Department, and must contain, at a minimum, the following information:

- a. name of the tenant, or vehicle and/or equipment owner or operator;
- b. the location where the wash activities will be conducted;
- c. the general timeframe and/or frequency of proposed activities (for example, daily, weekly, seasonally in the fall/winter, occasionally, sporadically);
- d. the name of the company or firm conducting the wash activities, if other than the tenant, or vehicle and/or equipment owner or operator;
- e. a description of the methods, materials, chemicals (including Material Safety Data Sheets (MSDS)), if any, and equipment used in the wash activities;
- f. the methods and means of storage and handling of material and equipment used in the wash activities; and
- g. the methods and means to manage, contain and dispose of contaminated materials resulting from or associated with the wash activities; and
- h. a list of the stormwater pollution prevention Best Management Practices (BMPs) used to control potential pollutants related to the activity.

See : SAN Storm Water Management Plan (SWMP), Appendix B, Best Management Practice (BMP) SC-04 and SC-12.

6. Any spillage or release of de-icing fluid must be promptly cleaned up by the responsible party in accordance with the Section 3.2.1.I.3 (Under Storm Water Compliance).

E. Cleaning and Servicing of Lavatory Equipment
Regulation.

1. No person shall clean or service any lavatory vehicle outside of the triturator area without the prior approval of the Airside Operations Department.

F. Alcohol and Drugs

Regulation.

1. No person shall operate any vehicle or equipment on the AOA while under the influence of any alcohol or drug.

Any violation of this regulation will be reported immediately to the Harbor Police.

G. Accidents

Regulations:

1. No person shall leave any vehicle or equipment involved in an accident on the AOA resulting in damage to property or bodily injury before notifying the Harbor Police Department and Airside Operations Department.
2. No vehicle or equipment involved in any accident on the AOA shall be moved until the Harbor Police accident investigation is complete.

H. Emergency Vehicles

Regulation.

1. All persons shall yield to emergency vehicles or equipment responding to any emergency on the Airport.

I. Ensuring Security

Regulation.

1. All persons proceeding through any gate of entry or exit shall secure such gate immediately afterward.

Failure to secure the gate may be deemed cause to rescind any permit and access to the AOA. This is also a Transportation Security Administration (TSA) security violation and may be cited by the Authority, Harbor Police or members of the Transportation Security Administration (TSA).

3.3.5 VEHICLES OPERATING ON MOVEMENT AREAS

Regulations:

- A. Every person driving on a taxiway, runway or other area controlled by the Air Traffic Control Tower (ATCT) shall EITHER:
 1. have been trained in proper radio and movement area procedures;
 2. have available two-way radio communications with the Air Traffic Control Tower (ATCT); and

San Diego International Airport
Rules and Regulations

3. receive clearance and permission from the Air Traffic Control Tower (ATCT) to access those areas; OR
 4. be escorted by a driver who has the above training, capabilities and clearance; and
 5. receive prior approval from the Airside Operations Department.
- B. Every person driving while under the control of the Air Traffic Control Tower (ATCT) shall adhere to all regulations, instructions, procedures and advisories of the FAA.

Violation of this regulation shall be cause for termination of driving privileges on the airfield.

- C. Every person operating any vehicle or equipment on the movement areas shall ensure that such vehicle or equipment is readily identified by paint scheme, logo, flag or other device as specified in Federal Aviation Administration (FAA) Advisory Circular (AC) 150/5210-5B (as amended).
- D. Every person operating any vehicle or equipment within any area under the control of the Air Traffic Control Tower (ATCT) shall have acquired prior written permission from the President/CEO.

The Airside Operations Department, Harbor Police Department, Aircraft Rescue and Fire Fighting (ARFF) and Airport maintenance vehicles, in compliance with this section, are permitted to operate wherever necessary with permission from the Air Traffic Control Tower (ATCT).

- E. Every person operating any vehicle or equipment between sunset and sunrise on the movement areas shall display an amber or red flashing or rotating beacon.

Vehicles operating on the service road are not required to have rotating/flashing lights displayed.

3.3.6 ABANDONMENT

Regulations:

- A. No person may abandon any vehicle or equipment on Airport property. The owner of any vehicle or equipment found to be inoperative, unlicensed to operate under the California Vehicle Code (CVC), or otherwise reasonably found to be abandoned shall be responsible for all expenses incurred in the removal of such vehicle or equipment.

Notification of such removal is made by the Harbor Police.

- B. No person shall leave any vehicle unattended for any reason while in an area of the AOA not designated for parking.

- C. Every person leaving a vehicle unattended in an area not designated for parking on the AOA shall notify the Airside Operations duty manager's office immediately and give the location, duration, and reason for leaving the vehicle unattended.

3.4 FUELING OPERATIONS AND SPILL PROTECTION ON THE AIR OPERATIONS AREA (AOA)

3.4.1 GENERAL

Authority Code § 8.11 (l). The Authority's President/CEO or his or her designee may adopt and set forth additional rules and regulations relating to aircraft fueling operations.

Regulation.

- A. Every tenant who stores, handles, or dispenses aircraft fuel ("fueler") at the Airport, except a fixed based operator (FBO) or the operator of an aircraft at the Airport, shall use the aviation fuel storage facility and delivery facilities designated by the Authority for such use.

If the designated facilities are not available, the tenant may make other arrangements, provided that such alternative arrangements are approved in advance by the Authority.

3.4.2 COMPLIANCE

Authority Code § 8.11 (a). Every fueler must meet and comply with all applicable federal, state and local laws regulating the storage, handling and dispensing of aviation fuel.

Regulations:

- A. Every fueler shall meet all applicable guidelines of the National Fire Protection Association (NFPA), the American Society of Testing Materials (ASTM) and the American Petroleum Institute (API).
- B. Every fueler shall comply with all currently applicable FAA guidelines and advisory circulars (ACs).
- C. Every fueler shall comply with all currently applicable United States Environmental Protection Agency (EPA) Oil Pollution Prevention and Spill Prevention, Control, and Countermeasure (SPCC) Rule requirements (40 CFR part 112).

3.4.3 INSPECTIONS

Regulations:

1. Every fueler shall make its physical facilities at the Airport available for inspection by the Authority at least once every three months for compliance, in accordance with 14 Code of Federal Regulations part 139.321(d). A record of each inspection shall be retained for at least twelve (12) consecutive calendar months.

2. Every fueler shall immediately take corrective actions to remedy any discrepancies noted by the Authority and a written report of corrective actions taken shall be sent to Airside Operations within ten (10) days of the observed discrepancy.

3.4.4 STORAGE FACILITIES

Regulations:

1. Every fueler shall perform at least one leakage test per month on each of its storage tanks and fueling pipelines.
2. Every fueler shall ensure that its fuel storage tanks and fueling vehicles are identified by the type of fuel and fuel octane stored.
3. Every fueler shall have adequate procedures for sampling and testing fuels. All tests and test schedules shall be performed in accordance with applicable regulations. Test results shall be retained for at least 24 months.

3.4.5 FUELING OPERATIONS

Authority Code § 8.11 (b). No aircraft shall be fueled or drained while an engine is running or while the aircraft is in a hangar or an enclosed space.

Authority Code § 8.11 (c). During all fueling operations, the aircraft shall be grounded by a method approved by the President/CEO.

Authority Code § 8.11 (d). Lighting of an open flame is prohibited within 50 feet of any fueling operation.

Authority Code § 8.11 (e). Aircraft being fueled shall be positioned so that aircraft fuel system vents or fuel tank openings are not closer than 25 feet to any terminal building, hangar, service building, or enclosed passenger concourse other than a loading walkway.

Authority Code § 8.11 (g). Adequate fire extinguishers shall be within ready reach of personnel engaged in fueling operations. Extinguishers shall not be located near fuel hoses, pumps, meters or valves.

Authority Code § 8.11 (h). No electrical or radio equipment shall be operated on aircraft during fueling operations in a manner that endangers any person or property on the facilities and airports under the jurisdiction of the Authority.

Authority Code § 8.11 (i). All fuel dispensing equipment shall be kept in a safe and non-leaking condition.

Regulations:

- A. No person shall fuel any aircraft while one or more of its engines are running, except when conducted under procedures approved by the FAA and consistent with proper safety practices.

Cross-reference: See Regulations; Section 6.2.B Fire Extinguishers.

- B. No person shall engage in any aircraft fueling or fuel draining operation without proper spill response equipment and supplies readily accessible at the point of fueling or fuel draining.
- C. Every person shall immediately suspend all fueling or fuel draining operations if a lightning flash is reported or observed within five (5) miles of the Airport and shall not resume any fueling or fuel draining operations until fifteen (15) minutes after the last observed lightning flash.

The Airside Operations duty manager will notify all fueling agents of the suspension and when fuel transfer activities may be resumed.

- D. All persons conducting fueling operations shall ensure that qualified personnel are stationed at the aircraft fuel control panel during pressure-fueling operations.
- E. Every person conducting fueling operations shall ensure that all fuel dispensing equipment hoses, funnels or apparatus used in fueling or draining fuel from aircraft are properly grounded in accordance with FAA and National Fire Protection Association (NFPA) guidelines.
- F. No person shall act in any manner or use any material that is likely to cause a spark within fifty (50) feet of any aircraft during fueling operations.
- G. Every person observing any fire in a fuel delivery device servicing an aircraft shall notify Aircraft Rescue and Fire Fighting (ARFF) immediately.
- H. In the event of any fire in a fuel delivery device servicing an aircraft, fueling shall be discontinued immediately and all emergency valves and dome covers shall be shut down at once.
- I. No person shall fuel any motor vehicle or other equipment on the Airport other than at an approved location or at an Authority-approved dispensing device.

3.4.6 FUEL SERVICE VEHICLES

A. General

Authority Code § 8.11 (f). Fuel trucks shall be parked at least 50 feet from any hangar or building unless engaged in active fueling of an aircraft.

Regulations:

1. Every person operating any aircraft fueling or defueling equipment shall remain with such equipment while it is connected to an aircraft.
2. No person shall operate any fueling vehicle designed for or employed in the transportation of fuel on a taxiway or runway at any time.

3. Every person operating a fuel service vehicle shall maintain air pressure for the brakes such that the vehicle can immediately move during an emergency.
4. Every person operating aircraft fueling or defueling equipment shall stabilize such equipment with an emergency brake and chock blocks during fueling or defueling operations and while parked unattended.
5. No person shall stage any fuel service vehicle on a terminal ramp overnight.
6. No person shall back up any vehicle used for fueling within twenty (20) feet of any aircraft unless a person is posted to assist as a guide.
7. Every person conducting a fueling operation shall ensure that the aircraft and aircraft fueling vehicle are adequately bonded.
8. Every person conducting a fueling or defueling operation shall hold open by hand any self-closing nozzles or dead man controls during the entire operation.
9. Every person conducting a fueling or defueling operation shall ensure that the nozzles and dispenser are labeled according to fuel type.
10. Every person operating a fuel servicing vehicle shall ensure that the vehicle has two (2) fire extinguishers with a rating of 20- B: C, one mounted on each side of the vehicle.
11. Every person operating a fuel servicing vehicle shall ensure that the vehicle has sufficient spill absorbent materials on board to properly contain a spill of at least five (5) gallons.

B. Vehicle Parking

Regulations:

1. Every person parking an aircraft fuel service vehicle shall ensure that the vehicle is positioned and in a condition ready to facilitate egress in the event of an emergency.
2. Every person parking an aircraft fuel service vehicle shall maintain at least ten (10) feet of clear space between adjacent vehicles for access by fire suppression personnel and equipment.
3. Every person parking an aircraft fuel service vehicle shall ensure that the vehicle is located and positioned to prevent potential fuel spillage from entering into any storm or slit trench drain.
4. No person driving a fuel service vehicle shall enter any structure other than a maintenance facility.

5. No person shall park or leave unattended any fuel service vehicle within fifty (50) feet of any hangar, aircraft, passenger terminal, fuel storage facility or occupied structure.

3.4.7 FUEL SPILLS

A. Prevention

Regulations:

1. Every fueler, owner or operator of a fuel or oil storage facility (“fueler”) who files a Spill Prevention Control and Countermeasure Plan (SPCC) with the United States EPA pursuant to the Federal Water Pollution Control Act (PL 92-500) shall also file a copy of the SPCC with the Authority’s Environmental Affairs Department. The SPCC shall be renewed every three years, with all updates and changes filed with the Environmental Affairs Department.
2. Every person conducting fueling or defueling operations shall arrange for the proper handling and disposal of any trash, waste or other hazardous materials generated, including but not limited to, used oil, solvents and other waste.
3. Every person conducting fueling or defueling operations shall develop adequate procedures to limit fuel spills.
4. Every fueler shall prepare a fuel spill contingency plan, including notification and clean-up procedures.
5. Every fueler shall train its fuel service personnel in the appropriate use of fire extinguishing and spill response equipment.
6. Every tenant involved in or contracting for fueling operations shall maintain an adequate supply of fuel absorbent materials readily available to respond in the event of a fuel spill.
7. Every tenant involved in or contracting for fueling operations shall maintain a valid contract with a hazardous materials emergency response and cleanup services provider (hazardous materials contractor) and shall provide the name of the company to both Airside Operations and the Environmental Affairs Department in writing.

B. Reporting

Regulations:

1. Every person shall promptly report any fuel spill to their supervisor and the Airside Operations Department.

2. Every person shall immediately notify Aircraft Rescue and Firefighting (ARFF) if one of the following conditions exists:
 - a. the spillage presents a fire hazard or otherwise endangers life or property;
 - b. the spillage is over ten feet in length in any dimension or over 50 square feet in area;
 - c. the spill source is continuous in nature; or
 - d. the spillage is not cleaned up immediately for any reason.
3. When a fuel spill does not require Aircraft Rescue Firefighting (ARFF) units to respond, every person causing the fuel spill shall stand by with a fire extinguisher during the clean up process.
4. Every person operating any vehicle or equipment causing a fuel or oil spill which seeps into a sewer, storm or slit trench drain; which cannot be controlled or cleaned up using on-site in-house absorbent equipment and manpower; or which reaches or has the potential to reach the San Diego Bay must be reported to Airside Operations, the local emergency agency, the National Response Center and the State of California Office of Emergency Management Agency (Cal EMA) as soon as the responsible party has knowledge of the spill or discharge and notification can be provided without substantially impeding cleanup or other emergency measures.

Local emergency agencies can be contacted by dialing 911.

The National Response Center can be contacted at (800) 424-8802 or (202) 267-2675.

The State of California Office of Emergency Management Agency (Cal EMA) can be contacted at (800) 852-7550 or (916) 845-8911.

C. Safety and Clean Up Procedures

Authority Code § 8.11 (j). No aircraft shall be started when there is fuel on the ground under or near the aircraft.

Regulations:

1. Every person operating any vehicle or equipment creating any spillage or release of gasoline, jet fuel, oil, grease or other petroleum-based product or hazardous material shall remove the material immediately by suitable procedures in a manner acceptable to the President/CEO.

San Diego International Airport
Rules and Regulations

2. Every person conducting an aircraft or vehicle refueling operation in the immediate vicinity of a fuel spill shall terminate such operation.
3. No person shall operate any electrical or automotive equipment within one hundred (100) feet of any spill until safe conditions are restored.
4. No person shall start or move any aircraft, vehicle, or spark-producing equipment within any spill area before the area is declared safe by either the Airside Operations Department or the Aircraft Rescue and Firefighting (ARFF) captain.
5. When a spill occurs and no fire is present, no person shall move any fuel delivery vehicle or equipment in the immediate area until the spillage is dispersed or removed and the area is deemed safe as determined by the Aircraft Rescue and Firefighting (ARFF) captain.
6. No person shall continue any fueling operation until after a spill is cleaned up and final approval is given from the Airside Operations Department.
7. Every person conducting a fuel spill clean-up operation shall prevent fuel from entering any storm or slit trench drain.
8. No person shall permit any type of fuel, grease, oil, flammable liquid or contaminant of any kind to flow into or be placed in any storm or slit trench drain.
9. Emergency clean-up using the storm drain shall only be accomplished on the North Ramp or the Terminal 2 West Ramp where the storm drains are equipped with approved separation device. Immediately following the clean-up process, the fuel shall be removed from the separation device by the fueling agent at the responsible party's expense.
10. Every person responsible for a fuel, grease, oil, flammable liquid or contaminant spill of any kind shall take immediate action to begin clean-up operations.
11. Every person cleaning a fuel, grease, oil, flammable liquid or contaminant spill of any kind shall use absorbent substances or absorbent pads. The contaminated absorbent material shall be placed in metal containers and shall be properly disposed of in a timely manner in accordance with applicable laws and regulations.
12. All persons responsible for fuel, grease, oil, flammable liquid or contaminant spill of any kind that is larger than the responsible party can adequately handle or

that reaches the storm drain system shall immediately obtain the clean up and fuel recovery services of the Hazardous Materials Contractor.

Cross-reference: See Regulation 3.4.8.B.

13. Every person responsible for any fuel, grease, oil, flammable liquid or contaminant spill of any kind shall be liable for all costs associated with the control, containment, clean up, disposal and damages to the Airport facilities resulting from the spill or clean-up operations.

3.4.8 LAVATORY CHEMICAL AND/OR LAVATORY WASTE SPILLS

A. Reporting

Regulations:

1. Every person in the AOA shall promptly report any lavatory chemical or lavatory waste spill to their supervisor and the Airside Operations Department.
2. Every person responsible for any lavatory chemical or lavatory waste spill which seeps into the storm or slit trench drains; which cannot be controlled or cleaned up using on-site in-house absorbent equipment and manpower; or which reaches or has the potential to reach the San Diego Bay shall report such spill to Airside Operations, the local emergency response agency, and the State of California Office of Emergency Management Agency (Cal EMA) as soon as the responsible party has knowledge of the discharge and the notification can be provided without substantially impeding cleanup or other emergency measures.

The local emergency response agency can be contacted by dialing 911.

The State of California Office of Emergency Management Agency (Cal EMA) can be reached at (800) 852-7550 or (916) 845-8911.

B. Safety and Clean Up Procedures

Regulations:

1. Every person conducting spill clean-up operations shall prevent lavatory chemicals and lavatory waste from entering any storm or slit trench drain.
2. Every person responsible for any lavatory chemical and lavatory waste spill shall take immediate action to begin clean-up operations.
3. Every person when cleaning any lavatory chemical or lavatory waste spillage shall use absorbent substances or pads. The contaminated absorbent material shall be placed in metal containers and be properly disposed of in a timely manner in accordance with applicable laws and regulations.

4. Every person conducting lavatory chemical or lavatory waste spill clean-up operations shall properly disinfect all impacted surfaces.

3.4.9 FOREIGN OBJECT DEBRIS (FOD)

A. General

Regulations:

1. Every person with access to the air operations area (AOA) shall keep the aprons, ramps and grounds of the Airport free of all foreign object debris (FOD).

Cross-reference: See Rules and Regulations Section 3.2.5 Ground Operations.

2. Every tenant providing a trash container at the Airport (e.g., cans, dumpsters, compactors) shall ensure that the container is covered, checked frequently, and emptied as necessary to prevent spillover of trash.
3. No person shall establish a break area (tables, chairs, trash can, etc.) on the ramp without prior approval from the Airport Authority. Unauthorized break areas on the ramp will be removed by the Authority.

B. Foreign Object Debris (FOD) Containers

Regulations:

1. Every tenant on the AOA shall provide and maintain clearly marked and covered foreign object debris (FOD) containers for the deposit of materials picked up from the aprons and other areas of the Airport.
2. Every tenant providing and maintaining one or more foreign object debris (FOD) containers shall empty such containers on a scheduled basis and as necessary.

SECTION 4

4.0 TERMINAL AND TENANT OPERATIONS

4.1 SCOPE AND APPLICABILITY

This section specifies the general required procedures for terminal and tenant operations at the Airport.

An agreement with the Authority is required to operate on the Airport.

4.2 BUSINESS CONDUCT/OCCUPANCY

A. Conducting Business in Common Areas

Authority Code § 8.41 (a). It shall be unlawful for any person to engage in any performance as an entertainer or engage in any business or commercial activity on any of the facilities or airports under the jurisdiction of the San Diego County Regional Airport Authority (the "Authority"), except as authorized by a valid grant, franchise, lease, certificate or permit from the Authority.

(b). Every person violating any of the provisions of this section shall be guilty of a misdemeanor.

Regulations:

1. Every tenant conducting aeronautical or aeronautical support activities at the Airport shall conform with all applicable regulations of the Federal Aviation Administration (FAA), the Transportation Security Administration (TSA) or any successor agency, directives of the Authority (including, but not limited to, the Airport Certification Manual (ACM) and the Airport Security Program (ASP)), and these Airport Rules and Regulations.
2. No tenant shall conduct business in any public area or other common area of the Airport including, but not limited to, sidewalks, entrances, passages, elevators, vestibules, stairways, corridors, driveways or parking areas.
3. All tenants shall only use common areas as passageways to and from their respective work areas or to reach, as customers, the leaseholds of other tenants.

B. Prohibited Uses of Premises

Regulation.

1. No tenant shall occupy or permit any portion of its premises to be occupied in any manner whatsoever beyond the use(s) set forth in its agreement with the Authority.

C. Damage to Fixtures and/or Facilities

Regulation.

1. Every tenant misusing any fixture or facility on the Airport premises shall bear the cost of repairing damage resulting from such misuse.

Repair costs may be billed to the tenant, subtenant or affiliated entity through additional rent or other cost recovery.

D. Theft

Any theft or loss should be reported to the Harbor Police Department at (619) 686-8002.

The Authority will not be responsible for lost or stolen personal property from any tenants' leased premises or common areas regardless of whether such loss occurs when the area is locked against entry or not.

E. Locks and Keys

Regulations:

1. No tenant shall make a duplicate of any security key for a lock on any door or gate on Airport premises leased to the tenant without first obtaining approval of the President/CEO.

For more information, contact the Authority's Terminals & Tenants Department at (619) 400-2694.

2. No tenant shall install any additional door lock without the prior written consent of the President/CEO.
3. All tenants that have lost a security key shall be responsible for all costs associated with any resulting re-keying or re-pinning.

The Authority provides all initial door locks in each tenant's leased premises. All subsequent lock changes requested by the tenant, if approved by the Authority, shall be completed by the Authority at tenant's sole expense and cost. The Authority shall furnish to each tenant a reasonable number of keys to the tenant's leased premises at the initial move in. All subsequent key requests shall be at the tenant's sole expense and cost.

4.3 CLEANLINESS

Regulations:

- A. All tenants shall keep their leased areas and adjacent areas clean and free of rubbish and trash. Nothing shall be swept or thrown into the corridors, hallways or stairwells.

San Diego International Airport
Rules and Regulations

- B. All tenants shall close all corridor doors to their leaseholds when those doors are not in use.

Cross-reference: See Rules and Regulations Section 6.6.C. Hangar Safety/Spills and Leaks.

4.4 IMPROVEMENTS

A. Approval Required

Regulation.

1. Prior to commencing any tenant improvement or construction project on the Airport, the tenant shall first obtain the written approval of the President/CEO, regardless of the scope of work.

No tenant improvement project, including “minor” projects such as new telephone or data lines, is exempt from this regulation.

For more information, contact the Authority’s Terminals & Tenants Department at (619) 400-2694.

B. Approval Process

Proposed tenant improvements and construction projects (“tenant improvements”) shall be submitted to the Terminals & Tenants Department for review and approval prior to the tenant commencing work on the project.

Tenant improvements shall comply with the Authority’s standards as contained in the Authority’s Tenant Design Criteria, Airport Sign Policy, the Lindbergh Field Design and Construction Standards, and other standards as may be amended or implemented. All submittal forms and standards can be obtained from the Authority’s Terminals & Tenants Department at (619) 400-2694. Incomplete or non-complying submittals may be rejected or placed on hold pending provision of a conforming submittal.

Submittals of accurate and complete as-built drawings are required for projects involving extensive remodeling, and/or electrical, mechanical, and structural systems and other projects as may be required in the Authority’s discretion.

Authority review is not a substitute for any other required applicable permits or approvals including, but not limited to, those issued by the following agencies: City of San Diego Development Services (building, electrical, plumbing, heating, and ventilating and air conditioning (HVAC), fire and temporary permits), County of San Diego Department of Environmental Health, and the Federal Aviation Administration (FAA).

C. Hot Work

Cross-reference: See Rules and Regulations Section 6.3.C. Fire Hazards/Open Flames

D. Tenant and their Contractors

Regulations:

1. No contractor of a tenant on the Airport shall commence any type of construction work prior to the tenant obtaining approval in writing from the President/CEO.
2. All tenants conducting any improvement project shall ensure that such project conforms with the President/CEO's written approval.

Authority representatives including, but not limited to, the Construction Inspector may direct a tenant or tenant contractor to correct improvements or construction operations and/or stop construction when a project is either unauthorized or not complying with the written conditions of approval for that project.

3. All tenants shall control and direct their contractors working at the Airport.
4. All contractors and subcontractors of an Airport tenant shall procure, provide and maintain insurance coverage naming the Authority as an additional insured, insuring such risks in such amounts and with a company meeting the minimum requirements set by the Authority.
5. All tenants conducting any construction work at the Airport shall perform such work in accordance with all laws and regulations; pursuant to a valid building permit; and in a good and workmanlike manner.
6. All tenants conducting any construction work at the Airport shall ensure that their activities do not result in any damage to the Airport or other tenant property, improvements or possessions.

4.5 SECURITY

A. General

Regulations:

1. All tenants shall ensure the internal security of leased areas, including company aircraft and aircraft parking ramps.
2. All tenants shall have in place an approved program to prevent any unauthorized access to any restricted areas or the AOA via their leasehold or an operating area.

3. All tenants shall screen all unidentified and unbadged persons entering or found in their leasehold or operating area.
4. All tenants loading or off-loading any passengers shall provide an authorized and badged employee as an escort during passenger loading or off-loading to prevent unauthorized access to the aircraft and the AOA.
5. All tenants shall ensure that departure gate access doors remain closed and locked during any non-flight activity.

B. Construction

1. Ensuring Compliance

Regulation.

- a. All tenants shall ensure complete compliance with all applicable security requirements specified in the Airport Security Program (ASP) for any construction or other contracted services they conduct at the Airport.

Although Transportation Security Administration (TSA) officials, Harbor Police Officers, Aviation Security and Public Safety Department, Airside Operations Department, Terminals & Tenants and Facilities Development personnel monitor Airport construction activities, it is the responsibility of the tenant (including any contractor and/or designated Chief of Security, if applicable) to ensure compliance with the requirements set forth by the Authority.

For construction activity on the AOA, refer to the Airport Operational Safety & Security Requirements on the AOA (available at www.san.org).

2. Briefing

Regulation.

- a. No tenant shall begin or permit any work on the Airport until the tenant, the tenant's contractor, and the contractor's Chief of Security (if such employee is required) has received a briefing from the Manager, Aviation Security and Law Enforcement, or his or her designated representative.

3. Perimeter Fence and Gate Security

Regulations:

- a. All tenants conducting any construction project requiring access through the Airport perimeter fence shall:
 - (1) only use designated and approved perimeter access gates and follow pre-approved travel routes;

- (2) obtain SAN Identification (ID) badges allowing access to pre-determined and approved areas; and
 - (3) not install any type of locking device on any gate unless approved by the Manager, Aviation Security and Law Enforcement, or his or her designated representative.
- b. Every tenant modifying the Airport perimeter security system shall obtain the prior approval of the Manager, Aviation Security and Law Enforcement. Security fencing and/or gate construction shall be in conformity with applicable Federal Aviation Regulations (FARs) and Advisory Circulars (ACs). The integrity of the perimeter fence and gate system shall be strictly maintained at all times without exception. Gaps between gate end posts and fence support posts shall not exceed two inches. Gaps under fencing shall not exceed four inches from the bottom of the fence fabric to surface grade.

4. Doorway Security

Regulations:

- a. All tenants engaged in construction shall maintain positive security controls to prevent unauthorized access to restricted areas of the Airport. Full height barrier walls, if installed, shall be maintained to provide a secure barrier at all times. Existing doorways and installed temporary doorways shall be secured or guarded with authorized SAN Identification (ID) badged personnel at all times. Temporary doors installed for use by the tenant or contractor personnel that allow access to restricted areas shall be secured with a lock issued by Airside Operations Department, or by other means approved by the Manager, Aviation Security and Law Enforcement.
- b. No tenant shall:
 - (1) modify a security access door closure device or automatic locking mechanism;
 - (2) use an emergency exit (alarmed door) for access unless authorized by Airside Operations; or
 - (3) allow a security access door to be propped open unless a guard is physically posted at the door to prevent unauthorized access and Airside Operations is notified in advance.

The Airside Operations duty manager will notify and authorize the Security Operations Center (SOC) to disregard the Door Open Too Long alarm until the work at the door under repair is complete. This prevents the Harbor Police Department (HPD) from being dispatched unnecessarily to respond to

the alarm. Guards must be approved by the Manager, Aviation Security and Law Enforcement, and the Contractor's Chief of Security.

All security access doors must close and lock automatically.

5. Airport SAN Identification (ID) Badge Requirements for Contractors

Regulations:

- a. Every tenant engaged in any work at the Airport shall ensure that there is at least one contractor supervisor/foreman with a photo SAN identification (ID) badge in each work area at all times. The contractor supervisor/foreman shall escort and vouch for all contractor personnel wearing SAN identification (ID) visitor badges with "escort required" limitations in the work area.
- b. Every tenant engaged in any work at the Airport shall ensure that all personnel wearing a visitor badge are under escort at all times when in restricted areas of the Airport. An escort must be a Security Identification Display Area (SIDA) badge holder with "escort" authority.
- c. Every tenant engaged in any work at the Airport shall ensure that:
 - (1) all of its visitors display orange visitor badges;
 - (2) all of its visitors are in view and under the positive control (not more than 25 feet) of a SAN Identification (ID) badge holder at all times;
and
 - (3) no more than five (5) visitors accompany any escort at a time.

4.6 STORM WATER COMPLIANCE

The Airport Authority Board has adopted the SDCRAA Code Sections 8.70 to 8.79, known as the SDCRAA Storm Water Management and Discharge Control ("Storm Water Code"). The Storm Water Code sets forth uniform requirements and prohibitions for dischargers and places of discharge to the storm water conveyance system and receiving waters necessary to adequately enforce and administer all laws, standards, orders and special orders that provide for the protection, enhancement and restoration of water quality. The Storm Water Code applies to all tenants, persons and places located on property within the Authority's jurisdiction that discharge storm water or non-storm water into any storm water conveyance system or receiving waters. Any tenant violating any of the provisions or failing to comply with the mandatory requirements of the Storm Water Code is subject to enforcement action.

There is a wide variety of airport, airline, aircraft, and ground support-related activities conducted at the Airport that are subject to the requirements of one or both of the following National Pollutant Discharge Elimination System (NPDES) storm water permits:

San Diego International Airport Rules and Regulations

- State Water Resources Control Board Water Quality Order No. 97-03-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000001, Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities (“General Industrial Permit”), as amended, modified, revised, or re-issued; and
- California Regional Water Quality Control Board, San Diego Region, Order No. R9- 2007-0001, National Pollutant Discharge Elimination System (NPDES) No. CAS0108758, Waste Discharge Requirements for Discharges of Urban Runoff from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds of the County of San Diego (County), the Incorporated Cities of San Diego County, the San Diego Unified Port District, and the San Diego County Regional Airport Authority (SDCRAA) (“Municipal Permit”), as amended, modified, revised, or re-issued;

The Authority has prepared a Storm Water Management Plan (SWMP) that outlines a comprehensive program to reduce and eliminate pollutants from entering the storm water conveyance system and receiving waters. The Storm Water Management Plan (SWMP) describes potential pollutant sources at the Airport and the management programs in place to reduce or eliminate them.

Regulations:

1. All tenants at the Airport shall comply with the current applicable General Industrial and Municipal Permits of the California Regional Water Quality Control Board and shall respond to all Authority requests for pertinent information regarding facilities, operations, and activities.
2. Each Airport tenant, service provider and other commercial user shall be fully aware of and comply with federal, state and local storm water pollution prevention laws and regulations, the Storm Water Code, the National Pollutant Discharge Elimination System (NPDES) permits applicable to the Airport, and the Storm Water Management Plan (SWMP). Airport tenants, service providers and other commercial users are also responsible for ensuring that their contractors and sub-contractors comply with these requirements.
3. Any spillage or release of gasoline, jet fuel, oil, grease, lavatory chemicals, lavatory waste, waste water of any kind, or any other material or pollutant which may degrade the environment or may be unsightly or detrimental to the pavement in any area of the Airport shall be removed immediately by the party or operator responsible, using suitable procedures in a manner acceptable to the President/CEO. The failure of the responsible party to act promptly to immediately remedy the spill or release may result in a determination by the President/CEO to expend Authority resources to protect public health and safety, property and the environment and to seek reimbursement for such expenditures from the party responsible.

Cross-references: See Rules and Regulations Sections 3.4.7 Fuel Spills, and 3.4.8 Lavatory Chemical and/or Lavatory Waste Spills.

4.7 CARE OF BUILDING

A. Covering or Obstructing Windows and Doors

Regulations:

1. No tenant shall cover or obstruct any door, sash, window, glass door, light or skylight that reflects or admits light into the common areas of the Airport.
2. No bottles, parcels, showcases, inventory, wares or merchandise of any type shall be placed on any windowsill or in the public portions of any terminal building.
3. No tenant shall construct or place any window display case or platform anywhere such that it can be viewed from or through an outside window or door without prior written approval as to the design, content, location, construction and suitability of the subject matter from the President/CEO.
4. No tenant shall attach any awning, shade or other window covering (including but not limited to curtains, blinds, drapes or screens) to the inside or outside walls or to the inside or outside of windows of any leasehold without the prior written consent of the President/CEO.

Any items requiring President/CEO consent must be of the quality, type, design, color, material, and general appearance specified by the Authority.

B. Baggage Storage Cases

Regulation.

1. No tenant shall use any baggage storage case located in any baggage claim area other than for the temporary storage of luggage or other travel-related, passenger-owned items.
2. No tenant shall apply any poster or other promotional material to the inside of any panel of a glass case in the baggage storage area. Any affixed items must be promptly removed at the request of the Authority.

C. Tenant Restrooms

Regulation.

1. No tenant shall use any restroom for any purpose other than those purposes for which it was constructed.

D. Defacing Exterior Surfaces

Regulation.

1. No tenant shall mark, drive nails or screws into, drill into, paint or in any way deface the exterior walls, roof, foundations, bearing walls or pillars of any leasehold or building without the prior approval of the Authority. The expense of repairing any breakage, stoppage or damage resulting from such activity will be borne solely by the tenant.

E. Utility Systems

Regulations:

1. No tenant shall install or use any water cooler, ice machine, air conditioning unit, heating or other similar type equipment without the prior written consent of the President/CEO.
2. All tenants installing or maintaining electrical equipment shall ensure that only trained and qualified electricians install and maintain the equipment. Facilities containing such equipment shall be regularly inspected to correct any hazard resulting from operational use.
3. No tenant shall install any temporary or makeshift wiring other than extension lights.
4. All tenants using any explosion-proof or vapor-tight equipment shall regularly maintain such equipment in accordance with safety standards.
5. No tenant shall install any semi-permanent or permanent electrical installation without Authority approval.

F. Painting and Battery Work

Cross-reference: See Rules and Regulations 6.3.D Fire Hazards/Paint Spraying/Stripping, Battery Work and Doping

G. Hot Work

Cross-reference: See Rules and Regulations 6.3.C. Fire Hazards/Open Flames

4.8 CLOSURE OF ENTRANCES

The Authority reserves the right to close and keep locked any and all entrances and exit doors of the Airport, including but not limited to gates into parking areas, during such hours the President/CEO deems appropriate for the cleaning, maintenance or protection of the Airport.

4.9 SIGNAGE AND TENANT ADVERTISING

A. Permanent Signage

Regulation.

1. No tenant shall exhibit, inscribe, paint or affix any sign, advertisement, notice or other lettering on any part of the outside or inside (if visible from outside) of a leasehold or terminal facility surface, including, but not limited to, ticket counters, gate check-in counters and ticket lift podiums without the prior written consent of the President/CEO.

The President/CEO may remove any violating object without any liability and may charge the expense incurred by such removal up to and including repair and rehabilitation costs to the tenant as additional rent or cost recovery.

The President/CEO shall have the right to prohibit any advertising or business conducted by a tenant on the Airport that, in his or her opinion, tends to damage the reputation of the Authority and/or may encourage tenants to refrain from or discontinue advertising or business.

B. Signage Content

Regulations:

1. No tenant shall display any sign or signage content other than the business name, address, product, service or principal use of the premises.
2. No tenant shall display any signage containing advertisements that include any rates or prices.

Tour and service information brochures offered by a tenant may be permissible at the business counters and must be kept in an acceptable display case (e.g., Lucite holder).

C. Banners

Regulation.

1. No tenant shall post or display any banner prior to receiving approval from the President/CEO.

The President/CEO reserves the right to limit the number of banners and signage placed at the Airport.

Approval Process

Tenants must deliver banners to the Terminals & Tenants Department for approval. A letter explaining the purpose of the banner may be requested. No advertising or political messages of any type will be allowed on banners or signs.

San Diego International Airport Rules and Regulations

Upon approval of the banner, the Terminals & Tenants Department will affix an Authority approval sticker to the lower right corner of the banner. The Authority approval sticker will contain the approval expiration date. Approval is for a maximum of thirty (30) days. Extensions may be authorized upon written request.

Installation

The Facilities Management Department is responsible for the installation and removal of all banners.

Banners may not be displayed in areas that block airport signage, exit signs, fire extinguishers, or pull boxes. Banners may hang no lower than ten (10) feet from the floor.

Banners should be constructed of lightweight, fire retardant materials. Plastic banners are not permitted.

D. Digital Corporate Welcome Signs

Digital corporate welcome signage supplied by the San Diego Convention and Visitors Bureau (San CVB) and the San Diego Convention Center Corporation may be placed on the 70-inch digital displays in the baggage claim areas of the Commuter Terminal, Terminal 1 and Terminal 2. The welcome signs may appear for approximately ten (10) seconds every sixty (60) minutes, depending on the availability of space.

Digital corporate welcome signage specifications require static images and 1920 x 1080 HD video files in MPEG-2 HD, WMV-HD, MPEG-4 or AVI format.

All requests for digital corporate welcome signs from the San Diego Convention and Visitors Bureau (San CVB) or the San Diego Convention Center Corporation must be sent with artwork attached to the Senior Marketing Specialist II, Vision, Voice & Engagement. Contact Vision, Voice & Engagement at (619) 400-2871 for assistance. Once approved by the Authority, all digital corporate welcome signs will be forwarded to a consultant with start and end dates as identified by the Senior Marketing Specialist II, Vision, Voice & Engagement.

No other welcome signs shall be placed on the digital baggage claim screens without pre-approval of the Authority.

E. Community Outreach Program – Regional Non-Profit Organizations

As part of the Community Outreach Program, a number of wall wraps in Terminals 1 and 2 have been designated for a diverse group of local not-for-profit organizations that reflect the region's diversity and uniqueness.

A rotating schedule of not-for-profit organizations will be developed by the Art Program Manager and the Senior Marketing Specialist II, Vision Voice & Engagement. Each wall wrap will have a three-month rotation allowing for 48

San Diego International Airport
Rules and Regulations

organizations to participate in a 12-month period. A request for proposals will be issued to the region's not-for-profit organizations to solicit participation. All art requires prior Authority approval. Wall wrap dimensions depend on location. Specifications will be provided upon acceptance into the program.

F. Holiday Decorations

Regulation.

1. All tenants shall remove at their own expense any holiday or other decorations deemed offensive in the judgment of the Terminals & Tenants Department.

Tasteful decorations are permitted at ticket counters and gate areas.

Any damage to Airport facilities resulting from decorations may be charged to the tenant as additional rent or cost recovery.

G. Solicitation of Business

Regulations:

1. No tenant shall solicit business in the terminal outside of their leased areas, in parking areas or in other common areas.
2. No tenant shall distribute any handbills or other advertising matter on automobiles parked in the parking areas or elsewhere.

4.10 TERMINAL PAGING SYSTEM

Regulations:

- A. No tenants shall use the terminal paging system other than for essential announcements, such as updated departure/arrival times, flight cancellations and gate changes. All paging announcements are to be made in a brief, clear and concise manner.
- B. All tenants with access to the paging system shall warn all employees that nonessential information over the paging system is strictly prohibited.

The Airport paging system is the property and responsibility of the Authority. Any repairs, modifications or maintenance to the system is performed by the Authority or in accordance with tenant plans pre-approved by the Authority.

Where damage due to misuse or negligence has occurred, the Authority may repair the system or return it to its former configuration. The cost of such work will be billed to the responsible tenant as additional rent or cost recovery.

4.11 DELIVERIES

A. Use of Public Areas

Regulations:

San Diego International Airport
Rules and Regulations

1. All tenants shall ensure that deliveries to and from their leasehold are made only in such a manner and at such times as prescribed and approved by the President/CEO.
2. All tenants shall ensure that the movement of any bulky merchandise or materials into or out of their leasehold occurs through the public entrances during non-peak hours between 11:30 p.m. and 5:00 a.m.
3. All tenants shall assume all risks and liability for any damage to property or injury to persons where such damage or injury is a result of services provided to the tenant.
4. All tenants moving in or out of their leasehold areas shall repair, at their sole cost and expense, any damage to the building caused by their move.
5. All tenants shall keep loading areas neat, clean and free of any debris or spillage at tenant's sole cost and responsibility.
6. No tenant shall permit any items, trash or other refuse to be left unattended in any common area. The responsible tenant shall reimburse the Authority for the cost of removal in the event of any violation.
7. No tenant shall use in any public area of the Airport any hand truck or dolly for the delivery or receipt of merchandise other than one equipped with rubber tires and side guards.

B. Use of Escalators

Regulation.

1. No tenant shall use an escalator at the Airport to transport any type of equipment, concession supplies, construction supplies or contractor materials. Any damage to any escalator shall be borne by the offending tenant.

4.12 NOISE

Regulation.

- A. No tenant shall make or permit to be made any unseemly or disturbing noises disturbing or interfering with other occupants of the terminal or other structures, whether by the use of any musical instrument, radio, television set, voice machine, paging system, unusual noise or otherwise.

4.13 VERMIN AND PESTS

Regulation.

- A. Any tenant that misuses or neglects their leasehold or leased terminal area such that it becomes infested with vermin or pests shall at their own expense cause the vermin or pests to be exterminated immediately. The tenant shall employ licensed exterminators as pre-approved in writing by the President/CEO.

The tenant's failure to act promptly to immediately remedy the infestation may result in a determination by the President/CEO to expend Authority resources to protect public health and safety, property or the environment. The Authority may use all means available to seek reimbursement for such expenditures from the tenant.

4.14 ELECTRONIC EQUIPMENT

Regulations:

- A. No tenant shall use or bring upon the leasehold any electronic equipment, computers, data processing equipment or other equipment that may interfere with the electronic equipment of the Authority or another tenant.
- B. No tenant shall erect, install or otherwise maintain any aerials, transmitters or antennas without prior written consent from the President/CEO.

4.15 QUEUING LINES AND STANCHIONS

Regulation.

- A. All tenants shall ensure that queuing lines and stanchions do not unreasonably impede access and egress through any public area. In the event such lines unreasonably impede passenger flow, the tenant shall make immediate corrections.

The Authority recommends that queuing lines be controlled with stanchions with stanchion-mounted signs. Stanchion-mounted signs must contain professionally manufactured messages. Handwritten signs are not acceptable and may be removed by Authority personnel. The tenant may use a colored connection strap that identifies their name and/or corporate identity.

Stanchions must be free from damage (e.g., damaged or loose stanchion bases, broken connection straps or straps tied together). Such stanchions and damaged stanchion-mounted signs are not acceptable and will be removed by Authority personnel.

Unless prior permission is received from the President/CEO, interior stanchions must be chrome and exterior stanchions must be black powder-coated and weather-resistant.

SECTION 5

5.0 MOTOR VEHICLE AND GROUND TRANSPORTATION OPERATIONS

5.1 SCOPE AND APPLICABILITY

This section prescribes general required operating procedures for all motor vehicles and ground transportation service operations at the Airport. Except in cases of emergency involving the protection of life and/or property, motor vehicles shall be operated in strict accordance with these rules and regulations, Authority Codes, and the California Vehicle Code (CVC).

5.2 REGULATIONS APPLICABLE TO ALL MOTOR VEHICLES

Authority Code § 9.30 (j). Unless otherwise provided, any applicable state and local laws relating to the operation of motor vehicles on the public highways thereof, apply to the operation of motor vehicles on the facilities and airports under the jurisdiction of the Authority.

A. Speed Limits

Authority Code § 9.30 (h). No person shall drive any vehicle in excess of posted speed signs and in no event in excess of 15 miles per hour, unless otherwise posted. A violation of this provision shall constitute a misdemeanor.

Authority Code § 9.31 (a). It shall be unlawful to operate any vehicle on the facilities and airports under the jurisdiction of the Authority in excess of posted speed limits.

B. Traffic Signs, Markers and Devices

Authority Code § 9.30 (e). No vehicle shall be parked or operated on the facilities and airports under the jurisdiction of the Authority in violation of posted signs.

Authority Code § 9.32 (a). The President/CEO is hereby instructed to have lines or markings painted or placed upon the curb or upon the street for the purpose of designating parking spaces. Vehicles shall park within the lines or markings so established. It shall be unlawful to park any vehicle across any such line or marking or to park said vehicle in such position that the same shall not be entirely within the area so designated by such lines or markings.

*Authority Code § 9.34 (a). No person shall stop, stand or park any vehicle on facilities or airports under the jurisdiction of the Authority, including the Airport (collectively, the “**Facilities**”), in violation of posted signs or curb markings.*

Authority Code § 9.34 (b). The Authority’s President/CEO is authorized to determine such parking restrictions and locate such signs or curb markings as are necessary or appropriate to give notice of any restriction and the applicable hours, times or days any such restriction is effective.

C. Pedestrian Right of Way
Regulation.

1. Every person driving a motor vehicle at the Airport shall yield the right-of-way to any pedestrian who crosses a roadway, access way, designated crosswalk or drive, except where the movement of vehicular traffic is being regulated by an authorized officer of the Authority, a peace officer, or traffic control signals.

D. Vehicle Condition

Authority Code § 9.30 (l). No person shall operate any vehicle that: (1) is so constructed, equipped, or loaded, or which is in such physical or mechanical condition, as to endanger persons or property; or (2) that has attached thereto an object or equipment (including that which is being towed) that drags, swings, or projects so as to be hazardous to persons or property.

E. Permission

Authority Code § 9.30 (m). Unless prior written approval is obtained from the President/CEO, only those motor vehicles licensed to travel on the public highways of the State of California shall be permitted on the roadways, access roads, apron or other vehicular traffic areas of the facilities and airports under the jurisdiction of the Authority.

F. Repairs

Authority Code § 9.30 (n). No person shall clean or make repairs to vehicles anywhere on the facilities and airports under the jurisdiction of the Authority other than in areas designated for this purpose, except for minor repairs necessary with respect to a temporarily disabled vehicle.

G. Loading and Unloading of Vehicles

Authority Code § 9.36 (a). No person shall stop a vehicle for loading, unloading, or any other purpose on the facilities and airports under the jurisdiction of the Authority, including, without limitation, the Airport, other than in areas specifically designated for such use, and only in the manner prescribed by signs, markings, voice recordings or other means provided.

H. Airport Temporary Curbside Parking Permit Rules
Regulations:

1. No emergency vehicle shall park at the curb before contacting an airport traffic officer (ATO) and the ATO performs a cursory inspection, with the exception of Authority and Airport-assigned emergency vehicles, Airport Operations vehicles, and Airport Facilities Maintenance vehicles. All emergency vehicles parked curbside shall be secured at all times.

San Diego International Airport
Rules and Regulations

2. All persons parking a media vehicle at a curb shall adhere to the following procedures:
 - a. An ATO shall be contacted prior to parking at the curb.
 - b. The ATO shall perform a cursory inspection of the media vehicle.
 - c. The media vehicle shall display valid media placards issued by the County or City of San Diego or be marked with station insignia.
 - d. The media vehicle shall be parked at the east end of the curb for Terminal 1, to the west of valet parking for Terminal 2, or in front of the pet relief area for the Commuter Terminal (CT).
 - e. A member of the media shall remain with the vehicle at all times.

For more information, contact the Airport Operations Department at (619) 400-2710.

All other media vehicles should use the parking lots. Media vehicles may park in the Airport parking lots for up to three hours at no cost. A business card is required for parking validation.

3. All persons parking a delivery vehicle at the curb shall adhere to the following procedures:
 - a. The delivery vehicle shall display a valid SAN AOA placard or curbside permit.
 - b. The driver shall contact an ATO.
 - c. ATO shall perform a cursory inspection.
 - d. The delivery vehicle shall be secured at all times.

Other temporary permits may be issued on an as-needed basis under special circumstances. Vehicles may only be parked as per the terms and conditions on the permit. Vehicles shall be secured at all times. The driver shall make contact with an ATO who will verify the permit and make a cursory inspection of the vehicle.

Any failure to comply with these procedures or the instructions of authorized personnel may result in the immediate revocation of the temporary permit and subject the vehicle to citation and impound. Permits shall be surrendered to any ATO, harbor police officer or Authority Ground Transportation Department employee upon request.

I. Accidents

Authority Code § 9.30 (d). Any accident involving injury or property damage shall be reported to the President/CEO.

Contact the Ground Transportation Department at (619) 400-2685.

Regulation.

1. Every operator of a motor vehicle involved in any accident which results in the injury or death of any person or damage to any property shall immediately stop such vehicle at the scene of the accident and render assistance as needed. The operator shall give their name, address, license and registration numbers, and the name and address of their insurance company to any person injured, any owner of the damaged property, or any peace officer present, and shall notify the Harbor Police immediately. The operator shall make a report of the accident as may be required by and in accordance with applicable law.

J. Towed Vehicles

Authority Code § 9.37 (a). The President/CEO has the authority to remove from any area on the facilities and airports under the jurisdiction of the Authority, including, without limitation, the Airport, any vehicle which is disabled, abandoned or parked in violation of these rules and regulations, or which presents an operational or security problem to any other area of such facilities and airports and may store the same at the owner's or operator's expense and without liability for damage which may result while removing, towing or storing.

Contact the Ground Transportation Department at (619) 400-2685.

5.3 PARKING AREAS

Authority Code § 9.33 (a). Jurisdiction. The Authority is authorized pursuant to §21100 and 22500 et. seq. of the California Vehicle Code, §170016 of the California Public Utilities Code, and other applicable laws to enact and appoint personnel to enforce parking regulations at the Airport.

Authority Code § 9.33 (b). Authorization. Airport Traffic Officers ("ATOs") and other Authority personnel designated by the President/CEO that are assigned to the enforcement of the Authority's codes, applicable section of the California Vehicle Code, and other applicable laws relating to illegal parking and related violations within the jurisdiction of the Authority are authorized to issue written notices of violation thereof stating the vehicle license number, make of vehicle, the time and date of illegal parking, street location and reference to the appropriate section violated together with fixing a time and place for appearance by the registered owner to answer said notice. Such notice shall be attached to said vehicle in a conspicuous place upon the vehicle so as to be easily observed by the person in charge of such vehicle upon his or her return thereto.

San Diego International Airport
Rules and Regulations

Authority Code § 9.33 (c) Penalty. For the purposes of regulating the use and safety of streets, parking and traffic and as a deterrent to illegal parking, the following penalties are established:

Type of Violation	Authority Code Sections(s)	Penalty Within 30 Days of Issuance	After 30 Days	After 65 Days
Out-of-Stall	9.32(a); 9.34(e)	\$35.00	\$70.00	\$80.00
Unauthorized Airport Parking, Stopping, or Standing	9.30(e); 9.30(f); 9.30(n); 9.34(a); 9.34(c); 9.34(d); 9.34(f); 9.34(k)	\$67.00	\$134.00	\$144.00
No Valid Employee Lot Permit	9.34(l)	\$35.00	\$70.00	\$80.00
Unauthorized Commercial Airport Parking, Stopping, or Standing	9.34 (m)	\$250.00	\$250.00	\$250.00

Authority Code § 9.33 (d) Payment of Penalties. The owner or operator of a cited vehicle for a parking code violation may elect to mail the applicable penalties within the time established for payment thereof in accordance with the information specified in the notice of violation; provided, however, said owner or operator shall be and remain responsible for the delivery and payment thereof.

Authority Code § 9.33 (e) Failure to Pay. Failure to pay the appropriate penalty as provided herein or failure to contest the violation in accordance with the information specified in the notice of violation will result in proceeding against the registered owner and or the vehicle operator for violation of the appropriate code section in accordance with the provisions of §40220 of the California Vehicle Code.

Authority Code § 9.33 (f) State Mandate Surcharges. The President/CEO is authorized to adopt procedures and delegate authority for the collection of additional mandated surcharges or fees imposed pursuant to applicable state or municipal law.

A. Public Parking

Authority Code § 9.34 (c). No person shall park a vehicle within any public vehicular parking area except upon the payment of such parking fees and charges as prescribed by the Authority.

Authority Code § 9.34 (d). No person shall enter or use a motor vehicle parking facility or parking space contrary to its posted or restricted use.

Authority Code § 9.34 (e). No person shall park or leave a vehicle unattended in any motor vehicle parking facility or parking space without having positioned said vehicle in a designated stall or area in such a manner as not to obstruct the proper movement of other vehicles in the parking facility or utilization by other vehicles or driveways or adjacent parking spaces.

Authority Code § 9.34 (f). The President/CEO has the authority to store vehicles parked in vehicular parking areas, for nonpayment of parking charges.

Authority Code § 9.34 (g). No person, unless authorized by the President/CEO, or the authorized parking facility operator, shall remove a claim check from a parking facility claim check dispensing machine, other than as an operator of a vehicle entering a parking facility, in which case, such person shall remove only one claim check from the dispensing machine.

Authority Code § 9.34 (h). It shall be unlawful for any person to remove a claim check or checks from, or to otherwise operate, a parking facility claim check dispensing machine, for the purpose of avoiding or enabling another person to avoid payment of the lawful charge of the use of such parking facility.

Authority Code § 9.34 (i). No person shall remove or attempt to remove a vehicle from a parking facility by presenting a claim check other than the claim check originally dispensed to the operator at the time the vehicle entered such parking facility.

Authority Code § 9.34 (j). No person shall present a parking claim check requiring payment of parking fees upon exiting a motor vehicle parking facility which does not indicate an accurate record of the length of time said vehicle was actually within the parking facility; inaccuracies of time recording equipment excepted.

B. Reserved Parking

Authority Code § 9.34 (k). No person shall park any vehicle in any space marked "reserved" without a valid permit issued by the Authority. All such vehicles shall be allowed only within a space or area specifically assigned to them. Parking shall be allowed only within spaces that comply with said designation, and then only for the times officially indicated by such authorized signs.

C. Airport Employee Parking Facilities

Authority Code § 9.34 (l). No person shall park or operate a vehicle on any parking facility established for the use of persons employed at the Authority unless such vehicle has properly affixed thereto a valid and un-expired parking decal or hang tag.

Regulation.

1. No person shall alter, falsify, forge, duplicate or in any manner reproduce or counterfeit any employee parking facility decal or hang tag.

5.4 COMMERCIAL TRANSPORTATION VEHICLES

A violation of any of the following provisions may be penalized by suspension or revocation of privileges and/or as a misdemeanor.

Authority Code § 9.11 (a). No person shall operate or drive or cause to be operated or driven any Taxicab, Vehicle for Hire, Charter Vehicle, TNC Vehicle, scheduled ground transportation service, hotel or other courtesy vehicle or any other commercial ground transportation service (except as provided in Section 9.23 of this Code) over and upon the non-dedicated private streets for the transportation of persons and baggage from or within the Airport without all valid and necessary permits issued by the Authority.

Authority Code § 9.24 (a). Violations of any of the provisions of Sections 9.01 to 9.24, inclusive, of this Code shall be charged as a misdemeanor and subject to:

- (1) Imprisonment in the county jail not exceeding six months;*
- (2) A fine not exceeding one thousand dollars (\$1,000);*
- (3) Having their vehicle impounded; or*
- (4) Having any combination of subsections (1), (2), and (3) above imposed.*

Authority Code § 9.34 (m). No person shall stop, stand or park, or cause to be stopped, standing, or parked, any commercial ground transportation vehicle on Facilities in violation of posted signs or curb markings.

A. Conformance with Laws

Authority Code § 9.21 (i). Any authorized ground transportation service shall be provided in conformance and abeyance of:

- (1) All lawful orders or instruction from authorized officers of the Authority;*
- (2) Any and all rules and regulations now in force or which may be changed, added, modified or adopted by the Authority for operation of transportation services at the Airport; and*
- (3) Any and all laws, ordinances, statutes, rules, regulations, orders, permits or certificates from the Airport, any governmental authority, municipal, state or federal, lawfully exercising authority over such person holding an Authority permit, including persons, employees, drivers and agents.*

B. Ground Transportation Permits

Authority Code § 9.12. The President/CEO or his or her designee of the Authority may issue permits authorizing ground transportation service for the transportation of

persons and baggage from or within the Airport. A valid permit is permission for the person to whom it is given, including said person's employee, driver or agent, to transport, by a vehicle to which a decal is affixed, passengers and baggage over and upon the non-dedicated private streets within the Airport, in accordance with the rules, regulations, and standing time limits established and designated by the President/CEO from time to time.

Authority Code § 9.23 (a). No ground transportation permit shall be required for the operation of ground transportation services for the transportation of persons and baggage from the Airport to any government-owned public transportation system.

Authority Code § 9.23 (b). No permit shall be required for the transportation of persons and baggage from the Airport by a vehicle operated for the transportation of passengers pursuant to a tour charter party license issued by the California Public Utilities Commission operating under an agreement or contract, with a passenger capacity of 25 persons or greater.

1. Vehicle Restrictions

Authority Code § 9.12 (a).

(1) Beginning July 1, 2012, the total number of authorized vehicle decals for Taxicab permits shall not exceed 450 for the Airport. A reserve list shall be retained and may be used by the President/CEO for possible replacements. The operating authority of vehicle decals for Taxicabs shall be restricted to two days every five days, not to exceed 180 authorized decals each day through the establishment of a numbered system.

(2) The total number of authorized Vehicle for Hire operators shall not exceed nine.

(3) No Vehicle for Hire operator may transfer a vehicle decal except as provided in Section 9.19 of this Code. Authorized Vehicle for Hire operators may increase the number of vehicle decals for their fleet each calendar year by the higher of two vehicles or 10% of their then existing fleet.

Authority Code § 9.19 is reprinted herein in Rules and Regulations section 5.4.D.

(4) No Taxicab, Charter Vehicle, Vehicle for Hire, Courtesy Vehicle, or TNC Vehicle shall be operated at the Airport without the appropriate current vehicle decal and permit issued by the Authority and having passed inspection as provided by this Code. No vehicle decal shall be issued for any Taxicab, Charter Vehicle, Vehicle for Hire, Courtesy Vehicle, or TNC Vehicle more than ten (10) years old.

(5) The Board reserves the right to increase or decrease the number of ground transportation service permits and vehicle decals or otherwise further limit or restrict the days or times for operation of the Permit Holders as provided herein or as may be provided pursuant to a duly adopted resolution.

Contact the Authority's Ground Transportation Department at (619) 400-2685 for more information.

2. Permit Terms and Fees

Authority Code § 9.12 (b). A ground transportation service permit may be issued any time during the calendar year and shall not exceed the expiration date. Irrespective of the date of issuance of any permit, every ground transportation service permit shall expire at the end of the permit term period during which it was issued unless any such permit is sooner terminated, suspended, revoked or cancelled. No permit shall be extended nor shall any permit be renewed or transferred except as provided in this Code.

(1) Trip fees or any other fees and charges for a ground transportation service provider shall be set by resolution of the Board.

3. Automated Vehicle Identification

Authority Code § 9.12 (c). All authorized Airport Ground Transportation Service Provider vehicles shall display a vehicle identification decal and have installed an Automated Vehicle Identification ("AVI") transponder.

(1) No person shall remove, damage or tamper with a vehicle decal or AVI transponder unless given written authorization by the Authority.

(2) No person shall evade or attempt to evade an Airport AVI reader.

Regulations:

- a. All authorized ground transportation service operators other than charter vehicle operators shall have AVI transponders affixed to their Airport-permitted vehicles.
- b. Only Airport-authorized personnel shall mount AVI transponders on permitted vehicles.
- c. No operator shall remove any AVI transponder without the permission of the Authority's Ground Transportation Department.
- d. Every operator who removes a vehicle from service shall return the AVI transponder to the Authority's Ground Transportation Department along

with the vehicle decal within five (5) days of the vehicle being taken out of service.

- e. All operators shall be responsible in full for any replacement costs for lost transponders.

The current replacement cost for a transponder is \$75.00.

- f. Any vehicle that does not have a transponder shall be placed out of service.
- g. Any operator found to have tampered with or damaged a transponder shall be subject to suspension or revocation of their Airport permit.
- h. Any operator found evading or attempting to evade an AVI reader shall be subject to suspension or revocation of their Airport permit.

4. Vehicle Inspections

Authority Code § 9.12 (d). Each vehicle for which there is an application for a decal shall be inspected by the Authority or an approved Inspection Station prior to issuance of a vehicle decal, and at other times as deemed advisable by the Authority.

Contact the Authority's Ground Transportation Department for more information at (619) 400-2685.

5. Temporary Ground Transportation Service Permit

The Authority's Ground Transportation Department has temporary ground transportation service permits available for current Airport-permitted charter operators. These permits may be used on rented vehicles that are placed into service for periods not to exceed thirty (30) days. Permits may be moved from vehicle to vehicle only as provided.

The number of temporary ground transportation service permits issued to an operator shall not exceed ten percent (10%) of their permanent vehicle decals. An exception may be granted for a maximum of ten (10) decals upon submitting proof of need to the Authority.

Regulations:

- a. All operators shall display any temporary ground transportation service permit on the right side of the vehicle dashboard. Vehicles not properly displaying permits are subject to a citation.
- b. All charter vehicle operators using temporary ground transportation service permits shall submit an Airport Authority insurance compliance form to the Ground Transportation Department prior to placing a temporary vehicle into service.

Airport Authority insurance compliance forms are available on the Authority's website at www.san.org. The form may be delivered in person or faxed to (619) 400-2686. Failure to submit the insurance form prior to using the temporary permit may result in the revocation of the permit.

- c. Every person operating under a temporary ground transportation service permit shall submit such permit for inspection at the request of any ATO or other authorized personnel.

Misuse of a temporary ground transportation service permit may result in the operator losing the privilege of obtaining future temporary permits.

6. Complaints

Authority Code § 9.17 (a). Every Airport Ground Transportation Service Permit Holder shall respond within ten days to any written complaint concerning transportation services provided or arranged by the Permit Holder to or from the Airport.

Authority Code § 9.17 (b). A Permit Holder also shall respond within ten days to any inquiries from the Authority regarding service complaints and provide copies of any requested correspondence and records.

C. Driver's Permits

Authority Code § 9.13 (a). Except as provided in Section 9.23 of this Code, no person shall drive or operate a commercial ground transportation vehicle at the Airport without a valid Driver's Permit ("Driver's Permit") from the Authority in their possession. For purposes of this Article, a commercial ground transportation vehicle shall include, but not be limited to, a Charter Vehicle, Courtesy Vehicle, Taxicab, Vehicle for Hire and TNC Vehicle.

Authority Code § 9.23 (a). No ground transportation permit shall be required for the operation of ground transportation services for the transportation of persons and baggage from the Airport to any government-owned public transportation system.

Authority Code § 9.23 (b). No permit shall be required for the transportation of persons and baggage from the Airport by a vehicle operated for the transportation of passengers pursuant to a tour charter party license issued by the California Public Utilities Commission operating under an agreement or contract, with a passenger capacity of 25 persons or greater.

Contact the Authority's Ground Transportation Department at (619) 400-2685 for more information.

1. Restrictions on Issuance and Exceptions

San Diego International Airport
Rules and Regulations

Authority Code § 9.13 (b). A Driver's Permit shall not be issued to any of the following:

(1) Any person required to register as a sex offender pursuant to the California Sex Offender Registration Act (California Penal Code §290, et seq.);

(2) Any person required to register with the chief of police pursuant to California Health and Safety Code §11590, et seq;

(3) Any person convicted of a felony;

(4) Any person convicted of violating any of the following:

(i) California Vehicle Code §23152 or §23153;

(ii) The vehicle code of another state or jurisdiction for driving a vehicle upon a highway while under the influence of an intoxicating liquor, drugs or narcotics;

(iii) California Vehicle Code §23103 or §23104; or

(iv) The vehicle code of another state or jurisdiction for reckless driving.

(5) Any person who has been convicted of a crime, the nature of which the Authority determines indicates the applicant's unfitness to operate a commercial ground transportation vehicle for hire in a safe and lawful manner, including, but not limited to, assault or battery, or any form thereof;

(6) Any person who is addicted, as defined in California Welfare and Institutions Code §3009, to any substance prohibited by the Uniform Controlled Substances Act unless enrolled and successfully participating in a drug treatment program approved by a court of relevant jurisdiction;

(7) Any person who, within the 12 months immediately preceding the submission of an application pursuant to this section, is convicted of, or held by any final administrative determination to be a negligent driver pursuant to California Vehicle Code §12810.5;

(8) Any person who fails a Security Threat Assessment by the United States Transportation Security Administration ("TSA");

(9) Any person who provides false information when applying for an Authority Driver's Permit; or

(10) Any person who alters, falsifies, forges, duplicates or in any manner reproduces or counterfeits, or displays or causes to be displayed any Driver's Permit issued pursuant to this Section.

Authority Code § 9.13 (c).

(1) The provisions of Subsections (b)(1), (b)(2), (b)(3), (b)(4) and (b)(5) above shall not apply when five (5) years have elapsed from the later of:

- (i) the last date of applicant's discharge from a jail or penal institution;*
- (ii) the last date of applicant's discharge from parole; or*
- (iii) the last date on which applicant was placed on probation.*

(2) For the purposes of Subsection (b) above, conviction includes, but is not limited to, a plea or verdict of guilty, a finding of guilty by a court or jury in a trial, a plea of nolo contendere, or a forfeiture of bail.

2. Application Procedures

Authority Code § 9.13 (c).

(3) The Authority shall fingerprint every applicant and may forward fingerprints to state and federal law enforcement agencies for search.

(4) The Authority shall collect from the applicant and forward to the TSA information that is requested by the TSA for the conduct of a Security Threat Assessment.

(5) A Taxicab Driver who is in possession of a valid Taxicab Driver's Identification Card issued by the Sheriff's Department may be deemed in compliance with the Authority's fingerprinting requirements. Such applicants are still subject to the TSA's Security Threat Assessment.

(6) If, after investigation, the Authority determines that the application for a Driver's Permit should be denied, the Authority shall prepare a Notice of Denial of Application setting forth the reasons for such denial. Such Notice shall be either sent by registered mail to the applicant or personally delivered. Any person who has had an application for a Driver's Permit denied may request a hearing in accordance with the provisions of this Code.

3. Term and Fees

Authority Code § 9.13(d).

(1) A Driver's Permit may be issued any time during the calendar year for a term not to exceed one (1) year.

(2) A Driver's Permit may be renewed within the thirty (30) days prior to its expiration date by making application to the Authority, unless such permit is terminated, suspended, revoked or cancelled. A Driver's Permit shall not be renewable thirty (30) days after the expiration date of the Permit.

(3) The fee for a Driver's permit shall be set by resolution or ordinance of the Board.

(4) Prior to the issuance or reissuance of a Driver's Permit, satisfactory proof of compliance with this Code shall be submitted to the Authority.

(5) Prior to the issuance or reissuance of a Driver's Permit, the applicant must provide proof of a valid current California Driver's License of the class required by the Authority.

4. Replacement

Airport taxicab and vehicle for hire drivers may replace a lost or stolen driver's permit upon payment of a permit fee. Any driver found operating with a previously replaced Airport driver's permit will be immediately placed out of service and the Authority may opt not to reissue a permit.

Contact the Authority's Ground Transportation Department at (619) 400-2685 for further information.

D. Issuance and Transfer of Permits

Authority Code § 9.19 (a). Issuance of Commercial Ground Transportation Permits, vehicle decals and driver permits

(1) Commercial Ground Transportation Service Permits, vehicle decals and Driver Permits are issued by the Authority for the purpose of granting the privilege to conduct business and provide commercial transportation services at the Airport.

(2) A Commercial Ground Transportation Service Permit, vehicle decal and Driver Permit is personal to the individual to whom it is issued.

(3) The Authority has absolute discretion to authorize the issuance of Commercial Ground Transportation Permits, vehicle decals and/or Driver Permits on an annual basis.

(4) The Authority may exercise its discretion to not authorize the renewal of Commercial Ground Transportation Service Permits, vehicle decals and/or Driver

San Diego International Airport
Rules and Regulations

Permits or to change the way Commercial Ground Transportation Service Permits, vehicle decals and/or Driver Permits are granted or allocated at any time.

(5) Holders of Commercial Ground Transportation Service Permits, vehicle decals and Driver Permits shall have no expectation of or right of renewal in any Commercial Ground Transportation Service Permit, vehicle decal or driver permit.

(6) The President/CEO may require, as a condition of issuing a Commercial Ground Transportation Service Permit, that the holder of said Permit join an Authority-approved industry association where said association is all of the following:

(i) A legal entity consisting of a minimum number, to be determined by the President/CEO, of holders of similar Commercial Ground Transportation Service Permits; and

(ii) Open to all holders of similar Commercial Ground Transportation Service Permits on a fair, equitable and non-discriminatory basis; and

(iii) A party to a memorandum of agreement with the Authority concerning ground transportation operations at the Airport; and

(iv) In compliance with such other requirements as determined by the President/CEO as being in the best interests of the Authority.

Authority Code § 9.19 (b). Transferability

*(1) The holder of a Commercial Ground Transportation Service Permit, vehicle decal or Driver Permit shall not in any manner, directly or indirectly, by operation or law or otherwise, sell, assign, hypothecate, transfer, or encumber (“**transfer**”) in whole or in part said Permit, decal or Driver Permit without the prior, express written consent of the President/CEO.*

(i) In the event the holder of a Commercial Ground Transportation Service Permit, vehicle decal and/or Driver Permit is a corporation, partnership or legal entity other than a natural person, the prior written consent of the President/CEO shall be required for any transfer of any stock, interest, ownership or control of that corporation, partnership or legal entity.

(ii) The President/CEO may deny any request to transfer a Commercial Ground Transportation Service Permit, vehicle decal and/or Driver Permit in his or her absolute discretion.

*(2) Taxicabs and TNC Vehicles. In the event the Board exercises its discretion to issue Commercial Ground Transportation Service Permits for Taxicabs or TNC Vehicles (“**Taxicab/TNC Permits**”) for any subsequent one-year period after June 30, 2014, the holder of any Taxicab/TNC Permit no longer wishing to operate under said Taxicab/TNC Permit must do one of the following:*

- (i) Return the Taxicab/TNC Permit to the Authority; or*
- (ii) Transfer the Taxicab/TNC Permit to an Authority-approved recipient (“**Transferee**”), and*
 - a. Pay the Authority a one-time transfer fee of \$3000,*
 - b. Secure the prior written consent of the President/CEO, and*
 - c. Advise the Transferee in a writing approved by the Authority that the Taxicab/TNC Permit is no longer transferrable and must be returned to the Authority if the Transferee no longer wishes to operate under the Taxicab/TNC Permit.*

(3) Vehicles for Hire.

(i) If the holder of a Commercial Ground Transportation Service Permit for Vehicles for Hire proposes to transfer all vehicle decals issued to the holder, the vehicle decals may be transferred to any person or entity provided that person or entity is approved by the California Public Utilities Commission and the prior written consent of the President/CEO is obtained.

(ii) If the holder of a Commercial Ground Transportation Service Permit for Vehicles for Hire proposes to transfer only a portion of its vehicle decals, the vehicle decals may only be transferred to another person or entity holding a current valid Commercial Ground Transportation Service Permit for Vehicles for Hire and only after first obtaining the prior written consent of the President/CEO.

Regulation:

1. To be eligible for a Ground Transportation Service Permit at the Airport, all taxicab owners must join an Authority-approved industry association where said association is all of the following:
 - a. A legal entity consisting of at least 5 active holders of similar Ground Transportation Service Permits; and
 - b. Open to all holders of similar Ground Transportation Service Permits on a fair, equitable and non-discriminatory basis; and

- c. A party to a memorandum of agreement with the Authority concerning ground transportation operations at the Airport; and
 - d. In compliance with such other requirements as determined by the President/CEO as being in the best interests of the Authority.
2. To be eligible for a Ground Transportation Service Permit at the Airport, all Vehicle for Hire owners must join an Authority-approved industry association where said association is all of the following:
 - a. A legal entity; and
 - b. Open to all holders of similar Ground Transportation Service Permits on a fair, equitable and non-discriminatory basis; and
 - c. A party to a memorandum of agreement with the Authority concerning ground transportation operations at the Airport; and
 - d. In compliance with such other requirements as determined by the President/CEO as being in the best interests of the Authority.

Contact the Authority's Ground Transportation Department at (619) 400-2685 for more information.

E. Suspension, Revocation, Denial and Fine of Permits and Services

Authority Code § 9.22 (a). The President/CEO shall suspend, revoke or deny the Ground Transportation Service Permit or driver permit, as applicable, for failure to comply with any of the provisions of Sections 9.01 to 9.13, inclusive, of this Code pertaining to ground transportation services. Any such suspension or revocation shall be separate from any civil or criminal proceedings and shall not be a basis for relief of liability or responsibility pursuant to the proceedings. The action of the President/CEO shall be subject to the appeals provisions provided herein.

Authority Code § 9.22 (c). The Permit Holder or applicant shall be notified that they may file a written appeal with the President/CEO. Each appeal must be perfected by a letter addressed to the President/CEO and delivered to the Authority Clerk, or postmarked with the United States Postal Service, within ten business days of the date notice of the decision of the President/CEO addressed to the party making the appeal is placed with the United States Postal Service, which letter of appeal must state that an appeal from the decision of the President/CEO is desired. If no appeal is filed within the said ten days, it shall be grounds to deny a hearing and any untimely filed appeal shall be dismissed by the Hearing Officer. A suspension or revocation shall immediately become effective if an appeal is not timely filed within the ten business days. If an appeal is timely filed, the revocation or suspension shall be stayed pending the final determination of the appeal. In the event the permit, which is the subject of the action, expires and a new permit is issued to the same operator prior to the suspension or revocation taking effect and being fully carried out, or prior to final decision on appeal, the new permit shall be issued conditioned upon

and shall be subject to the pending suspension or revocation. If no appeal is taken, said new permit shall be so suspended or revoked. If on appeal and suspension or revocation is the final decision, the new permit shall be so suspended or revoked. There shall be no requirement for further notice or hearing regarding the new permit.

Authority Code § 9.22 (d). When an appeal is timely filed, the President/CEO shall cause the appeal to be assigned to a Hearing Officer. The matter shall be heard no later than 60 calendar days from the date of the filing of the appeal. The Hearing Officer shall notify the parties in writing of the time, date and place of the hearing. The notice shall be sent to the appellant by registered or certified mail, or hand-delivery. The Hearing is an informal administrative proceeding with the rules of evidence relaxed from strict judicial practice. In that regard, hearsay evidence is admissible. All parties may be represented by legal counsel, witnesses shall be sworn and be subject to cross-examination, and cumulative or repetitive evidence should not be admitted. The Hearing Officer may subpoena witnesses and establish additional procedures within the provisions of California Government Code Sections 11507.5 through 11511 and as may be required to serve the interest of justice. The Hearing Officer may uphold the suspension, revocation or denial or reverse or modify the decision which is the subject of the appeal, or make a different decision. A copy of the decision of the Hearing Officer specifying findings of fact and reasons for the decision shall be furnished to the parties within ten business days of the conclusion of the Hearing.

Authority Code § 9.22 (e). The final decision of the Hearing Officer shall be the final administrative remedy. There shall be no rehearing or reconsideration. The final decision shall be subject to judicial review pursuant to California Code of Civil Procedure Sections 1094.5 and 1094.6.

Authority Code § 9.22 (f). An exception to the hearing provisions above shall be made when, in the opinion of the Authority, there is a clear and immediate threat to the safety and protection of the public, the Authority may suspend or revoke a permit prior to a Hearing being held. The Authority shall prepare a written notice of suspension or revocation which includes a statement of the action, a concise explanation of the reasons for the action, the statutory basis relied upon for such action, and an explanation of the Permit Holder's right to request a Hearing from the Authority. Such notice shall be either sent by certified mail to the Permit Holder or be personally delivered. The Permit Holder may request a Hearing from the Authority within five business days of receipt of notification that the permit has been suspended or revoked in the manner provided above in Subsection (c). The Hearing Officer shall notify the appellant of time and place of such Hearing and the Hearing shall be conducted in the manner prescribed in this Section. The Hearing shall be held not more than 15 business days from the date of receipt of said request for Hearing. The suspension or revocation shall not be stayed during pendency of said appeal Hearing.

Authority Code § 9.22 (g). It shall be unlawful for any person to operate any Ground Transportation Service Vehicle from a facility or airport under the Authority's jurisdiction providing any ground transportation from such facility or airport during the period of any suspension or revocation of the permit or the driver's permit.

Authority Code § 9.22 (h). No person shall use or give permission to use any vehicle or Taxicab to provide any ground transportation service from a facility or airport under the Authority's jurisdiction during the period of any suspension or revocation of the permit.

Authority Code § 9.22 (i). When a permit has been suspended or revoked, the operation of any vehicle or taxicab authorized by such permit shall cease.

Authority Code § 9.22 (j). Whenever any person or permit holder acquires an address different from the address previously given the Authority, the person shall within ten (10) business days thereafter notify the Authority, in writing, of the old and new address.

Contact the Authority's Ground Transportation Department at (619) 400-2685 for further information.

F. Insurance

Authority Code § 9.14 (a). No person shall operate, drive, or cause to be operated or driven any Taxicab, Vehicle for Hire, Charter Vehicle, TNC Vehicle, scheduled ground transportation service, hotel or other courtesy vehicle or any other commercial ground transportation service (except as provided in Section 9.23 of this code)("Insured Drivers") over and upon the non-dedicated private streets for the transportation of persons and baggage from or within the Airport unless they establish and maintain in effect the forms of financial responsibility for public liability and workers' compensation specified in this Section.

(1) Insured Drivers shall maintain a valid policy of automobile liability insurance executed and delivered by a company authorized to carry on insurance business in the State of California, with an AM Best Company financial rating acceptable to the President/CEO. The minimum terms and limits of said policy shall be set from time to time by the President/CEO. The terms of the policy shall provide that the insurance company assumes financial responsibility for injuries to persons, property and employees caused by the operation of the Insured Drivers and their authorized drivers and Airport Ground Transportation Service Permitted vehicles.

(2) Insured Drivers shall maintain a valid policy of workers' compensation insurance for all its drivers and shall include a waiver of subrogation endorsement in favor of the Authority.

Authority Code § 9.14 (b). A valid certificate of insurance issued by the company providing the insurance policy required under the provisions of this section shall be filed with and approved by the President/CEO. This certificate, with appropriate endorsements to the underlying policies, shall provide that the Authority and its officers, employees and agents are named as additional insureds. It shall also provide that the insurer will notify the Authority at least 30 days prior to a reduction in coverage or cancellation of the policy. The certificate also shall state:

- (1) The name and address of the Insured Drivers;*
- (2) The insurance policy number;*
- (3) The type and limits of coverage, including any deductibles or self-insured retention;*
- (4) The specific vehicle(s) insured for vehicle liability coverage;*
- (5) The effective dates of the policy; and*
- (6) The certificate's date of issue.*

G. Vehicle Registration

Authority Code § 9.15 (a). No Airport Ground Transportation Service Permit shall be issued without proof of valid vehicle registration provided to and approved by the Authority.

Authority Code § 9.15 (b). California vehicle registration shall list the Permit Holder or the Permit Holder's "dba" as the registered owner. If a vehicle is leased or rented, then a copy of a valid lease or rental agreement shall be provided to and approved by the Authority prior to any permit being issued.

Contact the Authority's Ground Transportation Department at (619) 400-2685 for more information.

H. Financial Ownership and Operating Records

Authority Code § 9.16 (a). Every holder of an Airport Ground Transportation Service Permit shall maintain:

- (1) Financial records in accordance with good accounting practices;*
- (2) Ownership records; and*
- (3) Operating records in a form, and at intervals, which shall be determined from time to time by the Authority.*

San Diego International Airport
Rules and Regulations

Authority Code § 9.16 (b). Ownership and operating records shall be made available to the Authority upon demand at any reasonable time. The Permit Holder shall retain operating records for a minimum of six (6) months from the date the records are created.

Authority Code § 9.16 (c). For the purposes of this Section, ownership records shall include, but are not limited to the following:

(1) Copies of the Articles (or Certificate) of Incorporation as filed with the Secretary of State of the entity's state of incorporation;

(2) Records identifying all corporate officers and board members. A corporation shall report any change in corporate officers or members of its board within ten (10) days of the effective date of such change;

(3) A stock register recording the issuance or transfer of any shares of the corporate stock; and

(4) The registration cards issued by the State of California Department of Motor Vehicles to the Permit Holder for all vehicles operating on Authority property under the authority of a Ground Transportation Service Permit.

Authority Code § 9.16 (d). For the purposes of this Section, operating records shall include, but are not limited to the following:

(1) Typed or written radio dispatch records;

(2) Any log that describes the trips transporting passengers and baggage to and from the Airport;

(3) Copies of the daily trip log required pursuant to Metropolitan Transit Development Board Ordinance 11;

(4) Waybills as defined under the California Public Utilities Commission General Order 157; and

(5) Any other similar records.

Authority Code § 9.16 (e). In order to ensure compliance with the foregoing sections, the Authority shall perform annual audits of each Ground Transportation Service Permit Holder.

Authority Code § 9.16 (f). If found to be out of compliance, the Ground Transportation Service Permit Holder may be subject to revocation of permit as set forth in this Code.

I. Vehicle Condition

Authority Code § 9.21 (a).

(1) No person shall operate, drive, or cause to be operated or driven any Taxicab, Vehicle for Hire, Charter Vehicle, TNC Vehicle, scheduled ground transportation service, hotel or other courtesy vehicle or any other commercial ground transportation service over and upon the non-dedicated private streets of the Airport unless it is in safe operating condition and in good repair. Its lighting equipment shall be in good working order. There shall be no cracked or broken windshields, windows or mirrors. The muffler and exhaust system shall be adequate to prevent excessive or unusual noise and shall not emit excessive smoke, flame, gas or oil. Exterior paint and markings shall not be faded or discolored. The vehicle shall have in operational condition, a heater, air conditioner and defroster. The vehicle shall be maintained in a clean condition, both with regard to the interior and exterior. In any vehicles required to have a taximeter, the person driving shall make certain that: the taximeter is in proper recording position at all times; the meter reading is visible to any passenger; and the meter light is burning during hours of darkness. The vehicle shall be further maintained in condition as provided in accordance with rules and regulations established by the President/CEO.

(2) The Authority may inspect any vehicle. If the inspection reveals that such vehicle is not in reasonable good repair or operating condition, from the standpoint of the safety, health and comfort of passengers, then the vehicle shall be ordered out of service until such time as remedial repairs and corrections have been made. When such repairs and corrections have been made, such vehicle shall be reinspected to determine whether or not proper repairs and corrections have been made and in no case shall the vehicle be permitted to resume its operation until such repairs and corrections have been made.

J. Personal Identification

Authority Code § 9.21 (b). A person operating a vehicle shall have and be in possession of a valid certificate or permit from the appropriate municipal or state governmental authority, proof of insurance in full force and effect equal to the requirements of the Authority, a valid driver's license of the class required issued by the State of California, any required identification card and have affixed to the right bottom corner of the windshield or such other location as directed by the President/CEO a valid vehicle decal or a valid Driver Permit issued by the Authority and shall present any of these documents upon the demand of an authorized officer of the Authority or any peace officer.

Regulation.

1. All operators shall ensure that the driver's identification card (placard) and the company name and vehicle number are clearly displayed in the driver compartment of the vehicle. The driver's identification card shall be posted on the dash of the vehicle and at all times be clearly visible to the passengers.

The Authority has reviewed this rule with the Metropolitan Transit Development Board (MTDB) and there is no conflict with its regulations. Drivers found to be in non-compliance with this regulation will be subject to a citation and may be placed out of service.

K. Pickup Areas

Authority Code § 9.21 (c).

(1) No person shall stop, park or stand any vehicle while awaiting for any passenger or employment at any location on Airport property other than at an authorized stand, line or zone. Passenger pickups shall take place only at designated stands and zones after following authorized procedures as may be established by the President/CEO and within vehicle standing time limits and parking regulations. The above rules may be waived for disabled passengers.

(2) No person shall solicit any customer's patronage in any manner while on Airport property or in an Airport terminal building.

(3) Taxicab and Vehicle for Hire drivers shall use only the assigned Taxicab or Vehicle for Hire line and stand as respectively designated by the President/CEO. Taxicab or Vehicle for Hire line means an area at the Airport designated by sign or other suitable means which is reserved for Taxicabs or Vehicles for Hire only while waiting to advance in turn to a vacancy at a Taxicab or Vehicle for Hire stand. "Taxicab and Vehicle for Hire stand" means an area on Airport property so designated and reserved for parking only while waiting to pick up passengers for hire.

(4) Before entry onto Airport property without passengers or after discharging passengers on Airport property, every Taxicab or Vehicle for Hire operator shall proceed to the off Airport hold lot as designated by the President/CEO and wait with the vehicle at the hold lot until an authorized officer or designate issues a time-stamped dispatch ticket and dispatches the vehicle and operator to the Airport. The vehicle operator shall give the valid dispatch ticket to an authorized officer or designate on duty at the Airport before the operator is authorized to pick up or engage any passenger for hire. Picking up any passenger for hire after or while leaving off any other passenger without proceeding through the designated hold lot and being issued a valid dispatch ticket is prohibited. The President/CEO, from time

to time, may establish, change or modify the rules, regulations and dispatch procedures for operation of the off-Airport hold lots.

(5) Notwithstanding any other regulation, any prospective passenger may select for hire any Taxicab or Vehicle for Hire, wherever located at the stand.

(6) The driver of each Taxicab or Vehicle for Hire in a Taxicab or Vehicle for Hire line shall at all times, until engaged for hire, remain in the driver's seat at the wheel of the vehicle or outside and within close proximity of the vehicle, except in case of emergency or personal necessity.

(7) The driver of each Taxicab or Vehicle for Hire at the Taxicab or Vehicle for Hire stand shall at all times, until engaged for hire, remain in the driver's seat at the wheel of the vehicle; provided, however, when engaged for hire, the driver may assist a passenger and load baggage into the vehicle. In case of an emergency or personal necessity, the driver may leave a Taxicab which is at the Taxicab stand.

(8) After a Taxicab exits a Taxicab stand, each vehicle at its rear shall at once be moved toward the head of the Taxicab stand and the Taxicab at the head of the Taxicab line shall be moved forward to occupy the vacancy in the Taxicab stand. Likewise, each vehicle to the rear in the Taxicab line shall be moved toward the head of the Taxicab line.

(9) No owner or operator of a Taxicab, Vehicle for Hire or Charter Vehicle, shall at any time while at the Airport by words, gesture or otherwise, solicit, persuade or urge or attempt to solicit, persuade or urge any person to use or hire any vehicle.

(10) If the driver of a Taxicab occupying the position at the head of the Taxicab stand refuses to accept and transport a passenger for hire or refers the passenger to a different Taxicab, the Taxicab and driver who refused or referred the passenger shall immediately be dispatched to the rear of the Taxicab line and the driver shall immediately remove the Taxicab from the head of the Taxicab stand.

On February 7, 2003, the Airport went to an elevated security level as directed by the Transportation Security Administration (TSA). Due to the Airport security level, Authority Code § 9.21(c)(7) (requiring drivers to remain in their vehicle while on the stand) will be strictly enforced. Any taxicab found unattended at the stand will be cited and immediately towed. Drivers who need to leave the stand for personal necessity will be required to notify the customer service representative (CSR) prior to leaving the vehicle unattended on the transportation island. Be advised that a taxicab will be required to return to the hold lot if the vehicle is bypassed during the passenger loading process.

Authority Code § 9.30 (k). No person operating a Taxicab or discharging from said Taxicab any passenger for hire in front of the passenger shall accept or solicit any passenger for hire in front of said passenger until after said Taxicab has proceeded in turn through and appropriate Taxicab holding area and Taxicab loading zone as designated by the President/CEO.

L. Hold Lot and Shuttle Island Procedures

An assigned Airport customer service representative (CSR) assists with the loading of passengers at the transportation islands.

Regulation.

1. All taxicab and vehicle for hire operators shall adhere to the following procedures:
 - a. Before entry onto Airport property without passengers or after discharging passengers on Airport property, the taxicab or vehicle for hire operator shall proceed to the off Airport hold lot as designated by the President/CEO and wait with the vehicle at the hold lot until an authorized officer or designee issues a time-stamped dispatch ticket and dispatches the vehicle and operator to the Airport. Picking up any passenger for hire after or while dropping off any other passenger without first proceeding through the designated hold lot and being issued a valid dispatch ticket is prohibited.
 - b. All vehicle for hire operators must transit the Airport hold lot prior to entering the Airport for the purpose of picking up passengers. Operators must obtain a valid dispatch pass prior to proceeding to the Airport stand. The operator shall give the valid dispatch ticket to an authorized officer or designee on duty at the Airport before the operator is authorized to pick up or engage any passenger for hire.
 - c. The vehicle for hire Airport hold lot is shared with the taxicab hold lot located at 1200 Harbor Island Drive. The vehicle for hire area in the lot has two staging lanes. Shuttles will be dispatched from the hold lot based on the capacity of the transportation islands.
 - d. Drivers shall wear their valid Airport-issued permit at all times while operating at the Airport and shall present the permit to the customer service representative (CSR) prior to being issued a dispatch pass.
 - e. Operators shall at all times have the current tariff rates posted inside their vans that are clearly visible to passengers from the inside of the vehicle.
 - f. Operators holding a valid Public Utilities Commission tour charter party (TCP) license may operate on individual charters provided there is a clearly visible sign on the front dash of the vehicle stating "Charter." The operator shall be

San Diego International Airport
Rules and Regulations

in possession of a complete and valid waybill in compliance with California Public Utilities Commission (CPUC) General Order 157-D, Section 3.01.

- g. Vehicle for hire operators shall not solicit business at any time while on Airport property and shall remain in their vehicle behind the steering wheel at all times while in the transportation islands, except for such time as necessary to aid their customers with baggage.
- h. Vehicle for hire operators shall display on the exterior of their vehicles the company name, passenger stage corporation (PSC) numbers, vehicle number and company telephone number. No operator shall post any signage relating to rates of fare, servicing of hotels, military bases, off-airport parking or car rental companies, or conventions. Any operator that has a temporary service contract with a convention group may display a sign, not greater than eight inches by twelve inches (8" X 12"), with the name of the contracted group on a right side window of their vehicles. The signs may only be displayed during the service contract period and upon prior written approval of the Authority Ground Transportation Department. Any vehicle found to be in non-compliance with the signage rules will be issued an "Out of Service" notice of violation until the vehicle is brought into compliance.
- i. No passengers are allowed in the Airport hold lot at any time.
- j. At no time shall an operator be allowed in the Airport hold lot or shuttle islands unless operating a shuttle or with the prior permission of the Authority's Ground Transportation Department.

A violation of this regulation may constitute interference with a public agency pursuant to California Penal Code § 602.1.

- k. Vehicle for hire operators shall be in compliance with California Public Utilities Commission (CPUC) General Order 158-A at all times while operating at the Airport. Any violation of the provisions of this order shall result in a suspension or revocation action of the operator.
- l. Any driver found feeding birds or throwing any food or trash on the ground in the Airport hold lot will be immediately ejected from the hold lot for the remainder of the day. Any further violations will result in revocation of the driver's Airport permit.

Birds in the area of the aircraft operations present a serious safety hazard to aviation. Feeding or attracting birds in the vicinity of the AOA is a violation of federal regulations.

M. Driver's Examination

Authority Code § 9.21 (d). The President/CEO may, but is not required to, issue or reissue a Driver's Permit to a person who has successfully passed an examination as given and required by the Authority, upon payment of the appropriate fee. The President/CEO also shall have the right to reexamine persons holding a Driver's Permit at intervals that the President/CEO deems advisable. Except in the event of reissuance as provided above, each applicant for a permit required by this provision and each driver must:

(1) Take and successfully pass an oral or written examination prior to issuance of a permit, which shall be established, designed and given by the President/CEO to test the applicant's or driver's knowledge of the location of principal office buildings, railroad and bus terminals, government offices, military installations, shopping centers, hotels, motels, freeway systems, major points of interest and residential communities in relation to the Airport and the most direct freeway and roadway routes from the Airport to such locations. Said examination may be given more than one time each year for new applicants at such times as determined by the President/CEO. No applicant shall be permitted to take the written or oral examination required by this subparagraph more than four times in any 12 month period;

(2) Be able to converse in the English language;

(3) Hold a valid and effective driver's identification card as provided by the County of San Diego Code if operating a Taxicab; and

(4) Successfully complete the Airport Customer Service Course.

As part of the Airport's taxicab and shuttle customer service improvement program, Airport taxicab and vehicle-for-hire drivers will be required to attend a customer service driver training course approved by the Authority. The intent of the training course is to help Airport drivers acquire the skills to become exceptional ambassadors and prepares drivers for the certification examination.

Drivers will be issued a temporary permit pending attendance of the customer service driver training course. Drivers must pass the certification examination within 60 days after issuance of a temporary permit to continue driving at the Airport. Drivers are required to attend the certification examination on the date they are assigned by their respective companies. If the driver is unable to attend on the assigned date, he or she must notify their respective company at least 24-hours in advance to schedule an alternative date for the certification examination.

Contact the Authority's Ground Transportation Department at (619) 400-2685 for more information.

N. Driver Appearance

Authority Code § 9.21 (e). Every driver shall comply with the following clothing requirements:

(1) Every driver shall be hygienically clean, well groomed, neat and suitably dressed in compliance with all applicable requirements of this section at all times while a transportation vehicle is in his or her custody;

(2) Drivers shall be clean shaven and hair shall be neatly fashioned. If a beard or moustache is worn, it shall be well groomed and neatly trimmed at all times in order not to present a ragged appearance;

(3) The term “suitably dressed” shall be interpreted to mean the driver shall wear clean and pressed trousers, a clean and pressed shirt with a collar and sleeves, shoes with socks and, if desired, appropriate outer garments. Female drivers may wear a skirt in place of trousers; and

(4) Clothing that is not considered appropriate and is not permitted includes: T-shirts, underwear, tank tops, body shirts, swimming, jogging suits or similar types of attire when worn as an outer garment, shorts or trunks (jogging or bathing) or sandals.

Regulations:

1. The term “suitably dressed”, Authority Code § Section 9.21 (e) (3) shall mean driver shall wear trousers and a shirt with a collar. The shirt should be buttoned up and tucked into the trousers. Female drivers may wear a skirt in place of trousers. All clothing shall be clean, pressed and free of wrinkles.
2. The definition of “trousers” does not include jeans, cargo pants, or camouflage pants. Subject to paragraph 3 below, the definition of trousers shall include short pants that are no shorter than four (4) inches above the center of the kneecap in length and have two (2) front pockets. All other types of shorts shall be considered inappropriate clothing as defined in Subsection 9.21 (e) 4 of the Authority Code.
3. Cargo shorts, camouflage shorts and athletic shorts shall be considered inappropriate clothing as defined in Subsection 9.21 (e) 4 of the Authority Code.
4. Three quarter length socks shall be worn at all times. For female driver this includes hosiery, or stockings. No open toed shoes are allowed.
5. Anyone not in compliance with the driver dress code will not be allowed to work until they adhere to the dress code.

6. Companies may submit alternate uniform choices to the Authority for approval.

O. Duty to Transport Passengers

Authority Code § 9.21 (f). The person operating a ground transportation service shall not refuse to transport any passenger, including baggage, requiring transportation and shall take all passengers to their requested destination using the most direct available route on all trips unless otherwise specifically requested by the passenger; provided, however, nothing herein shall require any person to provide ground transportation service contrary to any municipal or state permit or certificate regarding ground transportation or its Authority authorized permit. Furthermore, a driver is not required to transport any such passengers when: the driver has already been dispatched on another call; when such passengers appears to be under the influence of intoxicating liquor, or disorderly; or when the passenger may cause the vehicle to become damaged, stained or foul smelling; or if a passenger requires the use of a litter or stretcher.

Regulation.

1. Unless exempted by Authority Code § 9.21 (f), any driver refusing to transport a passenger or by their conduct dissuades a passenger from taking their service shall be ejected from the transportation island and be restricted from serving the Airport for the remainder of the work day.

Drivers wishing to appeal their ejection must submit a written appeal within 24 hours of receipt of the notice of violation.

P. Non-Discrimination

Authority Code § 9.21 (g). In providing ground transportation services on Airport property, no person shall discriminate against any person or class of persons by reason of sex, color, race, creed, religion, physical or mental disability, veteran status, medical condition, marital status, age, sexual orientation, pregnancy or national origin. The accommodations and services shall be made available to the public on fair and reasonable terms.

Q. Fares and Receipts

Authority Code § 9.21 (h). No driver shall collect, demand, receive or arrange for any compensation in an amount greater or less than that approved or allowed by the appropriate fare setting governmental agency or commission for the ground

transportation service. Upon request, the driver shall give a passenger making payment a receipt showing the amount of fare paid, the driver's correct name and correct vehicle license number and Authority permit number. There shall be no fare or charge to the passenger by a Courtesy Vehicle.

R. Disabled Passenger Services

Authority Code § 9.18 (a). Every Vehicle for Hire operator shall provide in its service fleet for the Airport, at a minimum, at least one wheelchair lift-equipped vehicle. Each operator shall provide wheelchair lift-equipped vehicles according to the following schedule when adding to or replacing airport vehicles in its fleet:

(1) One to 50 authorized vehicles requires one wheelchair-lift equipped vehicle;

*(2) 51 to 100 authorized vehicles requires two wheelchair-lift equipped vehicles;
and*

(3) Operators may subcontract to provide wheelchair-lift equipped vehicles. Operators shall obtain prior written approval from the Authority for any agreements between the operator and subcontractors providing wheelchair-lift equipped vehicles.

1. Mobility Impaired Demonstration Project

The Airport is participating in the Mobility Impaired Demonstration Project sponsored by Metropolitan Transit System (MTS). As part of the project, the Airport will allow project-permitted taxicabs ("accessible taxicabs") access to service the terminal transportation plazas.

Regulation.

- a. All taxicab operators who wish to provide Airport service under the Mobility Impaired Demonstration Project shall comply with the following procedures:
 - 1) Taxicab operators with authorized project medallions from the Metropolitan Transit System (MTS) and a valid Airport Ground Transportation service permit may obtain special taxicab permits (up to 10% of their authorized Airport vehicles) from the Authority's Ground Transportation Department.
 - 2) There will be no fee for a Ground Transportation service decal during the initial project period.
 - 3) All taxicab operators shall provide the Airport with a copy of valid California vehicle registration and proof of liability insurance.

- 4) Accessible taxicabs will not be permitted access to the off-airport taxicab holding lot.
- 5) Operators of accessible taxicabs shall have a valid Airport driver's permit.
- 6) Operators of accessible taxicabs shall only use the designated parking area at each transportation plaza.
- 7) Only one accessible taxicab may park at the designated parking area at a time.
- 8) Operators of accessible taxicabs using the authorized parking area shall only park for a maximum of thirty (30) minutes.
- 9) If an accessible taxicab has not been engaged for service by a mobility-impaired passenger at the end of the standing time, the customer service representative (CSR) will direct a passenger to the taxicab.
- 10) If there are no taxicabs available and passengers are waiting, the CSR will direct passengers to an accessible taxicab.
- 11) Airport Ground Transportation service decals may be revoked at any time without cause.

S. Taxicabs and Vehicles for Hire

1. Taxicab Permit Requirement

Regulation.

- a. Every taxicab operator shall possess and display a valid current City of San Diego taxicab medallion on each vehicle servicing the Airport.

2. Taxicab Driver Rules

Regulations:

- a. No taxicab operator shall charge a minimum fee for credit card payment. No fee shall be charged in excess of that stated on the meter unless authorized by the Authority.
- b. Every taxicab operator shall clearly display his or her driver's identification card in the vehicle driver's compartment.
- c. Every taxicab driver shall wear his or her Airport driver's permit so that the permit is clearly visible, above the waist and on the outermost garments.

San Diego International Airport
Rules and Regulations

- d. Every taxicab operator shall prominently post passenger information cards inside all of their vehicles in service so as to be clearly readable to the occupants.
- e. Every taxicab driver shall remain at all times at his or her taxicab while at the cabstand except in case of emergency or personal necessity. When a fare arrives at a taxicab, the driver must be at the vehicle or will forfeit his or her place on the taxicab stand.
- f. When in the Airport hold lot, all drivers who are not at their taxicab when dispatched shall go to the end of the line.
- g. Every taxicab operator dispatched from the Airport hold lot shall proceed directly to the taxicab line in the order dispatched. Operators arriving at the taxicab stand out of dispatched order will forfeit their place in line.
- h. No taxicab operator shall play a radio while passengers are in the vehicle unless specifically requested to do so by the passengers. This rule shall not apply to a company two-way radio used for business purposes.
- i. No driver of a taxicab shall use a cellular telephone while passengers are in the taxicab unless at the request of the passenger or in an emergency.
- j. Every operator of a taxicab shall use their vehicle's heater or air conditioner upon passenger request.

Any operator who has a complaint about any ATO or customer service representative (CSR) may submit the complaint in writing to the Ground Transportation Department.

3. Spare Taxicab Use Policy

Airport taxicab operators may place a spare car into airport service as a temporary replacement for a permitted vehicle that is out of service due to mechanical problems in accordance with the Metropolitan Transit Development Board (MTDB) Spare Car Procedure.

A taxicab operator in violation of any of the following regulations shall be subject to the Administrative Penalties in Section 7.7 of these Rules and Regulations.

Authorized Airport taxicab operators having between one and five permitted vehicles may be issued a single spare vehicle decal. Authorized Airport taxicab operators may be issued an additional spare vehicle decal for every five permitted vehicles thereafter, up to a total of five spare taxicab decals.

Regulations:

- a. Airport taxicab operators shall place spare cars into Airport service only under the following conditions:

San Diego International Airport
Rules and Regulations

- 1) Each spare car must have an Automated Vehicle Identification (AVI) transponder affixed to the vehicle;
- 2) A spare car may only be used for a maximum of sixty (60) days at a time;
- 3) The taxicab operator shall submit a written notification to the Authority of their intent to place a spare car into service. The notification should be received by the Ground Transportation Department no later than 24-hours after the vehicle is placed into service.

Notification may be faxed to the Authority Ground Transportation Department at (619) 400-2686.

- a) the Airport decal number of the car being taken out of service, the reason for it being out of service and the location of the out of service taxicab;
 - b) the estimated time the spare car will be in use;
 - c) a valid certificate of insurance for the spare car must be provided with the request;
 - d) a copy of the valid registration of the spare car showing the permit holder of the car being taken out of service as the registered owner of the spare car.
- b. Each taxicab operator placing an out-of-service car back into service shall provide advance written notification to the Authority.

Notification may be faxed to the Authority Ground Transportation Department at (619) 400-2686.

- c. All taxicab operators shall remove any spare car from service when the car it has been replacing is placed back into Airport service.
- d. No taxicab operator shall operate a spare vehicle other than on the same Airport taxi day as the vehicle it is replacing.

4. Background Check Procedures for Vehicle for Hire Drivers

- a. Vehicle for hire drivers must first apply to the Airport Ground Transportation Department for a vehicle for hire driver permit, tender a check or money order in the amount of \$90.00, and submit for inspection a valid California driver's license and a Department of Motor Vehicles driver record printout that is not more than thirty (30) days old.
- b. Vehicle for hire drivers are fingerprinted for a background check. Processing hours are 8:30 am to 11:30 am and 1:30 p.m. to 4:00 p.m., Monday through Thursday.

San Diego International Airport
Rules and Regulations

- c. The following items are necessary for a background check:
 - 1) a receipt for permit payment;
 - 2) an original Department of Motor Vehicle (DMV) driver record printout that is dated no earlier than thirty (30) days prior to application;
 - 3) a valid California driver’s license; and
 - 4) a birth certificate (if for a native US citizen) or approved INS documentation from the “Acceptable Identification Documents” list below.
- d. The Authority Ground Transportation Department conducts a computer check and takes the driver’s fingerprints for processing with the Department of Justice.
- e. Vehicle for hire drivers who pass the background check process are called to pick up their Airport driver permit and driver identification card (placard) at the Ground Transportation Permitting Office during normal permitting hours. The driver placard must be clearly displayed on the vehicle dashboard when operating at the Airport. The driver permit is to be worn on the driver’s person as provided for in these Rules and Regulations.
- f. Drivers who fail the computer or fingerprint check are notified by the Airport Authority of any appeal options that may be available.

List of Acceptable Documents

List A

1 item from List A

Documents that Establish Both Identity and Employment Eligibility
1. U.S. Passport or U.S. Passport Card (unexpired)
2. Permanent Resident Card or Alien Registration Receipt Card with photograph (USCIS Form I-151 or I-551)
3. Unexpired foreign passport, with I-551 stamp or attached temporary I-551 printed notation on a machine readable immigrant visa
4. Unexpired Employment Authorization Document issued by USCIS that contains a photograph (USCIS Form I-766)
5. In the case of a nonimmigrant alien authorized to work for a specific employer incident to status, a foreign passport with Form I-94 or Form I-94A bearing the same name as the passport and containing an endorsement of the alien’s nonimmigrant status, as long as the period of endorsement has not yet expired and the proposed employment is not in conflict with any restrictions or limitations identified on the form
6. Passport from the Federated States of Micronesia (FSM) or the Republic of the Marshall Islands (RMI) with Form I-94 or Form I-94A indication nonimmigrant admission under the Compact of Free Association between the US and the FSM or RMI.

OR (1 item from List B and 1 item from List C)

List B

Documents that Establish Identity
1. Driver's license or ID card issued by a State or outlying possession of the United States provided it contains a photograph or information such as name, date of birth, gender, height, eye color and address
2. ID card issued by Federal, State, or local government agency or entity provided it contains a photograph or information such as name, date of birth, gender, height, eye color, and address
3. School ID card with a photograph
4. Voter's registration card
5. U.S. Military card or draft record
6. Military dependent's ID card
7. U.S. Coast Guard Merchant Mariner Card
8. Native American tribal document
9. Driver's license issued by a Canadian government authority
For persons under the age of 18 who are unable to present a document listed above
1. School record or report card
2. Clinic, doctor, or hospital record
3. Day-care or nursery school record

List C

Documents that Establish Employment Eligibility
1. Social Security card issued by the Social Security Administration (other than a card stating it is not valid for employment in the United States)
2. Certification of Birth Abroad Issued by the Department of State (Form FS-545 or Form DS-1350)
3. Original or certified copy of a birth certificate issued by a State, county, municipal authority, or outlying possession of the United States bearing an official seal
4. Native American tribal document
5. U.S. Citizen ID Card (USCIS Form I-197)
6. ID Card for use of Resident Citizen in the United States (USCIS Form I-179)
7. Unexpired employment authorization document issued by the Department of Homeland Security (other than those listed under List A)

**5. Vehicle Markings for Taxicabs and Vehicles for Hire
Regulations.**

San Diego International Airport
Rules and Regulations

- a. All taxicab and vehicle for hire operators shall mark and identify their Airport authorized vehicles as follows:
 - 1) The name and vehicle number shall be permanently affixed to the vehicle.
 - 2) No magnetic signage is allowed at any time for authorized passenger stage corporation (PSC) vehicles unless approved by authorized personnel.
 - 3) All markings shall be in compliance with the requirements of Public Utilities Commission General Order 158, Sections 4.03 and 4.04.

Any taxicab or vehicle for hire found to be in violation of these Rules and Regulations shall be placed out of service until deemed in compliance by the Ground Transportation Department.

6. Commercial Credit Card Requirements for Taxicabs and Vehicles for Hire

Regulations:

- a. All taxicab and vehicle for hire operators shall accept Visa, MasterCard and American Express credit cards from passengers departing from the Airport.
- b. No taxicab or vehicle for hire operator shall set a minimum or maximum charge for any credit card transaction.
- c. All taxicab and vehicle for hire operators shall provide credit card paying customers with a copy of their credit charge receipt clearly showing the amount and date of the credit charge.
- d. All taxicab and vehicle for hire operators shall display Authority-issued decals announcing that passengers departing the Airport may use credit cards to pay fares and identifying the credit cards that will be accepted for payment. The required decals shall be displayed on all passenger doors, including sliding doors. The decals shall be visible from the interior and exterior of the vehicle.

The Ground Transportation Department issues the required decals to operators of permitted vehicles. No more than three decals per permitted vehicle will be issued at one time. Replacement decals will be issued on an as-needed basis.

7. Vehicle Condition of Taxicabs and Vehicles for Hire

Regulations:

- a. All taxicab and vehicle for hire operators shall maintain the exterior of their vehicles such that the vehicles:

San Diego International Airport
Rules and Regulations

- 1) are free of exterior dents and damage;
 - 2) are free of any dent, scrape or damage that is greater than three by three inches (3" X 3") in size and greater than the thickness of a quarter in depth;
 - 3) have clean, fresh paintjobs and clear and undamaged vehicle markings; and
 - 4) have the same color and marking scheme for all Airport-authorized vehicles.
- b. All taxicab and vehicle for hire operators shall repair any exterior vehicle damage within ten (10) days of the date of the notice of violation.
- c. All taxicab and vehicle for hire operators shall maintain the interior of their vehicles such that the vehicles:
- 1) have seats that are clean, free of stains and wear spots;
 - 2) have floor carpeting that is clean and free of stains or large wear spots;
 - 3) have door handles and panels that are intact and clean;
 - 4) are free of protruding springs, wires, cords or other sharp objects; and
 - 5) have interior lights operating properly in standard locations.
- d. All taxicab and vehicle for hire operators shall maintain their vehicles such that interior repairs reasonably match the existing interior.

T. Vehicle for Hire (PSC Shuttles) – Passenger Stage Carriers

1. Shuttle Trainee Ride-Along Policy

Regulation.

- a. No vehicle for hire PSC shuttle operator shall conduct any trainee "ride-along" except under the following conditions:
- 1) Trainees shall ride in only one (1) vehicle during the "ride-along."
 - 2) Trainees shall ride for a maximum of five (5) days.
 - 3) Trainees shall be subject to all Rules and Regulations for operators with the exception of the requirement of a driver's permit.
 - 4) Trainees shall not assist the driver with passengers in any manner.

- 5) The vehicle for hire PSC shuttle operator shall contact the Ground Transportation Department before 5:00 PM the day before a trainee is to participate on a "ride-along."
- 6) Vehicle for hire PSC shuttle operators shall provide the Authority with the name of the trainee and the days the trainee will be riding.

Trainees who are observed violating this policy or any Rules and Regulations will forfeit the "ride" time.

Vans with unauthorized trainees will not be dispatched from the hold lot.

U. Courtesy Vehicles (Hotel, Off-Airport Parking, Rental Car and others)

1. Rules of Operation

Authority Code § 9.21 (c).

(1) No person shall stop, park or stand any vehicle while awaiting any passenger or employment at any location on Airport property other than at an authorized stand, line or zone. Passenger pickups shall take place only at designated stands and zones after following authorized procedures as may be established by the President/CEO and within vehicle standing time limits and parking regulations. The above rules may be waived for disabled passengers.

Regulation.

- a. All courtesy vehicle operators providing ground transportation services at the Airport shall comply with the following when picking up and dropping off passengers at the Airport:
 - 1) All courtesy vehicle operators shall only use the Transportation Plaza Courtesy Island at Terminals 1 and 2.
 - 2) All courtesy vehicle operators shall use the designated zone located at the Commuter Terminal.
 - 3) Transportation Island dwell time for courtesy vehicle operators shall be limited to active loading and unloading of passengers only. Any vehicle found in violation shall be subject to a citation as provided under Authority Code § 9.21 (c) (1).
 - 4) No courtesy vehicle operator shall block or obstruct traffic when loading or unloading passengers.

2. Temporary Ground Transportation Service Decals

The Authority's Ground Transportation Department provides temporary ground transportation service vehicle decals for use by Airport-permitted courtesy vehicle operators.

Regulations:

- a. Courtesy vehicle operator permits may be moved from vehicle to vehicle if the vehicles conform to these Rules and Regulations.
- b. All courtesy vehicle operators using temporary decals shall display such decals on the right side of the vehicle dashboard.

Vehicles not properly displaying decals are subject to a citation.

- c. All courtesy vehicle operators using any temporary decal shall submit an Airport Authority Insurance Compliance Form to the Ground Transportation Department prior to placing a temporary vehicle into service.

The Airport Authority Insurance Compliance Form is available on the Authority's website at www.san.org. The form may be faxed to the Ground Transportation Department at (619) 400-2686 or delivered in person.

Failure to provide this form prior to using the temporary decal may result in the revocation of the Airport ground transportation service permit.

- d. All courtesy vehicle operators using temporary decals shall submit such decals for ATO inspection at any time.
- e. All courtesy vehicle operators shall be issued a maximum of one temporary ground transportation service decal during any permit period. The fee for the temporary decal shall be the same as for permanent decals and valid only for that permit period.

V. Operation Rules for Charter Vehicles (Charter Party Carriers/TCP)

Regulations:

1. All charter vehicle operators providing transportation services at the Airport shall hold a valid license and charter party carrier permit issued by the California Public Utilities Commission (CPUC).
2. All charter vehicle operators shall obtain an Airport ground transportation service permit for each vehicle used to pick up passengers at the Airport prior to providing services.
3. All charter vehicle operators shall be in compliance with all California Public Utility Commission (CPUC) general orders when providing services at the Airport.

4. No charter vehicle operator shall park or leave standing any permitted vehicle in violation of Airport parking regulations. Operators who are observed parked, waiting or leaving a vehicle on the terminal curbs shall be subject to citation and/or suspension of their Airport ground transportation service permit.

Charter vehicle operators may use the "charter vehicle" parking stalls as provided in the terminal parking lots.

5. All charter vehicle operators shall comply with all lawful orders of an ATO or Harbor Police officer.
6. All charter vehicle operators shall have a valid waybill in their possession when picking up passengers and shall present said waybill upon the request of any ATO or Harbor Police officer.

W. Subcarriers of Vehicle for Hire (PSC) or Passenger Stage Carriers

Authorized Airport vehicle for hire (PSC) operators who hold a valid passenger stage corporation (PSC) license from the California Public Utilities Commission (CPUC) may use a dedicated sub-carrier with the prior approval of the Authority.

1. Approval of Sub-carriers

Regulation.

- a. No sub-carrier shall receive approval except under the following conditions:
 - 1) Every sub-carrier shall possess a valid transportation charter party (TCP) certificate from the CPUC.
 - 2) Every vehicle for hire (PSC) prime carrier shall provide the Authority with a copy of the written agreement between the prime carrier and the sub-carrier. The agreement shall contain the sub-carrier's name, TCP number, and the services to be provided. The agreement must be approved by the Authority prior to the commencement of operations by the sub-carrier.
 - 3) Every sub-carrier shall only provide one (1) vehicle and no more than two (2) drivers to the prime carrier.
 - 4) Every vehicle for hire (PSC) prime carrier shall be accountable for the transportation charter parties (TCPs) operating as sub-carriers for the PSC. The TCP sub-carrier must be under the complete direction, supervision, and control of the PSC prime carrier.

2. Passenger Stage Corporation (PSC) Prime Carrier Requirements

Regulation.

San Diego International Airport
Rules and Regulations

- a. Every passenger stage corporation (PSC) prime carrier shall:
 - 1) maintain a list of all of its sub-carriers, identified by transportation charter party certificate (TCP) number;
 - 2) provide the Authority with a certificate of liability insurance listing "San Diego County Regional Airport Authority" as additional insured;
 - 3) ensure that the vehicles of all its sub-carriers are in compliance with both these Rules and Regulations and California Public Utilities Commission General Order 158-A, Part 4;
 - 4) ensure that the operators of all its sub-carriers are in compliance with both these Rules and Regulations and California Public Utilities Commission General Order 158-A, Part 5;
 - 5) maintain records for all its sub-carriers that are in compliance with these Rules and Regulations and California Public Utilities Commission General Order 158-A, Part 4 and Part 6, including, but not limited to, maintenance and safety of all vehicles permitted to operate at the Airport; and
 - 6) afford Authority staff all reasonable opportunity and accommodations to enter any vehicle or facility to inspect a carrier's accounts, books, papers, and documents, or to ascertain if Authority, California Public Utilities Commission and other state regulations are being complied with and observed.

3. Requirements for a Dedicated Sub-Carrier of a Vehicle for Hire(PSC) Passenger Stage Corporation

Regulation.

- a. Every dedicated sub-carrier of a vehicle for hire (PSC) passenger stage corporation (PSC) shall:
 - 1) display the name of its passenger stage corporation (PSC) prime carrier on its vehicle in compliance with these Rules and Regulations and Public Utilities Commission General Order 158-A, Section 4.03;
 - 2) display the identifying number assigned by the passenger stage corporation (PSC) prime carrier on its vehicle in compliance with these Rules and Regulations and California Public Utilities Commission (CPUC) General Order 158-A, Section 4.03;
 - 3) display the prime carrier's passenger stage corporation (PSC) number on its vehicle in compliance with these Rules and Regulations and Public Utilities Commission General Order 158-A, Section 4.04. This is in addition

to the requirements to display the sub-carrier's tour charter party (TCP) number on the vehicle in compliance with Section 4.04 of California Public Utilities Commission (CPUC) General Order 157-D;

- 4) file with the Authority and the Public Utilities Commission the trade, business, or fictitious name of the passenger stage corporation (PSC) prime carrier in compliance with Public Utilities Commission General Order 157-D, Section 3.06;
- 5) display the tariffs of the passenger stage corporation (PSC) prime carrier in the vehicle in compliance with these Rules and Regulations and Public Utilities Carrier General Order 158-A;
- 6) keep a copy of the sub-carrier agreement in the vehicle and present it to any Authority officer or Public Utilities Commission agent upon request; and
- 7) provide the Authority with a certificate of liability insurance listing the "San Diego County Regional Airport Authority" and the primary carrier as additional insureds.

Any sub-carrier of a passenger Stage corporation (PSC) operator found to be in violation of these Rules and Regulations or California Public Utilities Commission Regulations shall forfeit Authority approval of the sub-carrier agreement to operate at the Airport.

Repeated violations of these Rules and Regulations by sub-carriers will result in the Passenger stage corporation (PSC) prime carrier's loss of Authority approval to have sub-carriers operating at the Airport.

X. Lost Property and Luggage

Regulations:

1. Every taxicab, vehicle for hire, charter vehicle or courtesy vehicle operator shall ensure that their passengers remove all of their belongings upon arrival at their destination.
2. Every taxicab, vehicle for hire, charter vehicle or courtesy vehicle operator who finds any passenger belongings shall immediately return them to the passenger's destination. If the driver is unable to directly return any items, the items shall immediately be taken to the Airport Lost and Found.

Operators may park curbside to turn in lost property after making contact with an ATO or by calling Airport Paging at (619) 400-2900.

San Diego International Airport Rules and Regulations

For Lost and Found Office assistance call 619-400-2140 or fax 619-400-2141. The office is open from 7:00 AM until 11:00 PM, and can also be reached online at www.san.org.

These Rules and Regulations supersede Metropolitan Transit Development Board (MTDB) regulations regarding lost property where such regulations pertain to the Airport.

Y. Smoking

Regulation.

1. Every taxicab, vehicle for hire, or courtesy vehicle operator shall refrain from smoking in their vehicle at all times and prohibit their passengers from smoking while in their vehicle. "No smoking" signs shall be prominently posted in every vehicle.

Z. Ground Transportation Vehicle Conversion Incentive-Based Program

To meet certain commitments set forth in the May 5, 2008 Memorandum of Understanding with the California Attorney General pertaining to the management of greenhouse gas emissions, the Authority adopted the Ground Transportation Vehicle Conversion Incentive-Based Program ("Incentive Program") to incentivize applicable commercial ground transportation service providers operating at the airport to convert their current vehicles to electric, alternative fuel vehicles (AFVs) or to clean air vehicles (CAVs). The goal of this Incentive Program is to convert 100% of the applicable public commercial ground transportation vehicles operating at the Airport to AFVs or CAVs by 2017.

The Incentive Program is applicable to all eligible airport-permitted commercial ground transportation operators. These ground transportation service providers include, taxicabs, Transportation Network Companies (TNCs), vehicles for hire, hotel/motel shuttles, and off-airport parking shuttles. Limousines and charter vehicles (TCP licensed only) are exempt from all airport clean air vehicle conversion objectives, plans, incentives and requirements.

The President/CEO shall have the authority to suspend or cancel the Incentive Program at any time.

1. Standardized Age Replacement

Regulation.

- a. No ground transportation vehicle shall be operated at the airport where the model year of said vehicle exceeds ten (10) years old.
- b. Any ground transportation vehicle with a model year between seven (7) and ten (10) years old must meet the Authority's annual inspection requirements.

2. Hotel/Motel Shuttle Consolidation Incentive Program

If a hotel/motel elects to utilize an AFV or CAV and consolidates its shuttle services with one or more hotel or motel, the Authority will reduce the percentage of its fees as follows.

Operators	Reduction in fees and charges
2 to 3	50%
4 to 5	75%
6 plus	100%

The discounted rate would only apply to the dedicated AFVs or CAVs providing the courtesy service, not the entire fleet of vehicles owned and operated by the provider.

3. Conversion Incentives

The Authority may offer incentives or other programs to ground transportation service operators that use AFVs or CAVs. The incentives and other programs are approved by the Authority’s Board of Directors. Contact the Ground Transportation Department for details.

4. Non-Conversion Fees

The Authority may levy fee increases for non-alternative fuel or non-clean air commercial vehicles operating at the airport. These fees are approved by the Authority’s Board. Contact the Ground Transportation Department for details.

SECTION 6

6.0 FIRE, SAFETY AND HAZARDOUS MATERIALS

6.1 SCOPE AND APPLICABILITY

This section specifies fire prevention/protection, safety, and hazardous materials requirements at the Airport. All tenants shall conform with the codes and regulations prescribed in this section, all applicable codes, standards and recommended practices of the National Fire Protection Association (NFPA) relating to airports, all general construction fire and safety codes, and all applicable local, regional and state fire safety codes currently in existence or hereafter promulgated and not in conflict herewith. All hazardous substances at the Airport shall be managed in a manner consistent with applicable safety standards and all applicable federal, state, and local laws and regulations.

Authority Code § 8.12 (i). The enactment of this section is not intended to preempt the public health regulations contained in the City of San Diego Municipal Code, Article 5, Division 1, Sections 45.0101 through 45.0111, entitled "SMOKING PROHIBITED IN CERTAIN PUBLIC AREAS", and said Municipal Code Sections are hereby adopted and incorporated herein and shall be applicable to any airport under the jurisdiction of the Authority within the territorial limits of the County of San Diego. Every person at any said airport shall comply with the applicable provisions of said Municipal Code Sections, including subsequent amendments thereto, and every lessee of the Authority at any said airport shall post the necessary "No Smoking" signs on its leased premises as required by said Municipal Code Sections and enforce the provisions of said Municipal Code Sections.

Cross-references: See Rules and Regulations Sections 2.3 Litter and Refuse, 2.4 Pollution Prevention and Control and Dumping, and 4.3 Cleanliness. For specific procedures regarding fueling operations and spill protection, see Sections 3.4 – 3.4.8.

6.2 GENERAL SAFETY DUTIES

A. Fire Alarms

Regulation.

1. All tenants shall educate their employees in the proper use of the building fire alarm system and shall take effective measures to avoid inadvertent activation of building fire alarm systems due to careless or negligent behavior. Repeated avoidable activation of any fire alarm system shall be grounds for the Authority to levy penalties and/or facility use restrictions against the responsible tenant.

B. Fire Extinguishers

Authority Code § 8.12 (g). Tenants of all hangars and buildings shall provide suitable fire extinguishers and equipment and they shall be kept in such condition as may be required by the Fire Marshall of the city in which the airport is located.

Regulations:

1. All tenants shall provide adequate, readily accessible and properly working fire extinguishers in their leased spaces. Fire extinguishers shall be maintained in good operating condition as required by the City of San Diego Fire Marshal and applicable NFPA Standards. Each fire extinguisher shall display an official inspection tag showing the date of most recent inspection. Each fire extinguisher shall display its intended fire suppression capability as required by applicable occupational safety and health standards as found in Title 8, § 6151 of the California Code of Regulations.
2. Airlines are required to provide and maintain a wheeled fire extinguisher that meets or exceeds the NFPA Standard on the ramp at each of their preferentially assigned gates. Fire Extinguishers shall be maintained in good operating condition as required by the City of San Diego Fire Marshal and applicable NFPA standards. Each fire extinguisher shall display an official inspection tag showing the date of most recent inspection. At non-preferential gates, the operating airline shall ensure that a wheeled fire extinguisher that meets or exceeds the NFPA Standard is present on the ramp. Although multiple airlines may mutually agree which airline shall provide the extinguisher at non-preferential gates, the operating airline is ultimately responsible for ensuring the extinguisher is present and meets or exceeds the NFPA Standard prior to commencing its operations.

C. Cleanliness

Authority Code § 8.12 (f). Tenants shall maintain hangar floors, gasoline pits and trucks clean and free of excess gasoline, grease and other inflammables.

Regulations:

1. Tenants shall adhere to good housekeeping as well as Storm Water Best Management Practices as found in Appendix B of the Airport Storm Water Management Plan (SWMP). Failure to comply may result in the Authority providing cleaning services at the sole expense of the tenant.
2. Tenants shall keep the space allotted to them free from rubbish and accumulation of any material that may pose a potential hazard, including,

without limitation, waste, rubbish, fuel, oil, grease and other flammable or hazardous materials.

3. Tenants shall put in place drip pans and/or other precautions in compliance with good practice recommendations of the NFPA, the Federal Aviation Administration (FAA), and/or the Authority. Such containment measures shall be monitored and cleaned regularly so as not to overflow, pose a fire hazard, or become foreign object debris (FOD).

Cross-references: See Rules and Regulations Sections 2.3 Litter and Refuse, 2.4 Pollution Prevention and Control and Dumping, 4.3 Cleanliness, and relevant portions of Section 3.

D. Safety Inspections

The City of San Diego Fire Marshall oversees all Airport operations relating to fire safety standards and methods.

Regulations:

1. All tenants of any space where a safety inspection is proposed or conducted by a representative of a governmental jurisdiction other than the Authority shall notify the Authority's Aviation Security and Public Safety Department immediately.
2. All tenants of a space where it is determined that any building, structure, equipment or vehicle within the operational control of the tenant is a hazard shall immediately take necessary corrective actions to abate or correct the hazard. Once the condition has been abated or corrected, the tenant shall notify the Authority's Aviation Security and Public Safety Department.

Contact the Aviation Security and Public Safety Department at (619) 400-2762.

6.3 FIRE HAZARDS

Authority Code § 8.12 (a). Smoking or lighting of open flames shall be prohibited in the following locations:

- (1) Areas posted with "No Smoking" signs;*
- (2) On ramps or aprons; and*
- (3) Within 50 feet of hangars, fuel trucks or fuel loading stations.*

Authority Code § 7.02 (a). No person, except a peace officer or a member of the Armed Force on official duty, shall carry any weapon, explosive, or inflammable material on or about his or her person, openly or concealed, on the facilities and airports under the jurisdiction of the Authority, without the permission of the President/CEO.

A. Storage of Materials and Equipment

1. General

Authority Code § 8.12 (c). No person shall stock or store any material or equipment in such a manner as to constitute a fire hazard.

Regulation.

- a. No person shall block with equipment or stock the aisle, walkway, exit or entry to any building or storage area.

2. Outdoor Storage

Regulation.

- a. Every person storing material outside shall store such materials under cover. All protective covers and tarpaulins used for outdoor storage shall be made from a flame-proofed fabric or material.

3. Flammable Materials

Authority Code § 8.12 (d). Except for oil in sealed cans, no inflammable liquids or gases, including gasoline, dope, solvent and thinner, shall be stored in any hangar or building in quantities greater than one gallon; provided, however, separate buildings for such storage may be approved by the President /CEO.

Regulations:

- a. Every person storing a flammable liquid shall use a spill containment pallet or similarly-functioning storage device.
- b. No person shall store any flammable materials under any steps or stairway.

4. Oil-Stained Materials

Regulations:

- a. Every person storing any oil-stained materials, including waste rags, shall store such materials in metal receptacles with a self-extinguishing cover. The receptacle shall be emptied and cleaned daily or more frequently if necessary.
- b. Every person storing oil-stained clothes shall store such clothes in lockers constructed of metal or fire-resistant material.

B. Indoor Work Areas

Regulations:

1. No person shall conduct any work or process in which a highly-combustible material is used, including, but not limited to, doping or spray painting, other than in a designated and properly designed and ventilated room or building equipped with a proper fire suppression system. Each building used for such purposes shall conform to all applicable federal, state and local laws, regulations and ordinances. All illumination, wiring, heating, ventilating equipment, switches, outlets and fixtures shall be safe, spark-proof and vapor-proof.
2. Every person entering or working in any area where highly-combustible material is used, including, but not limited to, doping and spray painting, shall be properly trained, wear spark-proof shoes and clothing, and possess all required safety equipment.

C. Open Flames

Authority Code § 8.12 (b). No person shall start an open fire any place on the facilities and airports under the jurisdiction of the Authority without permission of the President/CEO.

1. Approval and Compliance Required

Regulations:

- a. No person shall conduct or permit any open flame operation or fire of any type, including cooking grills, exposed flame heaters, candles, welding (arc or gas) or cutting blow torches, flare pots or other open flame devices on any portion of the Airport without the express prior written permission of the Airside Operations Department.

The Airside Operations Department can be reached at (619) 400-2710.

Barbecue Request Forms can be obtained from the Authority's Airside Operations Department at (619) 400-2710.

Hot Work Permits can be obtained from the Authority's Facilities Development Department at (619) 400-2595 or the Facilities Management Department at (619) 400-2725.

- b. All persons engaged in any activity that is capable of providing a source of ignition, including, but not limited to, welding, cutting, grinding or soldering with a torch, shall comply with applicable California Occupational Safety and Health Act (Cal/OSHA) Title 8 requirements.

2. Aircraft Storage Areas

Regulation.

- a. No person shall use any equipment employing open flames or sparks within any aircraft storage area.

3. Required Distance

Regulation.

- a. No person shall create or maintain any open flames within fifty (50) feet of a hangar, fuel truck, fuel loading station, or aircraft without prior approval from the President/CEO.

4. Operations Restricted to Maintenance Areas

Regulation.

- a. No person shall conduct lead or carbon burning, fusion gas or electric welding blowtorch work, reservoir repairs, engine testing, battery charging or any open flame maintenance operations outside the maintenance areas approved by the Authority.

Such operations must receive prior written approval. See Regulation 6.3.C.1.a.

5. Safety Equipment and Training

Regulation.

- a. All persons conducting open flame operations shall have a sufficient fire suppression system available in the immediate vicinity and personnel adequately trained to operate such system.

Such operations must receive prior written approval. See Regulation 6.3.C.1.a.

D. Paint Spraying/Stripping, Battery Work and Doping

Regulations:

1. Every person conducting paint, varnish or lacquer spraying, battery work or doping operations shall receive prior approval from the President/CEO.
2. The arrangement, construction, ventilation and protection of spraying booths and the storing and handling of materials in connection therewith shall be in accordance with all applicable laws and regulations.
3. No person shall use dope (cellulose nitrate or cellulose acetate dissolved in volatile flammable solvents) within any hangar. The process of doping shall be conducted as set forth in the applicable NFPA Standards. All persons conducting such work shall do so only in isolated and Authority-approved areas equipped with all required safety controls. All such operations and locations shall comply

with all regulations, including but not limited to local fire prevention requirements, Authority regulations, Authority storm water pollution prevention requirements, and other applicable regulations and codes.

E. Cleaning Fluids

Authority Code § 8.12 (e). No person shall use a volatile inflammable [substance] for cleaning purposes inside any hangar or building.

Regulation.

1. All persons cleaning aircraft parts and other equipment shall do so only with nonflammable cleaning agents or solvents unless unavoidable. When the use of flammable solvents cannot be avoided, only liquids having flash points in excess of 100 degrees Fahrenheit shall be used. Special precautions shall be taken to eliminate ignition sources in compliance with good practice recommendations of the NFPA.

6.4 ELECTRICAL HAZARDS

A. Portable Lighting

Regulations:

1. Every person using extension lights or portable/mobile lighting equipment in and around aircraft hangars, shops, buildings and other areas on or near combustible materials shall ensure that such equipment is explosion-proof (also known as “hazardous location lighting” and/or “intrinsically safe lights”) and approved by Underwriters Laboratories (UL).
2. All light stands, equipment and towers interfering with the visibility of the Air Traffic Control Tower (ATCT), aircraft pilots, or ground vehicle operators shall be equipped with appropriate shielding.
3. No person shall use portable lamp assemblies in any area without the proper protective guard or shield.
4. All persons using portable lights shall comply with the Authority’s ramp lighting standards.

B. Cabling

Regulation.

1. All persons using power cables and cords on portable or stationary electric equipment shall ensure that such equipment uses heavy-armored rubber or similar material and provides automatic grounding through isolated integral

conductors. All power cables and cords shall be arranged or taped to the floor to prevent trip hazards.

6.5 HAZARDOUS MATERIAL AND WASTE

Authority Code § 8.50 (a). All persons subject to this Code shall comply with and conform to any and all applicable federal, state and local environmental laws and regulations, including, without limitation, any federal state and local environmental laws and regulations relating to the transportation of radioactive materials.

Authority Code § 8.51 (a). No person, without prior written approval from the President/CEO, shall keep, transport, handle or store at, in or upon any of the facilities or airports under the jurisdiction of the Authority, including, without limitation, the Airport (collectively, the "Facilities"), any cargo of explosives, or other hazardous materials that are barred from loading in or for transportation by civil aircraft in the United States under regulations promulgated by the Federal Aviation Administration or the regulations of any other authorized federal, state or local agency having jurisdiction. Advance written notice of at least 24 hours shall be given to the President/CEO to permit full investigation and clearances of any operation requiring a waiver of this rule. Compliance with said regulations shall not constitute or be construed to constitute a waiver of the required notice or an implied permission to keep, transport or store such explosives or other dangerous materials at, in, or upon the Facilities.

Authority Code § 8.51 (b). No person may offer, and no person knowingly may accept, any hazardous materials for shipment at any of the Facilities without the prior written approval of the President/CEO. Any and all shipments of hazardous materials shall be handled and stored in full compliance with the current provisions of F.A.R. Paragraph 139.321. Any person who has been authorized by the President/CEO to transport hazardous materials shall have designated personnel at the Authority who are authorized and responsible for receiving and handling such shipments in compliance with all applicable federal, state and local laws.

Authority Code § 8.51 (c). Any person engaged in the transportation of hazardous materials shall provide storage facilities which reasonably ensure against unauthorized access, exposure to persons, or damage to shipments while in or on any of the Facilities.

A. Management Plan

Regulation.

1. All persons using, generating, or storing any hazardous substance on the Airport shall first submit a detailed management plan to the Authority's Director, Environmental Affairs. The Plan shall include procedures for the use, handling, and storage of the hazardous substance, including safety procedures, safety training procedures and schedules of safety training frequency, site or facility safety features, and any other pertinent information. All persons storing

hazardous substances shall provide information regarding the exact location and quantity of all hazardous substances stored to the Director, Environmental Affairs, in the format requested by the Authority, together with a Material Safety Data Sheet (MSDS) for each substance. Written approval shall be received prior to the initiation of such activities.

The Environmental Affairs Department can be reached at (619) 400-2782.

B. Business Plan

Regulation.

1. All persons subject to California Health and Safety Code Chapter 6.95 (Hazardous Materials Release Response Plans and Inventory) and required to prepare a business plan shall notify the President/CEO and/or Director, Environmental Affairs in writing that the business is subject to Health and Safety Code Section 25503.5 and has complied with its provisions. Upon written request from the President/CEO and/or Director, Environmental Affairs, said person shall provide a copy of the Business Plan to the President/CEO and/or Director, Environmental Affairs within five (5) working days after receiving such request.

The Environmental Affairs Department can be reached at (619) 400-2782.

C. Training

Regulation.

1. Every person conducting any activity involving hazardous materials is solely responsible for educating and training their respective employees, agents, contractors and suppliers on the subject of hazardous substances management, handling, documentation, disposal and removal.

D. Damages Due to Non-Compliance

Regulation.

1. All fines, penalties, assessments, charges, costs, expenses and consequential damages attendant to non-compliance shall be the sole responsibility of the party found in violation and shall not become or form the basis of any reimbursement by the Authority, or any rental abatement, reductions, concessions or fee adjustments.

6.6 HANGAR SAFETY

Authority Code § 8.12 (h). Aircraft engines shall not be operated, nor shall aircraft electrical or radio equipment be operated in any hangar.

A. Motor Vehicles

Regulation.

1. No person shall operate a tractor, tug or other motor vehicle in a hangar occupied by any aircraft unless the vehicle is in compliance with applicable NFPA Standards and the exhaust system of such vehicle is protected by screens or baffles.

B. Aircraft

Regulation.

1. All persons repairing, providing maintenance to, or modifying an aircraft within a hangar shall ensure that the aircraft undergoing such operations is grounded and/or bonded in accordance with FAA and NFPA Standards and Guidelines.

C. Spills and Leaks

Regulation.

1. All maintenance and service personnel shall put in place drip pans or other precautions, in compliance with good practice recommendations of the NFPA Standards, FAA Advisory Circulars (ACs), and the Storm Water Management Plan (SWMP), Appendix B, BMP SC05, to contain any spills or leaks from aircraft or vehicles. Such containment measures shall be monitored and cleaned regularly so as not to overflow, pose a fire hazard or become foreign object debris (FOD).

Cross reference: See Rules and Regulations Section 4.3 Cleanliness.

D. Aircraft, Ground Radar and Radio Equipment

Regulations:

1. No person shall test or operate radio transmitters or similar equipment installed in an aircraft within a hangar with dynamotors running unless all parts of the antenna system are at least one foot removed from other objects. No aircraft shall be placed at any time so that any fabric-covered surface is within one foot of an antenna system.
2. Unless an approved shielding device is used, no person shall operate or ground-test airborne radar equipment in any area on the Airport where the directional beam of high-intensity radar is within 300 feet or the low-intensity beam is within 100 feet of an aircraft fueling operation, aircraft fueling truck or flammable liquid storage facility.

SECTION 7

7.0 ADMINISTRATIVE PROCEDURES AND PENALTIES

7.1 SCOPE AND APPLICABILITY

Authority Code § 6.01. Any person subject to the Rules and Regulations who violates or fails to comply with the Rules and Regulations will be deemed to be in violation of this Code. The President/CEO may promulgate a schedule of fines and penalties for any violation of the Rules and Regulations.

These administrative penalties apply to all persons with any badging, leasehold, permit or contractual relationship with the Airport or the Authority, including, but not limited to, tenants, vendors, licensees, permittees and such persons' employees, contractors and subcontractors.

7.2 PENALTIES AND OTHER CONSEQUENCES OF VIOLATION

Regulations:

- A. Unless specified otherwise, a violation of a Rule or Regulation shall result in any one or more of the following: warning, suspension or revocation of a SAN ID badge, termination of any airport agreement or Airport Ground Transportation Service Permit, loss of AOA driving privileges, monetary administrative civil penalty, administrative letter of correction, or attendance at training.
- B. Repeated violations of the Rules and Regulations shall be assessed additional and/or increased penalties.
- C. Unless specified otherwise, the violator of any Rule or Regulation may be assessed a civil penalty of up to \$25.00 for a first offense, \$50.00 for a second offense and \$100 for a third offense, where the prior violation occurred within twelve (12) months of the subsequent violation. Civil penalties may be imposed in addition to any other penalty imposed by the hearing officer and/or any other right or remedy the Authority may have available by contract or applicable law.
- D. Failure to pay an administrative civil penalty within thirty (30) days of its final adjudication may result in the temporary or permanent denial of access to restricted areas of the Airport, loss of permission to be on Airport property, and/or the termination or suspension of any or all rights, privileges, permits or other agreements at the Airport.

7.3 ENFORCEMENT

California Public Utilities Code § 170016 (c). A rule, regulation, or ordinance of the Authority may be enforced in an administrative action. A civil penalty may be imposed if the administrative action results in a finding that a violation has taken place.

(d). The Authority may employ necessary personnel to enforce this section.

The President/CEO may designate individuals to issue a Notice of Violation to any person who violates the Rules and Regulations or the employer of such person. Designated individuals include, but are not limited to, the Harbor Police Department, Airport Traffic Officers (ATOs), Aviation Security and Law Enforcement Manager, Emergency Preparedness and Public Safety Manager, Security and Public Safety Analyst, Airside Operations Manager, Airside Operations Duty Manager, Curfew Violation Review Board (CVRB), Environmental Affairs Manager, Senior Environmental Specialist, Associate Environmental Specialist, Assistant Environmental Specialist, Terminal Operations Manager, Terminal Operations Coordinator, Customer Service Coordinator, and Ground Transportation Manager.

7.4 NOTICE OF VIOLATION

- A. When a person authorized to enforce the Rules and Regulations observes or has notice of a violation, that person shall issue to the violator a written Notice of Violation. If the violator leaves the scene or the notice otherwise cannot be issued to the violator, the Notice of Violation shall be delivered to the violator's place of employment and to the operator, if other than the employer, who has the badging, leasehold, permit or contractual relationship with the Airport or the Authority and who is responsible for control of the violator while on the Airport.
- B. A copy of the Notice of Violation shall be delivered to the violator's employer and the operator who is responsible for control of the violator while on the Airport if that operator is not the violator's employer.
- C. The Notice of Violation shall contain:
 - 1) the date, time, location and nature of the violation;
 - 2) the identity of the violator and, if applicable, SAN ID or permit number; and
 - 3) the name and identification number of the individual issuing the Notice of Violation, the names of victims and/or witnesses, and the Authority Code or Rules and Regulations section violated.

7.5 RESPONSIBILITY AND LIABILITY

Regulations:

- A. Both the person violating the Rules and Regulations and the operator employing that person or responsible for control of that person while at the Airport shall be responsible for taking corrective action and payment of any imposed penalty.
- B. In the case of a violation by a commercial ground transportation driver, the operator of the vehicle which the driver is using, operating or associating with at the time of the violation shall be liable for payment of the applicable penalty.

7.6 APPEALS

A. Administrative Penalties and Suspension or Revocation of SAN ID Badges and Privileges

Regulations:

1. Individuals who receive a Notice of Violation may submit a written "Letter of Explanation" to the issuing Authority Department within five (5) business days after receipt of a Notice of Violation. Within ten (10) business days after issuance of a Notice of Violation, the issuing Authority Department will do all of the following: (1) determine whether to confirm the Notice of Violation; (2) determine the administrative penalty imposed, if any; and (3) issue a decision letter with findings advising the recipient of these determinations. The Notice of Violation findings and any suspensions, revocations, or other administrative penalties may be appealed in writing to the Vice President, Planning and Operations, or his/her designee within ten (10) business days of the date the decision letter is issued. Any request for appeal shall state the basis of the appeal and outline supporting facts. If an appeal is not filed within the ten (10) days, the suspension, revocation or administrative penalty shall become effective and any appeal filed thereafter may be denied.

The Vice President, Planning and Operations, or his/her designee may, without a hearing, immediately reverse an appealed suspension, revocation or administrative penalty based on the appeal, the notice of violation, and/or any other supporting documents.

2. When an appeal is timely filed, the appeal shall be assigned to the Vice President, Planning and Operations, or his/her designee, as a hearing officer. The matter shall be heard no later than sixty (60) calendar days from the date of receipt of the request for appeal. The hearing shall be conducted as an informal administrative proceeding with the rules of evidence relaxed from strict judicial practice; e.g., hearsay evidence may be admissible. All parties may be represented by legal counsel, witnesses shall be sworn and be subject to cross-examination, and cumulative or repetitive evidence may be excluded.

The hearing officer may uphold the suspension, revocation or administrative penalty specified in the notice of violation or reverse or modify the decision which is the subject of the appeal, or make a different decision. The written decision of the hearing officer shall contain findings of fact and state reasons for the decision. A copy of the decision shall be sent to or personally served upon the parties within ten (10) business days of the conclusion of the hearing.

3. The decision of the hearing officer may be appealed in writing to the President/CEO within fifteen (15) business days from the date the hearing officer's decision is sent or personally served. The decision of the President/CEO shall be based on the documents considered by the hearing officer. The President/CEO may uphold the suspension, revocation or administrative penalty or reverse or modify the decision which is the subject of the appeal, or make a different decision.
4. The decision of the President/CEO shall be the final administrative remedy. There shall be no rehearing or reconsideration. The final decision shall be subject to judicial review pursuant to California Code of Civil Procedure Sections 1094.5 and 1094.6.
5. When a timely appeal has been filed, the suspension, revocation or administrative penalty shall be stayed pending the decision(s) of the hearing officer and/ or the President/CEO. However, when, in the opinion of the Authority, there is a clear and immediate threat to public safety, the Authority may enforce a suspension or revocation prior to a hearing being held. The penalized party may then request a hearing from the Authority within ten (10) business days from the date notice that the suspension or revocation is not stayed has been sent or personally served. If no expedited hearing is requested, the appeal shall proceed in the ordinary course and the suspension or revocation shall remain in effect pending the outcome of the appeal process.

B. Suspension, Revocation and Denial of Ground Transportation Permits and Services

Authority Code § 9.22 (a) The President/CEO or his or her designee (the "President/CEO") of the San Diego County Regional Airport Authority (the "Authority") shall suspend, revoke or deny the Ground Transportation Service Permit or driver permit, as applicable, for failure to comply with any of the provisions of Sections 9.01 to 9.13, inclusive, of this Code pertaining to ground transportation services. Any such suspension or revocation shall be separate from any civil or criminal proceedings and shall not be a basis for relief of liability or responsibility pursuant to the proceedings. The action of the President/CEO shall be subject to the appeals provisions provided herein.

(b) Upon a determination by the President/CEO that a Permit Holder, operator of a vehicle or Taxicab, or applicant falls within the provisions of subsection (a) above, the Permit Holder or applicant, as the case may be, shall be notified of the suspension, revocation or denial and the manner in which such action may be appealed.

(c) The Permit Holder or applicant shall be notified that they may file a written appeal with the President/CEO. Each appeal must be perfected by a letter addressed to the President/CEO and delivered to the Authority Clerk, or postmarked with the

United States Postal Service, within ten business days of the date notice of the decision of the President/CEO addressed to the party making the appeal is placed with the United States Postal Service, which letter of appeal must state that an appeal from the decision of the President/CEO is desired. If no appeal is filed within the said ten days, it shall be grounds to deny a hearing and any untimely filed appeal shall be dismissed by the Hearing Officer. A suspension or revocation shall immediately become effective if an appeal is not timely filed within the ten business days. If an appeal is timely filed, the revocation or suspension shall be stayed pending the final determination of the appeal. In the event the permit, which is the subject of the action, expires and a new permit is issued to the same operator prior to the suspension or revocation taking effect and being fully carried out, or prior to final decision on appeal, the new permit shall be issued conditioned upon and shall be subject to the pending suspension or revocation. If no appeal is taken, said new permit shall be so suspended or revoked. If on appeal and suspension or revocation is the final decision, the new permit shall be so suspended or revoked. There shall be no requirement for further notice or hearing regarding the new permit.

(d) When an appeal is timely filed, the President/CEO shall cause the appeal to be assigned to a Hearing Officer. The matter shall be heard no later than 60 calendar days from the date of the filing of the appeal. The Hearing Officer shall notify the parties in writing of the time, date and place of the hearing. The notice shall be sent to the appellant by registered or certified mail, or hand-delivery. The Hearing (the "Hearing") is an informal administrative proceeding with the rules of evidence relaxed from strict judicial practice. In that regard, hearsay evidence is admissible. All parties may be represented by legal counsel, witnesses shall be sworn and be subject to cross-examination, and cumulative or repetitive evidence should not be admitted. The Hearing Officer may subpoena witnesses and establish additional procedures within the provisions of California Government Code Sections 11507.5 through 11511 and as may be required to serve the interest of justice. The Hearing Officer may uphold the suspension, revocation or denial or reverse or modify the decision which is the subject of the appeal, or make a different decision. A copy of the decision of the Hearing Officer specifying findings of fact and reasons for the decision shall be furnished to the parties within ten business days of the conclusion of the Hearing.

(e) The final decision of the Hearing Officer shall be the final administrative remedy. There shall be no rehearing or reconsideration. The final decision shall be subject to judicial review pursuant to California Code of Civil Procedure Sections 1094.5 and 1094.6.

(f) An exception to the hearing provisions above shall be made when, in the opinion of the Authority, there is a clear and immediate threat to the safety and protection of the public, the Authority may suspend or revoke a permit prior to a Hearing being held. The Authority shall prepare a written notice of suspension or revocation which includes a statement of the action, a concise explanation of the reasons for the action, the statutory basis relied upon for such action, and an explanation of the

Permit Holder's right to request a Hearing from the Authority. Such notice shall be either sent by certified mail to the Permit Holder or be personally delivered. The Permit Holder may request a Hearing from the Authority within five business days of receipt of notification that the permit has been suspended or revoked in the manner provided above in Subsection (c). The Hearing Officer shall notify the appellant of time and place of such Hearing and the Hearing shall be conducted in the manner prescribed in this Section. The Hearing shall be held not more than 15 business days from the date of receipt of said request for Hearing. The suspension or revocation shall not be stayed during pendency of said appeal Hearing.

(g) It shall be unlawful for any person to operate any Ground Transportation Service Vehicle from a facility or airport under the Authority's jurisdiction providing any ground transportation from such facility or airport during the period of any suspension or revocation of the permit or the driver's permit.

(h) No person shall use or give permission to use any vehicle or Taxicab to provide any ground transportation service from a facility or airport under the Authority's jurisdiction during the period of any suspension or revocation of the permit.

(i) When a permit has been suspended or revoked, the operation of any vehicle or taxicab authorized by such permit shall cease.

7.7 SCHEDULE OF ADMINISTRATIVE PENALTIES

Section Number:	Violation:	Consequences (*):	Authority Code Reference:
2.2 Smoking	Smoking in Violation of California State Law	G	Authority Code § 7.03, Authority Code § 8.12 (i).
2.9 Obstructions and Roadway Use	Violation of Obstructions and Roadway Use provisions	G	Authority Code § 7.12 (a, b & c).
2.16 Restricted Areas	Improper Entrance or allowing unauthorized entrance into Restricted Area(s)	G	
2.16.3 Restricted Areas	Improper personnel escort procedures	G	
2.17.A Badges/Display of SAN Identification (ID) Badge	Failure to display or properly display SAN Identification (ID) badge	G	
2.17.D Badges/Unauthorized Uses of Badges	Use of Another Person's SAN Identification (ID) badge or permitting use of One's own SAN Identification (ID) badge by another person	R, G	
2.17.G Badges/Lost or Stolen	Lost or Stolen badge	M, G (\$75 per occurrence. After third loss, badge privilege will be permanently revoked)	
2.18 Security Equipment and Directives	Unauthorized testing of checkpoint, screening or security systems	G	
2.18 Security Equipment and Directives	Failure to remain at an inadvertently activated security alarm until an authorized officer of the Authority or other security representatives arrive, determine cause of activation and verify the individual's authority to access that portion of such facilities or airports	G	Authority Code § 7.07 (c)
3.2.3 Airport Use Regulations			Authority Code § 9.40
3.2.7.C Charter Flight and Itinerant Operations	Improper vehicle escort procedures	G	
3.2.11 Maintenance and Repair of Aircraft	Cleaning, maintenance and repair of aircraft or Ground Service	G	

San Diego International Airport
Rules and Regulations

	Equipment (GSE) without authorization and/or in unauthorized locations		
--	--	--	--

Section Number:	Violation:	Consequences (*):	Authority Code Reference:
3.3.1 Air Operations Area (AOA) Driver's Permits	Driving on the Airside Operations Area (AOA) without State issued Drivers License or airport issued drivers permit	G	
3.3.4.A Vehicle Operations/Motor Vehicle and Equipment Operations around Aircraft	Failure to yield right-of-way to aircraft; driving a vehicle or equipment in front of taxiing aircraft	G	
3.3.4.A.7 Vehicle Operations/Motor Vehicle and Equipment Operations around Aircraft	Driving a vehicle or equipment across any active loading lane, that is, between the aircraft and the terminal gate or bus when passengers are being boarded or disembarking	G	
3.3.4.B Vehicle Operations/Parking	Parking violations on the Air Operations Area (AOA)	G	
3.3.4.C Vehicle Operations/Speed Limits and Operations on the Air Operations Area (AOA)	Speeding on the Air Operations Area (AOA)	G	
3.3.5 Vehicle Operations/Vehicles Operating on Movement Areas	Unauthorized vehicle operations on movement areas	R, G	
3.4.5 and 3.4.6 Fueling Operations and Fuel Service Vehicles	Violation of any fuel service vehicle provisions	G	Authority Code § 8.11 (b, c, d & e, g, h & i), Authority Code § 8.11 (f)
3.4.7.C Fuel Spills/Safety and Clean Up Procedures	Failure to clean-up any fuel spills or failure to follow any other fuel spill response procedures, which include making all proper notifications	G	Authority Code § 8.11 (j)
3.4.8.A & B Lavatory Chemical and/or Lavatory Waste Spills/Reporting and Safety and Clean Up Procedures	Failure to clean-up any lavatory chemical and/or lavatory waste spills or failure to follow any other spill response procedures, which include making all proper notifications.	G	

San Diego International Airport
Rules and Regulations

Section Number:	Violation:	Consequences (*):	Authority Code Reference:
4.2.A Conducting Business in Common Areas	Conducting business in common areas; prohibited use of premises	G	Authority Code § 8.41 (a & b)
4.3 Cleanliness	Trash/Foreign Object Debris (FOD), keeping leased area clean; responsibility to contain FOD	G	
4.5.B.3 Security/Construction/Perimeter Fence and Gate Security	Perimeter fence and gate security	G	
4.5.B.4 Security/Construction/Doorway Security	Doorway Security	G	
4.7 Care of Building	Care of building; windows and doors, baggage storage cases, tenant restrooms, exterior surfaces, utility systems, isolated operations (i.e. hallways, passageways, stairwells, employee ramp side restrooms, trash compactor areas etc.)	G	
4.9 Signage and Tenant Advertising	Signage and Tenant Advertising	G	
4.12 Noise	Noise; violation of any excessive noise between 10PM and 7AM or as otherwise directed by Authority tenant advisory, construction notice or other lawful instruction	G	
4.14 Electronic Equipment	Electronic equipment (Portable radios, iPods, boom boxes, etc.) playing in public spaces	G	
4.15 Queuing Lines and Stanchions	Ticket counter and gate queuing; Unauthorized queuing equipment other than typical 3-foot high chrome stanchions with black straps	G	

San Diego International Airport
Rules and Regulations

Section Number:	Violation:	Consequences (*):	Authority Code Reference:
5.4 Commercial Transportation Vehicles	Ground transportation permit required	G	Authority Code § 9.11(a)
5.4 Commercial Transportation Vehicles	Permit fees (non-payment)	G	Authority Code § 9.12(b)
5.4.A Commercial Transportation Vehicles	Lawful order	S, G	Authority Code § 9.21(i)1
5.4.A Commercial Transportation Vehicles	Authority Rules and Regulations	G	Authority Code § 9.21(i)2
5.4.A Commercial Transportation Vehicles	Public Utilities Commission Regulations	G	Authority Code § 9.21(i)3
5.4.A Commercial Transportation Vehicles	MTS regulations	G	Authority Code § 9.21(i)3
5.4.B.3. Commercial Transportation Vehicles	Failure to display/maintain transponder	S, G	Authority Code § 9.12 (c)
5.4.B.3. Commercial Transportation Vehicles	Decal/AVI transponder	G	Authority Code § 9.12(c)1
5.4.B.3. Commercial Transportation Vehicles	Evade AVI readers	S, G	Authority Code § 9.12(c)2
5.4.B.5.C. Commercial Transportation Vehicles	Driver permit required	G	Authority Code § 9.13 (a)
5.4.B.6 Commercial Transportation Vehicles	Service complaints (non-compliance)	G	Authority Code § 9.17
5.4.E Commercial Transportation Vehicles	Notify change of address	G	Authority Code § 9.22(j)
5.4.F Commercial Transportation Vehicles	Insurance (failure to maintain)	S, G	Authority Code § 9.14
5.4.F Commercial Transportation Vehicles	Threat to the safety and protection of the public	S, G	Authority Code § 9.22(f)
5.4.G Commercial Transportation Vehicles	Records (failure to provide)	G	Authority Code § 9.16
5.4.I Commercial Transportation Vehicles	Vehicle condition (owner/driver) Minor	G	Authority Code § 9.21(a)
5.4.I Commercial Transportation Vehicles	Vehicle condition (owner/driver) Major	G	Authority Code § 9.21(a)
5.4.J Commercial Transportation Vehicles	Driver identification	G	Authority Code § 9.21(b)
5.4.K Commercial Transportation Vehicles	Designated Pickup Zone	G	Authority Code § 9.21(c)1
5.4.K Commercial Transportation Vehicles	Must transit hold lot	G	Authority Code § 9.21(c)4
5.4.K Commercial Transportation Vehicles	Driver to remain at vehicle (hold lot)	G	Authority Code § 9.21(c)6
5.4.K Commercial Transportation Vehicles	Driver to remain in vehicle at stand	G	Authority Code § 9.21(c)7
5.4.K Commercial	Failure to move taxi	G	Authority Code § 9.21(c)8

San Diego International Airport
Rules and Regulations

Transportation Vehicles	forward		
5.4.K Commercial Transportation Vehicles	Soliciting by taxi or VFH driver/owner	G	Authority Code § 9.21(c)9
Section Number:	Violation:	Consequences (*):	Authority Code Reference:
5.4.N Commercial Transportation Vehicles	Driver personal grooming	G	Authority Code § 9.21(e)1 & 2
5.4.N Commercial Transportation Vehicles	Driver Attire	G	Authority Code § 9.21(e)3 & 4
5.4.O Commercial Transportation Vehicles	Duty to transport (taxi & VFH)	S, G	Authority Code § 9.21(f)
5.4.P Commercial Transportation Vehicles	Non-discrimination	S, G	Authority Code § 9.21(g)
5.4.Q Commercial Transportation Vehicles	Fares by meter or tariff, receipts	S, G	Authority Code § 9.21(h)
5.4.S.3 Spare Taxicab Use Policy	Violation of Spare Taxicab Use Policy	G	
5.4.S.6 Commercial Transportation Vehicles	Failure to follow Authority credit card requirements	G	

San Diego International Airport
Rules and Regulations

Section Number:	Violation:	Consequences *:	Authority Code Reference:
6.0 Fire, Safety and Hazardous Materials	Violation of fire prevention/protection and/or hazardous material/waste management procedures	G	Authority Code § 7.02 (a), Authority Code § 8.12 (a), Authority Code § 8.12 (b), Authority Code § 8.12 (c), Authority Code § 8.12 (d), Authority Code § 8.12 (e), Authority Code § 8.12 (f), Authority Code § 8.12 (g), Authority Code § 8.12 (h), Authority Code § 8.12 (i), Authority Code § 8.50 (a), Authority Code § 8.51 (a), Authority Code § 8.51 (b), Authority Code § 8.51 (c),
6.2.B.2 Fire Extinguishers	Violation of duty to provide, maintain or ensure wheeled fire extinguisher at ramp	G	
<p>*</p> <p>G = warning, suspension or revocation of a SAN ID badge, termination of any airport agreement or Airport Ground Transportation Service Permit, loss of AOA driving privileges, monetary administrative civil penalty, administrative letter of correction, and/or attendance at additional training S = mandatory suspension R = mandatory revocation M = monetary penalty as specified</p> <p>Where two letters are listed, the first letter designates a mandatory consequence of violation. A second letter indicates additional consequences of violation applied at the discretion of the Authority.</p>			

APPENDIX G
MISCELLANEOUS SUPPORT MATERIALS

Appendix G - Miscellaneous Support Materials



CEQA ENVIRONMENTAL CHECKLIST FORM

APPENDIX G: ENVIRONMENTAL CHECKLIST FORM

NOTE: The following is a sample form and may be tailored to satisfy individual agencies' needs and project circumstances. It may be used to meet the requirements for an initial study when the criteria set forth in CEQA Guidelines have been met. Substantial evidence of potential impacts that are not listed on this form must also be considered. The sample questions in this form are intended to encourage thoughtful assessment of impacts, and do not necessarily represent thresholds of significance.

1. Project title: _____
2. Lead agency name and address:

3. Contact person and phone number: _____
4. Project location: _____
5. Project sponsor's name and address:

6. General plan designation: _____ 7. Zoning: _____
8. Description of project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)

9. Surrounding land uses and setting: Briefly describe the project's surroundings:

10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|---|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology /Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Hydrology / Water Quality |
| <input type="checkbox"/> Land Use / Planning | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise |
| <input type="checkbox"/> Population / Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Transportation/Traffic | <input type="checkbox"/> Utilities / Service Systems | <input type="checkbox"/> Mandatory Findings of Significance |

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

Date

Signature

Date

EVALUATION OF ENVIRONMENTAL IMPACTS:

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

- 9) The explanation of each issue should identify:
- a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significance

SAMPLE QUESTION

Issues:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
--	---	---	---	----------------------

I. AESTHETICS. Would the project:

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
| a) Have a substantial adverse effect on a scenic vista? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

II. AGRICULTURE AND FORESTRY RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>IV. BIOLOGICAL RESOURCES:</u>				
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Less Than Significant			
	Potentially Significant Impact	with Mitigation Incorporated	Less Than Significant Impact	No Impact

V. CULTURAL RESOURCES. Would the project:

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
| a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Disturb any human remains, including those interred outside of formal cemeteries? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

VI. GEOLOGY AND SOILS. Would the project:

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
| a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ii) Strong seismic ground shaking? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| iii) Seismic-related ground failure, including liquefaction? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| iv) Landslides? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Result in substantial soil erosion or the loss of topsoil? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

VII. GREENHOUSE GAS EMISSIONS.

Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

VIII. HAZARDS AND HAZARDOUS

MATERIALS. Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

IX. HYDROLOGY AND WATER QUALITY.

Would the project:

a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
X. LAND USE AND PLANNING. Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

XI. MINERAL RESOURCES. Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

XII. NOISE -- Would the project result in:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Potentially Significant Impact			

XIII. POPULATION AND HOUSING. Would the project:

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|--------------------------|
| a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

XIV. PUBLIC SERVICES.

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|--------------------------|
| a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Fire protection? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Police protection? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Schools? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Parks? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Other public facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

XV. RECREATION.

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
| a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|--------------------------|

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>XVI. TRANSPORTATION/TRAFFIC.</u> Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Potentially Significant Impact			

XVII. UTILITIES AND SERVICE SYSTEMS.

Would the project:

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|--------------------------|
| a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| g) Comply with federal, state, and local statutes and regulations related to solid waste? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE.

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
| a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|--------------------------|

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Note: Authority cited: Sections 21083 and 21083.05, Public Resources Code. Reference: Section 65088.4, Gov. Code; Sections 21080(c), 21080.1, 21080.3, 21083, 21083.05, 21083.3, 21093, 21094, 21095, and 21151, Public Resources Code; *Sundstrom v. County of Mendocino*, (1988) 202 Cal.App.3d 296; *Leonoff v. Monterey Board of Supervisors*, (1990) 222 Cal.App.3d 1337; *Eureka Citizens for Responsible Govt. v. City of Eureka* (2007) 147 Cal.App.4th 357; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th at 1109; *San Franciscans Upholding the Downtown Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656.

Revised 2009

FDD PROJECT INTAKE FORM

Project: _____

PROCESS INTAKE FORM

Date: _____

Field Personnel: _____

	Requirement:	Response (to include applicable SWPPP or WPCP Section)
List additional BMPs to be used from minimum BMP categories i.e.:		
18	Project Planning:	
19	Erosion Control:	
20	Sediment Control/Run-on-Runoff Control:	
21	Tracking controls:	
22	Good housekeeping:	
23	Non-storm water:	
24	Materials and waste management:	
25	Active/passive sediment treatment systems, where applicable:	

AUTHORITY MINIMUM BMPs

Erosion Control BMPs

EC-1 Scheduling
EC-3 Hydraulic Mulch

Temporary Sediment Control BMPs

SE-1 Silt Fence
SE-5 Fiber Rolls
SE-6 Gravel Bag Berm

Wind Erosion Control BMPs

WE-1 Wind Erosion Control

Non-Storm Water Management BMPs

NS-1 Water Conservation Practices
NS-3 Paving and Grinding Operations
NS-6 Illicit Connection/Discharge

Waste Management & Materials Pollution Control

WM-1 Material Delivery and Storage
WM-2 Material Use
WM-3 Stockpile Management
WM-4 Spill Prevention and Control

EC-15 Soil Preparation
EC-16 Non-Vegetative Stabilization

SE-7 Street Sweeping and Vacuuming
SE-10 Storm Drain Inlet Protection
SE-13 Compost Socks and Berms

Temporary Tracking Control BMPs

TC-1 Stabilized Construction Entrance/ Exit

NS-9 Vehicle and Equipment Fueling
NS-12 Concrete Curing
NS-13 Concrete Finishing

WM-5 Solid Waste Management
WM-8 Concrete Waste Management
WM-9 Sanitary/ Septic Waste Management

PROCESS INTAKE FORM

Project: _____

Date: _____

Completed by: _____

Project Name _____

Project Address _____

WDID NUMBER (for CGP Projects) _____

WPCP or Certified SWPPP _____ (Circle one, and submit to EAD or FDD if tenant)

Project size _____

Maximum Disturbed Soil Area (DSA) _____

Construction Schedule

Start of Project End Date

CONTACT INFORMATION:

Name

Phone #

Email

Project Contact	_____	_____	_____
FDD Project Manager (PM)	_____	_____	_____
FDD Construction Manager (CM)	_____	_____	_____
QSD	_____	_____	_____
Contractor QSP	_____	_____	_____

SUBCONTRACTORS:

Subcontractors (to include any company to be used for the supply, installation and maintenance of BMPs, for spill response and clean up, for waste removal, or materials delivery), and any other relevant contacts.

IF N/A INDICATE HERE: _____

	Company Name	Contact Name	Title	Phone #	Email
1	_____	_____	_____	_____	_____
2	_____	_____	_____	_____	_____
3	_____	_____	_____	_____	_____
4	_____	_____	_____	_____	_____
5	_____	_____	_____	_____	_____

Other Notes:

Project: _____

PROCESS INTAKE FORM

Date: _____

Field Personnel: _____

	Requirement:	Response (to include applicable SWPPP or WPCP Section)
1	How has the project been scheduled so that the areas to be cleared and graded are minimized to only the portion of the site that is necessary for construction?	
2	If grading areas cannot be minimized, or the DSA in the SWPPP or WPCP exceeds the maximum stated, what erosion and sediment controls will be put in place to reduce any construction site sediment discharges to the MEP?	
3	How has the project been scheduled so that the exposure time of DSAs is minimized?	
4	How has the project been scheduled so that grading in the wet season is minimized or avoided, where possible?	
5	If grading during the wet season cannot be minimized or avoided, what erosion and sediment controls will be put in place to reduce any construction site sediment discharges to the MEP?	
6	BMPs to be used if the project is to exceed the maximum DSA stated in the SWPPP or WPCP?	
7	What wind erosion controls will be used?	
8	How and when will temporary and permanent stabilization be achieved for each area to be disturbed and temporarily or permanently not be re-disturbed?	
9	How and by whom will BMPs be maintained?	
10	What sediment controls and run-on/run-off controls will be used in conjunction with erosion controls?	
11	How will active slopes be stabilized prior to a rain event?	
12	Confirm if all Authority minimum BMPs apply or if not, list any that do not apply due to, for example, related activities that are not expected to occur. The SWPPP or WPCP should provide justification as to why those minimum BMPs do not apply. (See Page 4 for a list of Authority Minimum BMPs)	

Project: _____

PROCESS INTAKE FORM

Date: _____

Field Personnel: _____

	Requirement:	Response (to include applicable SWPPP or WPCP Section)
13	Description of the procedures to be used to implement a Weather-Triggered Action Plan (required for all high threat to water quality construction projects), including how construction schedules will be adapted in the event of a storm, and by whom.	
14	QSP inspection schedule	
15	How soon before the start of rain will the QSP conduct pre-rain inspections and does that provide enough time to perform any needed corrective actions?	
16	Are there any pre-existing soil contamination issues for which additional BMPs and safety measures will be required?	
17	Is the project located within 200 feet of San Diego Bay?	

Project: _____

PROCESS INTAKE FORM

Date: _____

Field Personnel: _____

	Requirement:	Response (to include applicable SWPPP or WPCP Section)
List additional BMPs to be used from minimum BMP categories i.e.:		
18	Project Planning:	
19	Erosion Control:	
20	Sediment Control/Run-on-Runoff Control:	
21	Tracking controls:	
22	Good housekeeping:	
23	Non-storm water:	
24	Materials and waste management:	
25	Active/passive sediment treatment systems, where applicable:	

AUTHORITY MINIMUM BMPs

Erosion Control BMPs

EC-1 Scheduling
EC-3 Hydraulic Mulch

Temporary Sediment Control BMPs

SE-1 Silt Fence
SE-5 Fiber Rolls
SE-6 Gravel Bag Berm

Wind Erosion Control BMPs

WE-1 Wind Erosion Control

Non-Storm Water Management BMPs

NS-1 Water Conservation Practices
NS-3 Paving and Grinding Operations
NS-6 Illicit Connection/Discharge

Waste Management & Materials Pollution Control

WM-1 Material Delivery and Storage
WM-2 Material Use
WM-3 Stockpile Management
WM-4 Spill Prevention and Control

EC-15 Soil Preparation
EC-16 Non-Vegetative Stabilization

SE-7 Street Sweeping and Vacuuming
SE-10 Storm Drain Inlet Protection
SE-13 Compost Socks and Berms

Temporary Tracking Control BMPs

TC-1 Stabilized Construction Entrance/ Exit

NS-9 Vehicle and Equipment Fueling
NS-12 Concrete Curing
NS-13 Concrete Finishing

WM-5 Solid Waste Management
WM-8 Concrete Waste Management
WM-9 Sanitary/ Septic Waste Management

STORM WATER QUALITY INSPECTION FORM

2015 Storm Water Quality Inspection For Industrial/Commercial/Municipal Facilities

Inspector Name: _____

Date: _____

Time: _____

Contact Information

Business Name _____

Business Type _____

Mailing Address _____

Business Telephone # _____ Business Fax # _____

On-Site Contact #1 _____ Title: _____

Phone # _____ Cell Phone # _____

On-Site Contact #2 _____ Title: _____

Phone # _____ Cell Phone # _____

Environ Contact _____ Title: _____

Phone # _____ Cell Phone # _____

Subtenants: Yes No If yes:

Name _____ Contact _____ Phone: _____

Name _____ Contact _____ Phone: _____

Vendors: Yes No If yes:

Name _____ Contact _____ Phone: _____

Name _____ Contact _____ Phone: _____

Facility/Operation/Site Information

Principal activity: _____

Does facility/operation have an Individual NPDES Permit? Yes No

If yes, provide WDID (Permit) #: _____

Does facility/operation maintain SWPPP and/or BMP Plan? Yes No

Does facility/operation maintain Hazmat Business Plan? Yes No

Has facility/operation conducted previous storm water monitoring/or sampling programs? Yes No

Initial Observations

Nearest MS4 conveyance inlet: _____ Approx. distance to MS4: < 200 ft. 200 – 1000 ft. > 1000 ft.

Discharge observed? Yes No If yes, describe: _____

Additional comments: _____

Tenant Summary Sheet

Verify/update "Tenant Description and Primary Industrial Activities:" **Correct/Adequate**

Updates, please describe: _____

Print Name of Facility/Operation Representative: _____

Inspector's Signature: _____ Date: _____

BMPs	N/A	Fully	Partial	Not	Comments
Storm Water Discharges					
Does storm water from this facility/operation enter the MS4?					
Does the storm water run-off from this facility/operation discharge into a wastewater treatment process or sanitary sewer or dead-end sump area with pump?					
BMPs	N/A	Fully	Partial	Not	Comments
SC01 - Non-Storm Water Management <input type="checkbox"/> Not Applicable at this Facility/Operation					
Identify significant materials which could have the potential to discharge to storm drains.	<input type="checkbox"/> Oil and Grease <input type="checkbox"/> Solvents <input type="checkbox"/> Paint <input type="checkbox"/> Deicing/Anti-Icing Fluids <input type="checkbox"/> Cleaning Solutions <input type="checkbox"/> Lubricants <input type="checkbox"/> Anti freeze <input type="checkbox"/> Battery Acid <input type="checkbox"/> Fuel <input type="checkbox"/> Pesticides/Herbicides/Fertilizers <input type="checkbox"/> Metals <input type="checkbox"/> Deicing/Anti-Icing Fluids <input type="checkbox"/> Sediment <input type="checkbox"/> Fire Fighting Foam <input type="checkbox"/> Dumpster Wastes <input type="checkbox"/> Landscape Wastes <input type="checkbox"/> Floatables <input type="checkbox"/> Lavatory Chemical Wastes <input type="checkbox"/> Potable Water System Chemicals <input type="checkbox"/> Rubber Particulates <input type="checkbox"/> Other:				
SC01-01. Are the Airport Operations (619-400-2710) and the Airport Authority Environmental Affairs Department (619-400-2784) notified if there is any evidence of illicit connections or illegal discharges?					
SC01-02. Have employees, tenants and the public been educated about avoiding non-storm water discharges?					
SC01-03. Are outdoor water supplies (hose bibs) limited and posted with appropriate use signs to discourage uses that may pollute the storm drain system/receiving waters?					
SC01-04. Is the site free of evidence of illicit connections and illegal discharges?					
SC01-05. Are landscaped areas being irrigated during a forecasted rain event or 48 hours after a rain event?					
SC01-06. Is the irrigation systems and landscaped areas being inspected on a regular basis to minimize excessive watering and identify any leaks?					
SC01-07. Is air conditioning or refridgeator condensation being directed to landscaping, porous surface, into the sanitary seware, or being reused?					
SC01-08. Is the satellite water-tracking system being used to irrigate landscaped areas? Is the satellite water-tracking system properly operating to apply correct levels of soil moisture?					
SC01-09. Is an hand-held hose equipped with positive shutoff nozzle, hand-held water container, or timed sprinkler system being used to irrigate landscaped areas?					

Additional Comments:

BMPs	N/A	Fully	Partial	Not	Comments
------	-----	-------	---------	-----	----------

SC02A - Outdoor Equipment Ops and Maintenance Areas Not Applicable at this Facility/Operation

Identify significant materials used at the facility/operation, associated with equipment operations and maintenance.	<input type="checkbox"/> Oil and Grease <input type="checkbox"/> Fuel <input type="checkbox"/> Solvents <input type="checkbox"/> Paint <input type="checkbox"/> Cleaning Solutions <input type="checkbox"/> Lubricants <input type="checkbox"/> Anti freeze <input type="checkbox"/> Battery Acid <input type="checkbox"/> Other:				
--	---	--	--	--	--

SC02A-01. Are storm drains located directly within equipment operations and maintenance areas?					
--	--	--	--	--	--

SC02A-02. Is there a designated equipment ops and maintenance area with overhead cover for pollutant sources and/or activity areas?					
---	--	--	--	--	--

Additional Comments:

BMPs	N/A	Fully	Partial	Not	Comments
------	-----	-------	---------	-----	----------

SC02B - Aircraft, Grnd Vehicle & Eqpmnt Maintenance Not Applicable at this Facility/Operation

Identify significant materials used at the facility/operation, associated with maintenance/repair.	<input type="checkbox"/> Oil and Grease <input type="checkbox"/> Fuel <input type="checkbox"/> Solvents <input type="checkbox"/> Paint <input type="checkbox"/> Cleaning Solutions <input type="checkbox"/> Lubricants <input type="checkbox"/> Anti freeze <input type="checkbox"/> Battery Acid <input type="checkbox"/> Other:				
--	---	--	--	--	--

SC02B-01. Are employees trained in safe vehicle and equipment operations and maintenance?					
---	--	--	--	--	--

SC02B-02. Are storm drains located directly within the aircraft, vehicle and equipment maintenance area?					
--	--	--	--	--	--

SC02B-03. Is there a designated aircraft, vehicle and equipment maintenance area that is either indoors or covered, bermed, enclosed, or sloped/positioned away from the MS4?					
---	--	--	--	--	--

SC02B-04. Is equipment regularly inspected and tested?					
--	--	--	--	--	--

SC02B-05. Are visual observations performed to detect fluid leaking from aircraft, vehicles, and equipment? Are drip pans put under leaks if needed?					
SC02B-06. Are aircraft vehicles and equipment maintained in good condition to prevent or correct any leakage of oil or other fluids?					
SC02B-07. Are drip pans used during maintenance?					
SC02B-08. Are drip pans or other open containers containing fluid left around? Are fluids regularly transferred for recycling or proper disposal?					
SC02B-09. Is the use of solvent minimized and less toxic solvent used whenever possible? If solvents cannot be avoided, are parts cleaned and/or drained in self-contained sinks or drum units? Are these units checked regularly for leaks?					
SC02B-10. Are mechanical parts, equipment, and vehicles waiting for repair stored under cover and away from drains?					
SC02B-11. Are spill response materials stored in maintenance areas and on maintenance vehicles? Are used absorbent materials collected/removed and properly disposed of?					
SC02B-12. Are fluids and batteries removed from salvage vehicles and equipment properly disposed of?					
SC02B-13. Are obsolete and inoperable vehicles and equipment properly disposed of?					

Additional Comments:

BMPs	N/A	Fully	Partial	Not	Comments
------	-----	-------	---------	-----	----------

SC02C – Electric Vehicle Maintenance Not Applicable at this Facility/Operation

Identify significant materials used at the facility/operation, associated with maintenance/repair.	<input type="checkbox"/> Battery Acid <input type="checkbox"/> Metals <input type="checkbox"/> Vehicle Fluids <input type="checkbox"/> Other:				
SC02C-01. Are batteries being overcharged in electric vehicles?					
SC02C-02. Are electric vehicles parked in cool and dry areas when not in use?					

SC02C-03. Are acid resistant drip pans sprinkled with a battery acid neutralizing agent being used when filling or cleaning electric vehicles? Are waste being properly disposed?					
SC02C-04. Are battery acid neutralizing kits located adjacent to charging stations and are properly maintained? Is spill response material after use properly disposed of in an appropriate manner?					
SC02C-05. Are electric vehicle batteries being overfilled? Is there staining or residue on the ground signaling spillage?					
SC02C-06. Is maintenance on electric vehicles being performed or batteries being filled during rain events?					
SC02C-07. Are batteries being stored inside buildings in cool and dry places? Are batteries being stored on a nonreactive impervious surface with a cover if stored outside?					
SC02C-08. Is the battery case and terminals being cleaned regularly or when there is a buildup of corrosion? Is the cleaning done with a rag wetted down with a solution of water and battery acid neutralization agent? Is the wastewater being captured and disposed as hazardous waste?					
SC02C-09. Is petroleum jelly or grease being applied on battery terminals in order to slow down the corrosion process?					

Additional Comments:

BMPs	N/A	Fully	Partial	Not	Comments
------	-----	-------	---------	-----	----------

SC03 - Aircraft, Ground Vehicle and Equipment Fueling Not Applicable at this Facility/Operation

Identify significant materials used at the facility/operation, associated with vehicle and equipment fueling.	<input type="checkbox"/> Fuel <input type="checkbox"/> Other				
SC03-01. Is there a designated fueling area that is covered, bermed, enclosed or sloped away from the MS4?					
SC03-02. Are storm drains located directly within fueling areas?					
SC03-03. Are tanks, piping and valves labeled, regularly inspected and kept in good condition?					
SC03-04. Are absorbent booms, spill kits or vacuum equipment present in fueling areas or on fueling vehicles?					
SC03-05. Are fueling areas regularly inspected?					

SC03-06. Are major fueling operations monitored?					
SC03-07. Is secondary containment or cover used when transferring fuel from a tanker truck to a fuel tank?					
SC03-08. Are leak, overfill protection and spill prevention devices used for tanks and piping?					
SC03-09. Are automatic shut-off mechanisms used for fuel tankers and hose connections?					
SC03-10. Are fuel tanks topped off?					
SC03-11. Is access to fuel tanks and fueling vehicles restricted?					

Additional Comments:

BMPs	N/A	Fully	Partial	Not	Comments
------	-----	-------	---------	-----	----------

SC04 - Aircraft, Grnd Vehicle and Equipment Cleaning Not Applicable at this Facility/Operation

Identify significant materials at the facility/operation associated with vehicle and equipment cleaning.	<input type="checkbox"/> Oil and Grease <input type="checkbox"/> Solvents <input type="checkbox"/> Cleaning Solutions <input type="checkbox"/> Lubricants <input type="checkbox"/> Anti freeze <input type="checkbox"/> Other:				
SC04-01. Are vehicles, equipment, and washing areas kept clean and free of waste?					
SC04-02. Are dry washing and surface preparation techniques used where feasible?					
SC04-03. Are storm drains located directly within wash areas?					
SC04-04. Are pigs and cover mats used to cover all catch basins in the surrounding area to contain the wash water during washing activities?					
SC04-05. Are all washing activities performed in a designated area that captures or diverts all wash water to a structural treatment control BMP, sanitary sewer, or dead end sump with pump?					
SC04-06. Are routine visual observations performed on washing activities and nearby storm drains to detect discharges from cleaning activities?					
SC04-07. Is wash water filtered and recycled where possible? If not possible, is the wash water collected and properly disposed of?					

SC04-08. Are excess materials such as drippings and residue removed by using vacuum methods? Are all waste materials properly disposed of?					
SC04-09. Is a hand-held hose equipped with a positive shut-off nozzle being used to wash vehicles?					
SC04-10. Is vehicles, aircraft, and equipment being washed between 4pm and 10am from November 1 to May 31 and between 6pm and 10am from June 1 to October 31?					
SC04-11. Are wash racks being used to capture and recycle/reuse water?					

Additional Comments:

BMPs	N/A	Fully	Partial	Not	Comments
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SC05 - Aircraft Deicing/Anti-Icing

Not Applicable at this Facility/Operation

Identify significant materials used at the facility/operation, associated with aircraft deicing/anti-icing.	<input type="checkbox"/> Ethylene Glycol <input type="checkbox"/> Propylene glycol <input type="checkbox"/> Other:				
SC05-01. Are deicing/anti-icing operations performed only in designated areas that are covered, bermed, enclosed, or sloped/positioned away from the MS4?					
SC05-02. Are deicing/anti-icing operations monitored regularly to ensure quantities of fluids used are at a minimum while not jeopardizing aircraft safety and operation?					
SC05-03. Are all fluids captured or diverted to a treatment control BMP, recycling system, sanitary sewer, or dead end sump with pump?					
SC05-04. Are the designated anti-icing/deicing ramp areas cleaned following deicing/anti-icing operations with wet-type sweepers to remove deicing fluids from the paved areas? Are the fluids recycled or properly disposed of?					

Additional Comments:

BMPs	N/A	Fully	Partial	Not	Comments
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SC06 - Outdoor Loading/Unloading of Materials Not Applicable at this Facility/Operation

Identify significant materials loaded or unloaded at the facility/operation.	<input type="checkbox"/> Oil and Grease <input type="checkbox"/> Fuel <input type="checkbox"/> Pesticides/Herbicides/Fertilizers <input type="checkbox"/> Solvents <input type="checkbox"/> Cleaning Solutions <input type="checkbox"/> Battery Acid <input type="checkbox"/> Other:				
SC06-01. Are contractors/haulers aware of and do they adhere to BMP specifications that are relevant to the loading and unloading of materials?					
SC06-02. Are storm drains located directly within loading/unloading areas?					
SC06-03. Are loading/unloading areas graded, bermed, covered or otherwise protected to prevent contact with rainfall and storm water run-on and run-off?					
SC06-04. Is loading/unloading equipment regularly checked for leaks?					
SC06-05. Are drip pans or other containment measures used under hoses?					
SC06-06. Are loading and unloading areas kept free of spills and debris by containing and absorbing leaks during transfers and spillage from hose disconnections or cargo pallets? Is residue or debris properly disposed of?					
SC06-07. Are spill kits or other measures available in accessible locations near areas where spills may be likely to occur to contain spills and/or prevent tracking off-site?					

Additional Comments:

BMPs	N/A	Fully	Partial	Not	Comments
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SC07 - Outdoor Material Storage Not Applicable at this Facility/Operation

Identify significant materials stored outdoors at the facility/operation.	<input type="checkbox"/> Oil and Grease <input type="checkbox"/> Solvents <input type="checkbox"/> Paint <input type="checkbox"/> Deicing/Anti-Icing Fluids <input type="checkbox"/> Cleaning Solutions <input type="checkbox"/> Lubricants <input type="checkbox"/> Anti freeze <input type="checkbox"/> Battery Acid <input type="checkbox"/> Fuel <input type="checkbox"/> Pesticides/Herbicides/Fertilizers <input type="checkbox"/> Metals <input type="checkbox"/> Deicing/Anti-Icing Fluids <input type="checkbox"/> Sediment <input type="checkbox"/> Fire Fighting Foam <input type="checkbox"/> Dumpster Wastes <input type="checkbox"/> Landscape Wastes <input type="checkbox"/> Floatables <input type="checkbox"/> Lavatory Chemical Wastes <input type="checkbox"/> Potable Water System Chemicals <input type="checkbox"/> Rubber Particulates <input type="checkbox"/> Other:				
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Identify significant materials stored indoors and used outdoors at the facility/operation.	<input type="checkbox"/> Oil and Grease <input type="checkbox"/> Solvents <input type="checkbox"/> Paint <input type="checkbox"/> Deicing/Anti-Icing Fluids <input type="checkbox"/> Cleaning Solutions <input type="checkbox"/> Lubricants <input type="checkbox"/> Anti freeze <input type="checkbox"/> Battery Acid <input type="checkbox"/> Fuel <input type="checkbox"/> Pesticides/Herbicides/Fertilizers <input type="checkbox"/> Metals <input type="checkbox"/> Deicing/Anti-Icing Fluids <input type="checkbox"/> Sediment <input type="checkbox"/> Fire Fighting Foam <input type="checkbox"/> Dumpster Wastes <input type="checkbox"/> Landscape Wastes <input type="checkbox"/> Floatables <input type="checkbox"/> Lavatory Chemical Wastes <input type="checkbox"/> Potable Water System Chemicals <input type="checkbox"/> Rubber Particulates <input type="checkbox"/> Other:
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SC07-01. Are outdoor material storage areas located directly in the path of storm drains?					
SC07-02. Do outdoor material storage areas have areas with overhead cover and secondary containment?					
SC07-03. Are outdoor material storage areas prevented from contacting storm water run-on and run-off (e.g. by the use of berms, wood pallets etc.)?					
SC07-04. Are material stockpiles covered and contained or erosion control practices implemented at the perimeter of the site and at any inlets or catch basins to prevent the off-site transport of eroded material?					
SC07-05. Are wood products treated with preservative chemicals covered with tarps or stored indoors?					
SC07-06. Are protection guards (bollards, posts, or guardrails) installed around ASTs and piping to prevent damage from vehicles or forklifts and any subsequent release?					
SC07-07. Are regular inspections performed on tanks, storage containers, and berms to check for corrosion, structural failure, loose fittings, poor welds, leaks etc? Are repairs or replacements performed as needed?					
SC07-08. Are liquid materials in ASTs stored in double-walled, valved storage tanks or within concrete bermed secondary containment areas to provide the capacity to contain the entire volume of the single largest container with sufficient freeboard to contain precipitation? Is the area inside the curb sloped to a drain?					
SC07-09. Is precipitation from bermed areas drained to the sanitary sewer if available or inspected and tested according to applicable regulations prior to its release to a locked, valved or plugged storm drain?					
SC07-10. Is ponded storm water from bermed or containment areas properly disposed of?					
SC07-11. Does the facility/operation have and display a County Hazardous Materials Permit for hazardous materials storage?					
SC07-12. Is an accurate and up-to-date inventory maintained to record materials delivered and stored on site?					

Additional Comments:

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BMPs	N/A	Fully	Partial	Not	Comments
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SC08 - Waste Handling and Disposal	<input type="checkbox"/> Not Applicable at this Facility/Operation
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Identify wastes stored, handled, disposed of or recycled at the facility/operation.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Oil and Grease <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Lubricants <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Anti freeze <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Solvents <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Cleaning Solutions <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Trash <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Other: _____ (I=indoors; O=outdoors)
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SC08-01. Does facility/operation make efforts to reduce amount of waste generated (e.g. use only amount needed, use solvents more than once, practice good inventory control, do not over-buy, purchase long-lasting products, etc.)?					
SC08-02. Are materials recycled whenever possible?					
SC08-03. Is there a designated waste/recycling area with restricted access?					
SC08-04. Are waste/recycling areas located directly in the path of storm drains?					
SC08-05. Is there secondary containment and cover provided for wastes?					
SC08-06. Are wastes that are not contained or covered prevented from contacting storm water run-on and run-off (e.g. by use of berms)?					
SC08-07. Are all dumpsters covered and kept closed and drain holes plugged?					
SC08-08. Are waste collection and storage containers inspected frequently for leaks, spills, compromised structural integrity, and proper closure seal?					
SC08-09. Are employees trained to properly handle and dispose of waste materials?					
SC08-10. Are wastes and recyclable materials stored in appropriate containers, segregated, and properly labeled?					
SC08-11. Are wastes characterized, where appropriate, and properly disposed of?					
SC08-12. Does facility/operation make efforts to prevent overflow of waste containers by timely pickup/service and removal?					
SC08-13. Is dumpster cleaning performed in designated areas that are bermed to contain wash water? Are all collected fluids properly disposed of or discharged to the sanitary sewer?					
SC08-14. Does facility/operation track waste generated, stored, and disposed?					

Additional Comments:

BMPs	N/A	Fully	Partial	Not	Comments
SC09 - Building and Grounds Maintenance <input type="checkbox"/> Not Applicable at this Facility/Operation					
Identify significant materials used in/produced by building and grounds maintenance.	<input type="checkbox"/> Oil and Grease <input type="checkbox"/> Pesticides/Herbicides/Fertilizers <input type="checkbox"/> Sediment <input type="checkbox"/> Landscape Wastes <input type="checkbox"/> Other:				
SC09-01. Have all areas of exposed soil been treated to prevent erosion (e.g. landscaped, re-vegetated, or contain erosion or sediment controls)?					
SC09-02. Are all landscaped areas being weeded by hand?					
SC09-03. Are integrated pest management methods implemented? Is the use of pesticides, herbicides, and fertilizers minimized, and are they used according to directions?					
SC09-04. Are temporary BMPs such as portable booms and vacuum trucks used to contain water from outdoor building or structure wash down activities? Is all waste water collected and properly disposed of through a permitted connection to the sanitary sewer?					
SC09-05. Are grass trimmings, leaves, sticks, or other collected vegetation being disposed as garbage, to a permitted landfill, or being composted?					
SC09-06. Is stockpiled materials placed away from watercourses and drainage inlets? Are stockpiles being bermed or covered to prevent material release?					
SC09-07. Is spilled fertilizer being cleaned up on sidewalks or pavement before application of irrigation water?					

Additional Comments:

BMPs	N/A	Fully	Partial	Not	Comments
SC10 - Employee Training <input type="checkbox"/> Not Applicable at this Facility/Operation					
SC10-01. Is the facility/operation SWMP/SWPPP up to date, including completion of amendment pages?					
SC10-02. Have employees and contractors been trained on storm water pollution prevention education covering all storm water issues, implementation and effectiveness of BMPs, spill prevention and cleanup, hazardous materials management, right-to-know awareness, and SWMP or SWPPP implementation?					
SC10-03. Are any additional training programs in place (e.g. Spill Prevention Control and Countermeasure (SPCC) Plan implementation, the prohibition on cross-connections between sanitary sewers and storm drains, and contractor responsibility to comply with adopted BMPs)?					
SC10-04. Does facility/operation have current training records of employees that have participated in the storm water pollution prevention education program and other related training programs?					
Additional Comments: 					
BMPs	N/A	Fully	Partial	Not	Comments
SC11 - Lavatory Service Operation <input type="checkbox"/> Not Applicable at this Facility/Operation					
Identify significant materials at the facility/operation associated with lavatory service operations.	<input type="checkbox"/> Lavatory Chemicals <input type="checkbox"/> Lavatory Waste <input type="checkbox"/> Lavatory Truck Wash Water <input type="checkbox"/> Other:				
SC11-01. Are triturator facilities covered and bermed with low roll-over type berms?					
SC11-02. Are triturator facilities located directly in the path of storm drains?					
SC11-03. Are all hoses and fittings used for transferring lavatory waste regularly inspected and all equipment kept in good condition?					
SC11-04. Are absorbent booms, spill kits, and other containment equipment present on lavatory service equipment and at the triturator facility?					
SC11-05. Are all mixing and transfers of surfactants and disinfectants performed within the covered and bermed triturator area or under a cover?					

SC11-06. Are drip pans used when draining aircraft lavatory systems? Is collected drippage immediately dumped into the bulk storage tank on the lavatory service cart or lavatory service truck?					
SC11-07. Are all spills of lavatory wastes and lavatory chemicals immediately cleaned and properly disposed of at the triturator facility?					
SC11-08. Are all hoses, valves, and equipment secured when transporting lavatory waste?					
SC11-09. Are lavatory truck cleanouts/backflushing and lavatory waste discharging to sanitary sewer connections performed ONLY at triturator facilities?					
SC11-10. Are all hoses drained completely?					
SC11-11. Does lavatory service cart or truck have spill prevention equipment installed?					
SC11-12. Are temporary sanitary facilities have secondary containment and is located away from watercourses, drainage facilities, traffic circulation, and high wind areas?					
SC11-13. Are temporary sanitary facilities regularly inspected for leaks and spills? Are temporary sanitation facilities being cleaned or replaced from inspections of leaks and spills?					

Additional Comments:

BMPs	N/A	Fully	Partial	Not	Comments
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SC12 - Outdoor Washdown/Sweeping,

Not Applicable at this Facility/Operation

SC12-01. Is sweeping and scrubbing equipment regularly inspected and maintained to ensure effectiveness at removing pollutants and to avoid leaks?					
SC12-02. Are roads, ramp areas, apron areas and if feasible, runway/taxiway areas swept regularly?					
SC12-03. Is sweeping performed during dry weather using dry sweeping techniques where feasible?					
SC12-04. Are sweepers operated at manufacturer-recommended optimal speeds?					
SC12-05. Are debris and sediment from sweeping properly disposed of?					

SC12-06. Are outdoor washdown areas bermed to contain the wash water and to prevent run-on to adjacent areas?					
SC12-07. Is the amount of water used during outdoor washdown activities minimized?					
SC12-08. Is wash water collected and discharged to the sanitary sewer system through a permitted connection at designated and approved discharge facilities (i.e. dewatering bin)?					
SC12-09. Does facility maintain records of the sweeping or scrubbing activities including the miles swept or scrubbed and the amount of waste collected?					
SC12-10. Is reclaimed water being used for washdowns and scrubbing activities when possible?					

Additional Comments:

BMPs	N/A	Fully	Partial	Not	Comments
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SC13 - Fire Fighting Foam Discharge

Not Applicable at this Facility/Operation

Identify significant materials at the facility/operation associated with testing fire fighting equipment.

Aircraft Fire Fighting Foam Other:

SC13-01. Are fire fighting foam discharge/testing areas located directly in the path of storm drains?					
SC13-02. Is fire fighting equipment regularly inspected and tested?					
SC13-03. Is there a designated fire fighting foam testing area that captures or diverts all foam waste to a structural treatment control, sanitary sewer, or dead end sump with pump?					
SC13-04. Are sump(s) and/or oil water separator(s) serviced regularly?					
SC13-05. Are fire fighting foam testing areas prevented from contacting storm water run-on and run-off or from reaching storm drains (e.g. by the use of berms or sandbags)?					

Additional Comments:

BMPs	N/A	Fully	Partial	Not	Comments
SC14 - Potable Water System Flushing <input type="checkbox"/> Not Applicable at this Facility/Operation					
Identify significant materials used at the facility/operation, associated with aircraft potable water system flushing and water truck cleaning/flushing.	<input type="checkbox"/> Purine <input type="checkbox"/> Chlorine Bleach <input type="checkbox"/> Other:				
SC14-01. Are the aircraft potable water system or water truck cleaning/flushing areas located directly in the path of storm drains or surface pollutants?					
SC14-02. Is there a designated cleaning/flushing area that captures or diverts all wastewater away from storm drains, or to a structural treatment control, sanitary sewer or dead end sump with pump?					
SC14-03. Are cleaning/flushing areas prevented from contacting stormwater run-on and run-off (e.g. by the use of berms)?					
Additional Comments: 					
BMPs	N/A	Fully	Partial	Not	Comments
SC15 - Runway Rubber Removal <input type="checkbox"/> Not Applicable at this Facility/Operation					
Identify significant materials generated by runway rubber removal activities.	<input type="checkbox"/> Rubber Particles <input type="checkbox"/> Dirt Particles <input type="checkbox"/> Other:				
SC15-01. Is the amount of water used during runway rubber removal activities minimized?					
SC15-02. Is the waste water produced from runway rubber removal activities prevented from entering the storm drainage system by immediately collecting and properly disposing of it?					
SC15-03. Are manual or mechanical cleaning methods (e.g. mechanical street sweepers) used to remove rubber particulates from the runway and adjacent paved areas following runway rubber removal activities?					
SC15-04. Are storm drain inlets, catch basins, and runway drainage areas inspected following runway rubber removal activities for any resulting debris? Is debris removed and properly disposed of?					

Additional Comments:

BMPs	N/A	Fully	Partial	Not	Comments
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SC16 - Parking Lots

Not Applicable at this Facility/Operation

SC16-01. Are parking lots posted with "No Littering" signs and have regularly emptied trash receptacles?					
SC16-02. Are all parking lot areas swept regularly and accumulated debris and sediment removed?					
SC16-03. Are sweepers operated at manufacturer-recommended optimal speeds?					
SC16-04. Is sweeping in parking lot areas performed when the number of parked vehicles is lowest to maximize areas swept?					
SC16-05. Does facility maintain records of the sweeping activities including the miles swept and the amount of waste collected?					
SC16-06. Are oily spots from parking lot surfaces cleaned with absorbent materials?					
SC16-07. Are repairs to parking lot surfaces performed during periods of dry weather?					
SC16-08. Are nearby storm drain inlets, catch basins, and manholes covered and sealed during parking lot repairs?					
SC16-09. Are drip pans and absorbent materials used to catch and collect drips and leaks from paving equipment that is not in use?					
SC16-10. Are hot bituminous materials used for parking lot repairs preheated and transferred or loaded away from storm drain inlets?					
SC16-11. Are used absorbent materials, debris, and collected drips properly disposed of?					
SC16-12. Does facility make efforts to avoid draining rooftop downspout drains onto paved parking lot surfaces?					
SC16-13. Is waste materials generated from parking lot repairs being removed by sweeping, vacuum, or other dry methods? Is the collection of removed pavement material being done by mechanical or manual methods?					
SC16-14. Are waste materials and debris from parking lot repairs being stored in containers or in stockpiles with a cover and berm around it and is away from storm drain inlets?					

Additional Comments:

BMPs	N/A	Fully	Partial	Not	Comments
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SC17 - Drainage System Maintenance

Not Applicable at this Facility/Operation

SC17-01 Are storm drains stenciled with "No Dumping" messages?					
SC17-02. Does facility/operation conduct routine self-inspections of the storm water drainage system? Does the Authority inspect the entire MS4 at least annually, between the dates of May 1 and September 30?					
SC17-03. Are appropriate measures taken to prevent discharge during MS4 cleaning and maintenance?					
SC17-04. Does facility clean and maintain storm drain inlets, catch basins, pipes, and other conveyance structures before the wet season and as needed?					
SC17-05. Does facility clear open channels of accumulated litter in a timely manner?					
SC17-06. Does facility properly dispose of all accumulated sediments, contaminants, debris, and waste water from cleaning and maintenance activities?					
SC17-07. Does facility maintain records for all inspections, cleaning, and maintenance including the quantity of waste removed?					

Additional Comments:

BMPs	N/A	Fully	Partial	Not	Comments
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SC18 - Housekeeping

Not Applicable at this Facility/Operation

SC18-01. Does facility/operation regularly perform and document self-inspections and evaluations of the implemented BMPs?					
SC18-02. Is facility/operational area kept clean and orderly?					
SC18-03. Are trash receptacles placed in appropriate locations? Does trash receptacles have covers?					

SC18-04. Does facility sweep all operational areas at least once per week to prevent the accumulation of sediments, debris, and contaminants?					
SC18-05. Are all debris and sediment from sweeping properly disposed of?					
SC18-06. Are significant materials stored in the appropriate containers that are properly sealed and labeled?					
SC18-07. Are significant materials stored within secondary containment?					
SC18-08. Are significant materials stored in a restricted access area?					
SC18-09. Are Material Safety Data Sheets (MSDSs) readily available for all significant materials?					

Additional Comments:

BMPs	N/A	Fully	Partial	Not	Comments
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SC19 - Safer/Alternative Products

Not Applicable at this Facility/Operation

SC19-01. Does facility/operation use alternative products that are "Regionally Accepted" and are identified as non-toxic, less toxic or biodegradable?					
SC19-02. Does facility maximize the purchase and use of products containing recycled materials?					

Additional Comments:

BMPs	N/A	Fully	Partial	Not	Comments
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SC20 – Erodible Areas

Not Applicable at this Facility/Operation

Identify significant materials at the facility/operation associated with erodible areas.	<input type="checkbox"/> Sediments <input type="checkbox"/> Other:				
SC20-01. Does facility/operation minimize operation on erodible areas?					
SC20-02. Is the natural vegetation being preserved?					
SC20-03. Are loose soils and slopes stabilize by re-vegetation or non-vegetation stabilization methods prior to a forecast storm event?					

SC20-04. Are erodible areas being spray down with water or environmentally benign dust suppressants until stabilization is reached?

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Additional Comments:

BMPs	N/A	Fully	Partial	Not	Comments
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SC21 – Construction Repair/Remodel Not Applicable at this Facility/Operation

Identify significant materials at the facility/operation associated with construction activity.

Asphalt Basic Materials Concrete Construction Material Debris
 Floatables Fuel Metals Oil and Grease Paint Sediments
 Sealants Septic Wastes Solvents Suspended Solids Trash
 Synthetic Organics Vehicle Fluids Other:

SC21-01. Are outdoor repairs and construction being done during rain events or during any period the National Weather Service is forecasting 50% chance of rain?					
SC21-02. Are inactive areas stabilized with temporary vegetation or non-vegetation stabilization methods?					
SC21-03. Is traffic limited to stabilized roadways within the site? Is traffic volume and activity limited on erodible areas with a speed limit of 15 miles per hour?					
SC21-04. Is there perimeter control and runoff/runoff controls in place? Are silt fences, fiber rolls, or gravel bags being used for perimeter control and runoff/runoff control?					
SC21-05. Are inlets protected? Are they protected with gravel bags, fiber rolls, or spill mats or pads?					
SC21-06. Are streets or paved areas swept of any loose dirt?					
SC21-07. Is there a stabilized construction entrance?					
SC21-08. Is containment pallets, buildings, or garages being used to store materials? Are chemicals stored indoors or in watertight containers on secondary containment? Are erodible landscape material on pallets and covered when not in use? Are fertilizers and landscaped materials contained when not in use?					
SC21-09. Is erodible landscape material being applied within 2 days prior to or during a forecasted rain event?					

SC21-10. Are materials and waste stockpiles covered and protected when not actively being used and prior to a forecasted rain event? Are stockpiles near inlets or drainage courses? Are "cold mix" asphalt, dry-powder concrete, treated wood, and basic materials stockpiles also laying ontop of plastic or other relevant material?

SC21-11. Are waste containers covered at the end of each work day and when its raining? Is there a sufficient amount of litter receptacles and waste containers to handle the amount of trash and debris generated onsite? Is the trash generated on site picked up daily? Is the soild waste properly being disposed?

SC21-12. Is lining or drop cloths being used properly during outdoor painting, scraping, and sandblasting work? Are paint mixing activities being performed indoors or in contained areas?

SC21-13. Are paintbrushes and paint tools being cleaned in a contained area away from soil, watercourses, and drainage systems? Is wastewater and excess oil-based paints and sludge being properly disposed?

SC21-14. Are concrete washout areas in designated areas away from inlets and drainage courses? Are concrete washout areas properly constructed and maintained?

SC21-15. Are temporary sanitation facilities have secondary containment and located away from watercourses, drainage facilities, and traffic circulation? Are they regularly inspected for leaks and spills and cleaned up or replaced when necessary? Are they secured from overturning from high winds?

SC21-16. Is the minimum amount of water necessary being achieved to perform tasks? Are water hoses equipped with positive shut-off valves or nozzles?

SC21-17. Is saw-cut slurry from concrete or pavement cutting operation being removed by shovel, sweeping, or vacuum? Is the inlets covered or barricaded during saw cutting? Is pavement material being removed by manual or mechanical methods? Is temporary perimeter controls in place during sealing operations until the structure is stabilized? Is the paving equipment parked over plastic on impervous surface to prevent soil contamination? Is hot bituminous material being pre-heated, transferred, or loaded near inlets or drainage courses? Is seal coat, tack coat, slurry seal, or fog seal applied or will go through its curing process when rainfall is predicted?

SC21-18. Are equipment and vehicles cleaned offsite or at designated areas with berms and sump to capture and properly dispose of washwater? Are the designated area away from inlets and drainage courses?					
SC21-19. Are equipment and vehicles in good working condition and have drip protection available? Are equipment and vehicles being used at designated areas for storage, fueling, and maintenance which are away from inlets and drainage courses?					
SC21-20. Is water being directed away from inlets and drainage courses during blasting or concrete curing operations? Is water being directed towards collection areas for infiltration or removal during blasting operations? Is water being directed towards concrete washout areas during concrete curing operations?					
SC21-21. Is debris from sandblasting being swept or vacuum up at the end of each shift?					

Additional Comments:

BMPs	N/A	Fully	Partial	Not	Comments
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SR01 - Spill Prevention, Control and Clean up

Not Applicable at this Facility/Operation

SR01-01. Does facility/operation have current Spill Prevention, Control, and Countermeasure (SPCC) Plan or facility spill prevention and response procedures, where required?					
SR01-02. Does facility/operation post a summary of the SPCC Plan, or spill response procedures, at key locations, identifying the spill cleanup coordinators, location of cleanup equipment, and phone numbers of regulatory agencies to be contacted in the event of a spill?					
SR01-03. Are relevant employees and contractors trained in the implementation of the SPCC Plan, if applicable, or spill control procedures?					
SR01-04. Are leak and spill prevention devices used?					
SR01-05. Are adequate spill kits placed in appropriate locations?					

SR01-06. In the event of a spill, does facility notify Airport Operations (619-400-2710), the Airport Authority Environmental Affairs Department (619-400-2784), and any agencies or companies identified in the SPCC or facility spill prevention and response procedures?					
SR01-07. In the event of a spill or release, does facility immediately follow procedures identified in the SPCC or facility spill prevention and response procedures?					
SR01-08. Does facility use only dry cleaning methods?					
SR01-09. Are all used spill control and clean-up materials properly disposed of?					
SR01-10. Is waste water from washing activities captured by vacuum and properly disposed of, or diverted to a structural treatment control, sanitary sewer, or dead end sump with pump?					

Additional Comments:

BMPs	N/A	Fully	Partial	Not	Comments
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TC 01 - Structural Treatment Control BMPs Not Applicable at this Facility/Operation

Identify each structural treatment control BMP currently implemented at this facility/operation.

Detention Basin TC-22		Vegetated Buffer Strip TC-31		Infiltration Trench TC-10	
Wet Pond TC-20		Harvest and Reuse TC-12		Infiltration Basin TC-11	
Constructed Wetland TC-21		Bioretention TC-32		Water Quality Inlet TC-50	
Vegetated Swale TC-30		Media Filter TC-40		Multiple Systems TC-60	
Biotreatment MP-20		Stormwater Filter MP-40		Wet Vault MP-50	
Gravity Separator MP-51		Drain Inlet Insert MP-52			

Other

TC01-01. Does facility regularly inspect, clean, and maintain all structural treatment control BMPs to prevent the accumulation or resuspension of oil, grease, floating debris and sediments?					
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TC01-02. During cleaning operations, are all effluent valves at the treatment control device closed, all standing water properly disposed of, and all accumulated waste removed? Are oil absorbent pads in the treatment control device replaced prior to the start of the wet season and as needed?

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TC01-03. Are records for all inspections, cleaning, and maintenance of structural treatment control BMPs documented and maintained?

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TC01-04. Is an annual inventory of all structural treatment control BMPs performed?

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Additional Comments:

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Photos: Y N

Immediate "Action Items" Identified: Y N

CASQA FORMS

Visual Observation Log - Monthly	
Date and Time of Inspection:	Report Date:
Facility Name:	
Weather	
Antecedent Conditions (last 48 hours):	Current Weather:
NSWD Observations	
Were any authorized non-stormwater discharges observed?	Yes <input type="checkbox"/> No <input type="checkbox"/>
Were any unauthorized non-stormwater discharges observed?	Yes <input type="checkbox"/> No <input type="checkbox"/>
If yes to either, identify source:	
Outdoor Industrial Equipment and Storage Area Observations	
Complete Monthly BMP Inspection Report	Yes <input type="checkbox"/> No <input type="checkbox"/>
Drainage Area 1:	Were any deficiencies or any other potential source of industrial pollutants observed? Yes <input type="checkbox"/> No <input type="checkbox"/>
Drainage Area 2:	Were any deficiencies or any other potential source of industrial pollutants observed? Yes <input type="checkbox"/> No <input type="checkbox"/>
Drainage Area 3:	Were any deficiencies or any other potential source of industrial pollutants observed? Yes <input type="checkbox"/> No <input type="checkbox"/>
If yes to any, describe:	
Exception Documentation (explanation required if inspection could not be conducted).	
Inspector Information	
Inspector Name:	Inspector Title:
Signature:	Date:

Visual Observation Log – Sampling Events			
Date and Time of Inspection:		Report Date:	
Facility Name:			
Weather			
Antecedent Conditions (last 48 hours):		Weather:	
Precipitation Total:		Predicted % chance of rain:	
Estimate storm beginning: _____	Estimate storm duration: _____	Estimate time since last storm: _____	Rain gauge reading: _____
(date and time)	(hours)	(days or hours)	(inches)
Sampling Event Observations			
Observations: If yes identify location and observe drainage area to identify probable cause			
Odors	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Floating material	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Suspended Material	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Sheen	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Discolorations	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Turbidity	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
NSWD Observations			
Were any authorized non-stormwater discharges observed?		Yes <input type="checkbox"/>	No <input type="checkbox"/>
Were any unauthorized non-stormwater discharges observed?		Yes <input type="checkbox"/>	No <input type="checkbox"/>
If yes to either, identify source			
Drainage Area Observations			
Drainage Area		Deficiencies Noted	

Exception Documentation (explanation required if inspection could not be conducted).

--

Inspector Information

Inspector Name:

Inspector Title:

Signature:

Date:

Sampling Log		
Facility Name:	Date:	Time Start:
Sampler Name:		
Field Meter Calibration		
pH Meter ID No./Description:		
Calibration Date/Time:		
Field pH Measurements		
Discharge Location Identifier	pH	Time
Samples Collected		
Discharge Location Identifier	Constituent	Time
	Oil and Grease	
	Total Suspended Solids	
Additional Sampling Notes:		
Time End:		

JRMP ANNUAL REPORT FORM

**JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM
ANNUAL REPORT FORM
FY _____**

I. COPERMITTEE INFORMATION	
Copermittee Name:	
Copermittee Primary Contact Name:	
Copermittee Primary Contact Information:	
Address:	
City:	County:
State:	Zip:
Telephone:	Fax:
	Email:
II. LEGAL AUTHORITY	
Has the Copermittee established adequate legal authority within its jurisdiction to control pollutant discharges into and from its MS4 that complies with Order No. R9-2013-0001?	YES <input type="checkbox"/> NO <input type="checkbox"/>
A Principal Executive Officer, Ranking Elected Official, or Duly Authorized Representative has certified that the Copermittee obtained and maintains adequate legal authority?	YES <input type="checkbox"/> NO <input type="checkbox"/>
III. JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM DOCUMENT UPDATE	
Was an update of the jurisdictional runoff management program document required or recommended by the San Diego Water Board?	YES <input type="checkbox"/> NO <input type="checkbox"/>
If YES to the question above, did the Copermittee update its jurisdictional runoff management program document and make it available on the Regional Clearinghouse?	YES <input type="checkbox"/> NO <input type="checkbox"/>
IV. ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM	
Has the Copermittee implemented a program to actively detect and eliminate illicit discharges and connections to its MS4 that complies with Order No. R9-2013-0001?	YES <input type="checkbox"/> NO <input type="checkbox"/>
Number of non-storm water discharges reported by the public	
Number of non-storm water discharges detected by Copermittee staff or contractors	
Number of non-storm water discharges investigated by the Copermittee	
Number of sources of non-storm water discharges identified	
Number of non-storm water discharges eliminated	
Number of sources of illicit discharges or connections identified	
Number of illicit discharges or connections eliminated	
Number of enforcement actions issued	
Number of escalated enforcement actions issued	
V. DEVELOPMENT PLANNING PROGRAM	
Has the Copermittee implemented a development planning program that complies with Order No. R9-2013-0001?	YES <input type="checkbox"/> NO <input type="checkbox"/>
Was an update to the BMP Design Manual required or recommended by the San Diego Water Board?	YES <input type="checkbox"/> NO <input type="checkbox"/>
If YES to the question above, did the Copermittee update its BMP Design Manual and make it available on the Regional Clearinghouse?	YES <input type="checkbox"/> NO <input type="checkbox"/>
Number of proposed development projects in review	
Number of Priority Development Projects in review	
Number of Priority Development Projects approved	
Number of approved Priority Development Projects exempt from any BMP requirements	
Number of approved Priority Development Projects allowed alternative compliance	
Number of Priority Development Projects granted occupancy	
Number of completed Priority Development Projects in inventory	
Number of high priority Priority Development Project structural BMP inspections	
Number of Priority Development Project structural BMP violations	
Number of enforcement actions issued	
Number of escalated enforcement actions issued	

**JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM
ANNUAL REPORT FORM**

FY _____

VI. CONSTRUCTION MANAGEMENT PROGRAM

Has the Copermittee implemented a construction management program that complies with Order No. R9-2013-0001? YES
NO

Number of construction sites in inventory	
Number of active construction sites in inventory	
Number of inactive construction sites in inventory	
Number of construction sites closed/completed during reporting period	
Number of construction site inspections	
Number of construction site violations	
Number of enforcement actions issued	
Number of escalated enforcement actions issued	

VII. EXISTING DEVELOPMENT MANAGEMENT PROGRAM

Has the Copermittee implemented an existing development management program that complies with Order No. R9-2013-0001? YES
NO

	Municipal	Commercial	Industrial	Residential
Number of facilities or areas in inventory				
Number of existing development inspections				
Number of follow-up inspections				
Number of violations				
Number of enforcement actions issued				
Number of escalated enforcement actions issued				

VIII. PUBLIC EDUCATION AND PARTICIPATION

Has the Copermittee implemented a public education program component that complies with Order No. R9-2013-0001? YES
NO

Has the Copermittee implemented a public participation program component that complies with Order No. R9-2013-0001? YES
NO

IX. FISCAL ANALYSIS

Has the Copermittee attached to this form a summary of its fiscal analysis that complies with Order No. R9-2013-0001? YES
NO

X. CERTIFICATION

I Principal Executive Officer Ranking Elected Official Duly Authorized Representative] certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature

Date

Print Name

Title

Telephone Number

Email

INDUSTRIAL ANNUAL REPORT FORM

Placeholder for Industrial Annual Report Form

MS4 OUTFALL VISUAL OBSERVATION FIELD DATA SHEETS



MS4 Outfall Visual Observation Field Datasheet

New Site? Yes No

Source Investigation Follow-up for _____

General Site Description

Site ID				Site Type		Sample Event ID	
Location						Sample Event Type	
Date	Time		Latitude	° N (NAD83)		HU	
Staff	TB Guide		Longitude	° W (NAD83)		HSA	

Historical Outfall Dry Weather Flow Info: Unknown Persistent Transient Dry

Conveyance (Check one only) Concrete Channel Natural Creek Earthen Channel Manhole Outfall Other _____

Flow Status Flowing Ponded Tidal Dry

Flow Reaches Receiving Water? Yes No

Non-Stormwater Flow Source? Yes No Unknown

Evidence of Obvious IC/ID?* Odor Color High Flow
*Requires immediate follow-up

Outfall Structural Condition
 Normal
 Damaged
 Scour Pond
 Blockage

Potential Source Ground Water Irrigation Runoff Permitted Discharge
 Vehicle Washing Power Washing Pool/Spa Discharge Water Line Break
Unknown Tidal Other _____

Was Flow Source Eliminated? Yes No
Notes: _____

Weather Clear Partly Cloudy Overcast Fog
Last Rain > 72 hours < 72 hours but ≤ 0.1"
Tide N/A Low Incoming High Outgoing Tide Height _____ ft.

Observations

Odor	<input type="checkbox"/> None	<input type="checkbox"/> Sewage	<input type="checkbox"/> Sulfides	<input type="checkbox"/> Petroleum	<input type="checkbox"/> Manure	<input type="checkbox"/> Other
Color	<input type="checkbox"/> None	<input type="checkbox"/> Yellow	<input type="checkbox"/> Brown (Silty)	<input type="checkbox"/> White (Milky)	<input type="checkbox"/> Gray	<input type="checkbox"/> Other
Clarity	<input type="checkbox"/> Clear	<input type="checkbox"/> Cloudy(<4" vis)	<input type="checkbox"/> Murky(>4" vis)			<input type="checkbox"/> Other
Floatables	<input type="checkbox"/> None	<input type="checkbox"/> Trash	<input type="checkbox"/> Bubbles/Foam	<input type="checkbox"/> Sheen <input type="checkbox"/> Algae	<input type="checkbox"/> Biofilm	<input type="checkbox"/> Other
Deposit	<input type="checkbox"/> None	<input type="checkbox"/> Coarse Particulate	<input type="checkbox"/> Fine Particulate	<input type="checkbox"/> Stains/Minerals	<input type="checkbox"/> Oily Deposit	<input type="checkbox"/> Other
Vegetation	<input type="checkbox"/> None	<input type="checkbox"/> Limited	<input type="checkbox"/> Normal	<input type="checkbox"/> Excessive		<input type="checkbox"/> Other
Biology	<input type="checkbox"/> None	<input type="checkbox"/> Insects	<input type="checkbox"/> Algae	<input type="checkbox"/> Snails	<input type="checkbox"/> Fish	<input type="checkbox"/> Birds <input type="checkbox"/> Cray Fish <input type="checkbox"/> Other

MS4 Outfall Flow Estimate

Width	ft
Depth	ft
Velocity	ft/sec
Length of Ponded Area	ft

Flowing Pipe Diameter _____ ft. Depth _____ ft. Velocity _____ ft/sec
Bottle Fill Volume _____ ml Time to Fill _____ seconds
Leaf Float Distance _____ ft. Time _____ seconds
Estimated Flow Rate _____ cfs gpm

Trash Present? Yes No **Trash Assessment** High (>400 pieces) Medium (50 to 400 pieces) Low (<50 pieces)
Evidence of Illegal Dumping Yes No **Evidence of Illegal Connection** Yes No
Accessibility Easy Moderate Difficult Critical Habitat

Comments:



**COUNTY OF SAN DIEGO
WATERSHED PROTECTION PROGRAM**

**DEPARTMENT OF PUBLIC WORKS
5510 OVERLAND AVE., SUITE 410
SAN DIEGO, CA 92123**

Site Type: VOM (Visual Outfall Monitoring) – For sites that are within the visual outfall monitoring program.
A, B, C, D... (Source Investigation) – For locations that are aimed at source follow-up investigations.

Sample Event Type: Visual Observation
Confirmation
Source Investigation
Duplicate
Blank
Lab Standard

Watersheds

Hydro. Unit	Watershed
902	Santa Margarita River
903	San Luis Rey River
904	Carlsbad Management Area
905	San Dieguito River
906	Los Penasquitos
907	San Diego River
908	Pueblo San Diego
909	Sweetwater River
910	Otay River
911	Tijuana River

DRY WEATHER MONITORING FIELD DATA SHEET



Dry Weather Monitoring Field Datasheet

New Site? Yes No

IC/ID Follow-up for _____

GENERAL SITE DESCRIPTION

Site ID		Site Type		Sample Event ID		Sample Event Type		
Location						Watershed	Hydrologic Unit	
Date		Time		Latitude	° N		Hydrologic Area	
Field Staff		Thomas Guide		Longitude	° W		Hydrologic Subarea	

QC Sample None Original Duplicate Blank Split Lab Standard

Land Use (Primary) (Check one only) Residential Rural Resid. Commercial Industrial Agriculture Parks Open

Land Use (Secondary) (Optional, >10%) Residential Rural Resid. Commercial Industrial Agric. Parks Open None

Conveyance (Check one only) Concrete Channel Natural Creek Earthen Channel Manhole Catch Basin Outlet Curb/Gutter

WATER FLOW Flowing Ponded Dry

REFERRED FOR _____

GENERAL CONDITION

Weather Sunny Partly Cloudy Overcast Fog **Last Rain** > 72 hours < 72 hours
 None ≤ 0.1 inches

OBSERVATIONS N/A

Odor	<input type="checkbox"/> None	<input type="checkbox"/> Musty	<input type="checkbox"/> Rotten Eggs	<input type="checkbox"/> Chemical	<input type="checkbox"/> Sewage	<input type="checkbox"/> Other
Color	<input type="checkbox"/> None	<input type="checkbox"/> Yellow	<input type="checkbox"/> Brown (Silty)	<input type="checkbox"/> White (Milky)	<input type="checkbox"/> Gray	<input type="checkbox"/> Other
Clarity	<input type="checkbox"/> Clear	<input type="checkbox"/> Slightly Cloudy	<input type="checkbox"/> Opaque			<input type="checkbox"/> Other
Floatables	<input type="checkbox"/> None	<input type="checkbox"/> Trash	<input type="checkbox"/> Bubbles/Foam	<input type="checkbox"/> Sheen	<input type="checkbox"/> Algae	<input type="checkbox"/> Fecal Matter <input type="checkbox"/> Other
Deposit	<input type="checkbox"/> None	<input type="checkbox"/> Coarse Particulate	<input type="checkbox"/> Fine Particulate	<input type="checkbox"/> Stain	<input type="checkbox"/> Oily Deposit	<input type="checkbox"/> Other
Vegetation	<input type="checkbox"/> None	<input type="checkbox"/> Limited	<input type="checkbox"/> Normal	<input type="checkbox"/> Excessive		<input type="checkbox"/> Other
Biology	<input type="checkbox"/> None	<input type="checkbox"/> Insects	<input type="checkbox"/> Algae	<input type="checkbox"/> Snails	<input type="checkbox"/> Fish	<input type="checkbox"/> Birds <input type="checkbox"/> Cray Fish <input type="checkbox"/> Other

FLOW MEASUREMENT N/A

Flowing Creek		Average
Width		ft
Depth		ft
Velocity		ft/sec (enter 0 if water is ponded)
Length of Ponded Area		ft

Evidence of Overland Flow? Yes No Irrigation Runoff
 Other _____

Outlet Diameter _____ Liters/Second _____

Leaf Float Distance _____ ft Time _____ sec

FIELD MEASUREMENT N/A

Horiba Meter: In Stream In Bucket Agitated (DO)

Sample Filtered for Test Kits? Yes No
Analytical Lab Sample Collected? Yes No

Parameter	Reading	Parameter	Reading	Parameter	1 st Reading	Dil. Factor	Dil. Reading	Final
pH (Unit)		DO (mg/L)		Phosphate (PO ₄)	mg/L			
Cond. (mS/cm)		Temp (°C)		Nitrate (NO ₃)				
Turb. (NTU)		Salinity (%)		Ammonia (NH ₃ -N)				
TDS (g/L)				MBAS				

COMMENTS: _____

Completed by _____



SiteType: DWM (Dry weather monitoring) – For sites that are within dry weather monitoring programs.
A, B, C, D... (IC/ID investigation) – For stations that are aimed at IC/ID follow-up investigations.

EventType: Field Screening
Confirmation
Source ID
Duplicate
Blank
Lab Standard

Action Levels

Field Screening Analyte	Action Level
pH	<6.5 or >9.0
Orthophosphate-P (mg/L)	2.0 (6.0 PO₄)
Nitrate-N (mg/L)	10.0 (44.3 NO₃)
Ammonia-N (mg/L)	1.0
MBAS	1.0
Turbidity (NTU)	B.P.J.
Temperature (°C)	B.P.J.
Conductivity (µS/cm)	B.P.J.

Laboratory Analyte	Action Level
Oil and Grease (mg/L)	15
Diazinon & Chlorpyrifos (µg/L)	0.5
Dissolved Cd, Cu, Pb, Zn (µg/L)	C.T.R.
Total Coliform (MPN/100 mL)	130,000
Fecal Coliform (MPN/100 mL)	13,000
Enterococcus (MPN/100 mL)	7,000

Watersheds

Hydro. Unit	Watershed
902	Santa Margarita River
903	San Luis Rey River
904	Carlsbad Management Area
905	San Dieguito River
907	San Diego River
909	Sweetwater River
910	Otay River
911	Tijuana River

Land Use Types

- Residential**
Single-family and multi-family homes, mobile home parks, etc.
- Rural Residential**
Single-family homes located in rural areas with lot sizes of approximately 1 to 10 acres. Rural residential estates may have small orchards, fields or small storage buildings associated with the residential dwelling unit, etc.
- Commercial**
Offices, schools, shopping centers, auto dealerships, government/civic centers, cemeteries, churches, libraries, post offices, fire/police stations, military use, jails, prisons, border patrol holding stations, dormitories, hotels, motels, resorts, and casinos, etc.
- Agricultural**
Orchards, vineyards, nurseries, greenhouses, flower fields, dairies, livestock, poultry, equine ranches, row crops and grains, pasture, fallow, etc.
- Industrial**
Shipbuilding, airframe, aircraft manufacturing, industrial parks, manufacturing uses such as lumber, furniture, paper, rubber, stone, clay, and glass; auto repair services/recycling centers; warehousing, wholesale trade; mining, sand and gravel extraction, salt evaporation; junkyard, dumps/landfills; auto wrecking/dismantling and recycling centers, etc.
- Parks**
Recreation areas and centers, neighborhood parks, wildlife and nature preserves, golf courses, accessible sandy areas along the coast or major water bodies allowing swimming and picnicking, etc.
- Open**
Vacant and undeveloped lands, etc.

EXAMPLE COCs



SIERRA ANALYTICAL

TEL: 949 • 348 • 9389

FAX: 949 • 348 • 9115

26052 Merit Circle • Suite 105 • Laguna Hills, CA • 92653

CHAIN OF CUSTODY RECORD

Date: ___/___/___

Page: ___ of ___

Lab Work Order No.: _____

Client: _____

Client Project ID: _____

Client Address: _____

Client Tel. No.: _____

Client Fax. No.: _____

Client Proj. Mgr.: _____

Analyses Requested

Table with 15 columns for recording analyses requested.

Geotracker EDD Info: _____

Client LOGCODE _____

Site Global ID _____

Field Point Names / Comments _____

Turn Around Time Requested: Immediate, 24 Hour, 48 Hour, 72 Hour, 4 Day, 5 Day, Normal, Mobile.

Main data table with columns: Client Sample ID, Sierra No., Date, Time, Matrix, Preservative, Container Type, No. of Containers.

1 Sampler Signature: _____ Shipped Via: _____

Printed Name: _____ (Carrier/Waybill No.) _____

2 Relinquished By: _____ Date: _____ Received By: _____ Date: _____

Company: _____ Time: _____ Company: _____ Time: _____

3 Relinquished By: _____ Date: _____ Received By: _____ Date: _____

Company: _____ Time: _____ Company: _____ Time: _____

4 Relinquished By: _____ Date: _____ Received By: _____ Date: _____

Company: _____ Time: _____ Company: _____ Time: _____

Special Instructions: _____

Total Number of Containers Submitted to Laboratory

Sample Disposal:

- Return to Client, Lab Disposal *, Archive ___ mos., Other _____

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under SIERRA's Terms and Conditions, unless otherwise agreed upon in writing between SIERRA and CLIENT. * - Samples determined to be hazardous by SIERRA will be returned to CLIENT.

Total Number of Containers Received by Laboratory

FOR LABORATORY USE ONLY - Sample Receipt Conditions:

- Intact, Sample Seals, Properly Labelled, Appropriate Sample Container, Chilled - Temp (°C) _____, Preservatives - Verified By _____, Other _____, Storage Location _____

APPENDIX H
MUNICIPAL PERMIT

Appendix H – Municipal Permit



**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION**

**ORDER NO. R9-2013-0001, AS AMENDED BY ORDER NO. R9-2015-0001
NPDES NO. CAS0109266**

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT
AND WASTE DISCHARGE REQUIREMENTS FOR
DISCHARGES FROM THE MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)
DRAINING THE WATERSHEDS WITHIN THE SAN DIEGO REGION**

The San Diego County Copermittees in Table 1a are subject to waste discharge requirements set forth in this Order.

Table 1a. San Diego County Copermittees

City of Carlsbad	City of Oceanside
City of Chula Vista	City of Poway
City of Coronado	City of San Diego
City of Del Mar	City of San Marcos
City of El Cajon	City of Santee
City of Encinitas	City of Solana Beach
City of Escondido	City of Vista
City of Imperial Beach	County of San Diego
City of La Mesa	San Diego County Regional Airport Authority
City of Lemon Grove	San Diego Unified Port District
City of National City	

~~After the San Diego Water Board receives and considers Ithe Orange County Copermittees' Report of Waste Discharge and makes any necessary changes to this Order, the Orange County Copermittees in Table 1b are will become subject to waste discharge requirements set forth in this Order. -after expiration of Order No. R9-2009-0002, NPDES No. CAS0108740 on or after December 16, 2014.~~

Table 1b. Orange County Copermittees¹

City of Aliso Viejo	City of Rancho Santa Margarita
City of Dana Point	City of San Clemente
City of Laguna Beach	City of San Juan Capistrano
City of Laguna Hills	City of Laguna Woods
City of Laguna Niguel	County of Orange
City of Lake Forest¹	Orange County Flood Control District
City of Mission Viejo	

¹~~While not listed in Table 1b., the City of Lake Forest remains a Copermittee under this Order until the later effective date of this Order or the effective date of Santa Ana Water Board Tentative Order No. R8-2015-0001. Thereafter, the City of Lake Forest will no longer be considered a Copermittee under this Order because its Phase I MS4 discharges will be regulated by the Santa Ana Water Board pursuant to Water Code section 13228 designation. The requirements of this Order that apply to the City of Lake Forest for the duration of this Order, however, are described in Finding 29 and Footnote 2 to Table B-1.~~

After the San Diego Water Board receives and considers the Riverside County Copermittees' Report of Waste Discharge and makes any necessary changes to this Order, the Riverside County Copermittees in Table 1c will become subject to waste discharge requirements set forth in this Order after expiration of Order No. R9-2010-0016, NPDES No. CAS0108766 on or after November 10, 2015.

Table 1c. Riverside County Copermittees

City of Murrieta	County of Riverside
City of Temecula	Riverside County Flood Control and Water Conservation District
City of Wildomar	

The ~~Orange County Copermittees and~~ Riverside County Copermittees may become subject to the requirements of this Order at a date earlier than the expiration date of their current Orders subject to the conditions described in Provision F.6 of this Order if the Riverside County Copermittees ~~in the respective county~~ receive a notification of coverage from the San Diego Water Board.

The term Copermittee in this Order refers to any San Diego County, Orange County, or Riverside County Copermittee covered under this Order, unless specified otherwise.

This Order provides permit coverage for the Copermittee discharges described in Table 2.

Table 2. Discharge Locations and Receiving Waters

Discharge Points	Locations throughout San Diego Region
Discharge Description	Municipal Separate Storm Sewer System (MS4) Discharges
Receiving Waters	Inland Surface Waters, Enclosed Bays and Estuaries, and Coastal Ocean Waters of the San Diego Region

Table 3. Administrative Information

This Order was adopted by the San Diego Water Board on:	May 8, 2013
This Order No. R9-2013-0001 will become <u>became</u> effective on:	June 27, 2013
<u>This Order as amended by R9-2015-0001 became effective on:</u>	April 1, 2015
This Order will expire on:	June 27, 2018
The Copermittees must file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than 180 days in advance of the Order expiration date.	

I, David W. Gibson, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on May 8, 2013, as amended by adoption of Order No. R9-2015-0001 on February 11, 2015.



David W. Gibson
 Executive Officer

TABLE OF CONTENTS

I. FINDINGS

Discharge Characteristics and Runoff Management.....	3
Water Quality Standards.....	6
Considerations Under Federal and State Law	8
State Water Board Decisions.....	12
Administrative Findings.....	13

II. PROVISIONS

A. Prohibitions and Limitations	15
1. Discharge Prohibitions.....	15
2. Receiving Water Limitations	16
3. Effluent Limitations	17
4. Compliance with Discharge Prohibitions and Receiving Water Limitations	17
B. Water Quality Improvement Plans	19
1. Watershed Management Areas	19
2. Priority Water Quality Conditions.....	21
3. Water Quality Improvement Goals, Strategies and Schedules.....	25
4. Water Quality Improvement Monitoring and Assessment Program	32
5. Iterative Approach and Adaptive Management Process	32
6. Water Quality Improvement Plan Submittal, Updates, and Implementation	34
C. Action Levels	35
1. Non-Storm Water Action Levels	35
2. Storm Water Action Levels	38
D. Monitoring and Assessment Program Requirements.....	40
1. Receiving Water Monitoring Requirements	40
2. MS4 Outfall Discharge Monitoring Requirements.....	51
3. Special Studies.....	64
4. Assessment Requirements	66
5. Monitoring Provisions	74
E. Jurisdictional Runoff Management Programs	75
1. Legal Authority Establishment and Enforcement.....	75
2. Illicit Discharge Detection and Elimination.....	76
3. Development Planning	84
4. Construction Management	98
5. Existing Development Management.....	102
6. Enforcement Response Plans	111
7. Public Education and Participation	113
8. Fiscal Analysis.....	114

TABLE OF CONTENTS (Cont'd)

II. PROVISIONS (Cont'd)

F. Reporting	115
1. Water Quality Improvement Plans	115
2. Updates	118
3. Progress Reporting.....	121
4. Regional Clearinghouse	124
5. Report of Waste Discharge	126
6. Application for Early Coverage	126
7. Reporting Provisions	127
G. Principal Watershed Copermittee Responsibilities.....	128
H. Modification of Order.....	129
I. Standard Permit Provisions and General Provisions	131

ATTACHMENTS

Attachment A - Discharge Prohibitions and Special Protections	A-1
Attachment B - Standard Permit Provisions and General Provisions	B-1
Attachment C - Acronyms, Abbreviations and Definitions	C-1
Attachment D - Jurisdictional Runoff Management Program Annual Report Form	D-1
Attachment E - Specific Provisions for Total Maximum Daily Loads Applicable to Order No. R9-2013-0001	E-1
Attachment F - Fact Sheet / Technical Report for Order No. R9-2013-0001 as amended by Order No. R9-2015-0001	F-1

I. FINDINGS

The California Regional Water Quality Control Board, San Diego Region (San Diego Water Board), finds that:

JURISDICTION

- 1. MS4 Ownership or Operation.** Each of the Copermitees owns or operates an MS4, through which it discharges storm water and non-storm water into waters of the U.S. within the San Diego Region. These MS4s fall into one or more of the following categories: (1) a medium or large MS4 that services a population of greater than 100,000 or 250,000 respectively; or (2) a small MS4 that is "interrelated" to a medium or large MS4; or (3) an MS4 which contributes to a violation of a water quality standard; or (4) an MS4 which is a significant contributor of pollutants to waters of the U.S.
- 2. Legal and Regulatory Authority.** This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations (Code of Federal Regulations [CFR] Title 40, Part 122 [40 CFR 122]) adopted by the United States Environmental Protection Agency (USEPA), and chapter 5.5, division 7 of the California Water Code (CWC) (commencing with section 13370). This Order serves as an NPDES permit for discharges from MS4s to surface waters. This Order also serves as waste discharge requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the CWC (commencing with section 13260).

The San Diego Water Board has the legal authority to issue a regional MS4 permit pursuant to its authority under CWA section 402(p)(3)(B) and 40 CFR 122.26(a)(1)(v). The USEPA also made it clear that the permitting authority, in this case the San Diego Water Board, has the flexibility to establish system- or region-wide permits (55 Federal Register [FR] 47990, 48039-48042). The regional nature of this Order will ensure consistency of regulation within watersheds and is expected to result in overall cost savings for the Copermitees and San Diego Water Board.

The federal regulations make it clear that the Copermitees need only comply with permit conditions relating to discharges from the MS4s for which they are operators (40 CFR 122.26(a)(3)(vi)). This Order does not require the Copermitees to manage storm water outside of their jurisdictional boundaries, but rather to work collectively to improve storm water management within watersheds.

- 3. CWA NPDES Permit Conditions.** Pursuant to CWA section 402(p)(3)(B), NPDES permits for storm water discharges from MS4s must include requirements to effectively prohibit non-storm water discharges into MS4s, and require controls to reduce the discharge of pollutants in storm water to the maximum extent practicable (MEP), and to require other provisions as the San Diego Water Board determines are appropriate to control such pollutants. This Order prescribes conditions to assure

compliance with the CWA requirements for owners and operators of MS4s to effectively prohibit non-storm water discharges into the MS4s, and require controls to reduce the discharge of pollutants in storm water from the MS4s to the MEP.

- 4. CWA and CWC Monitoring Requirements.** CWA section 308(a) and 40 CFR 122.41(h),(j)-(l) and 122.48 require that NPDES permits must specify monitoring and reporting requirements. Federal regulations applicable to large and medium MS4s also specify additional monitoring and reporting requirements in 40 CFR 122.26(d)(1)(iv)(D), 122.26(d)(1)(v)(B), 122.26(d)(2)(i)(F), 122.26(d)(2)(iii)(D), 122.26(d)(2)(iv)(B)(2) and 122.42(c). CWC section 13383 authorizes the San Diego Water Board to establish monitoring, inspection, entry, reporting and recordkeeping requirements. This Order establishes monitoring and reporting requirements to implement federal and State requirements. [This Order also includes requirements for the Orange County Copermittees to participate in, and together with South Orange County Wastewater Authority and Orange County Health Care Agency, share responsibility for implementing the unified approach to beach water quality monitoring and assessment program set forth in the October 2014 report, Workgroup Recommendation for a Unified Beach Water Quality Monitoring and Assessment Program in South Orange County, issued pursuant to CWC section 13383 in the San Diego Water Board December 5, 2014 Letter Directive.](#)

- 5. Total Maximum Daily Loads.** CWA section 303(d)(1)(A) requires that “[e]ach state shall identify those waters within its boundaries for which the effluent limitations are not stringent enough to implement any water quality standard applicable to such waters.” The CWA also requires states to establish a priority ranking of impaired water bodies known as Water Quality Limited Segments and to establish Total Maximum Daily Loads (TMDLs) for such waters. This priority list of impaired water bodies is called the Clean Water Act Section 303(d) List of Water Quality Limited Segments, commonly referred to as the 303(d) List. The CWA requires the 303(d) List to be updated every two years.

TMDLs are numerical calculations of the maximum amount of a pollutant that a water body can assimilate and still meet water quality standards. A TMDL is the sum of the allowable loads of a single pollutant from all contributing point sources (waste load allocations or WLAs) and non-point sources (load allocations or LAs), background contribution, plus a margin of safety. Discharges from MS4s are point source discharges. The federal regulations (40 CFR 122.44(d)(1)(vii)(B)) require that NPDES permits incorporate water quality based effluent limitations (WQBELs) developed to protect a narrative water quality criterion, a numeric water quality criterion, or both, consistent with the assumptions and requirements of any available WLA for the discharge. Requirements of this Order implement the TMDLs ~~established~~ ~~adopted~~ by the San Diego Water Board ~~or~~ ~~and~~ ~~approved~~ ~~by~~ USEPA as of the ~~time-date~~ this Order ~~was~~ ~~is~~ ~~issued~~ ~~amended~~ ~~in~~ ~~2015~~. This Order establishes WQBELs consistent with the assumptions and requirements of all available TMDL WLAs assigned to discharges from the Copermittees’ MS4s.

- 6. Non-Storm Water Discharges.** Pursuant to CWA section 402(p)(3)(B)(ii), this Order requires each Copermitee to effectively prohibit discharges of non-storm water into its MS4. Nevertheless, non-storm water discharges into and from the MS4s continue to be reported to the San Diego Water Board by the Copermitees and other persons. Monitoring conducted by the Copermitees, as well as the 303(d) List, have identified dry weather, non-storm water discharges from the MS4s as a source of pollutants causing or contributing to receiving water quality impairments in the San Diego Region. The federal regulations (40 CFR 122.26(d)(2)(iv)(B)(1)) require the Copermitees to have a program to prevent illicit discharges to the MS4. The federal regulations, however, allow for specific categories of non-storm water discharges or flows to be addressed as illicit discharges only where such discharges are identified as sources of pollutants to waters of the U.S.
- 7. In-Stream Treatment Systems.** Pursuant to federal regulations (40 CFR 131.10(a)), in no case shall a state adopt waste transport or waste assimilation as a designated use for any waters of the U.S. Authorizing the construction of a runoff treatment facility within a water of the U.S., or using the water body itself as a treatment system or for conveyance to a treatment system, would be tantamount to accepting waste assimilation as an appropriate use for that water body. Runoff treatment must occur prior to the discharge of runoff into receiving waters. Treatment control best management practices (BMPs) must not be constructed in waters of the U.S. Construction, operation, and maintenance of a pollution control facility in a water body can negatively impact the physical, chemical, and biological integrity, as well as the beneficial uses, of the water body.

DISCHARGE CHARACTERISTICS AND RUNOFF MANAGEMENT

- 8. Point Source Discharges of Pollutants.** Discharges from the MS4s contain waste, as defined in the CWC, and pollutants that adversely affect the quality of the waters of the state. A discharge from an MS4 is a “discharge of pollutants from a point source” into waters of the U.S. as defined in the CWA. Storm water and non-storm water discharges from the MS4s contain pollutants that cause or threaten to cause a violation of surface water quality standards, as outlined in the Water Quality Control Plan for the San Diego Basin (Basin Plan). Storm water and non-storm water discharges from the MS4s are subject to the conditions and requirements established in the Basin Plan for point source discharges.
- 9. Potential Beneficial Use Impairment.** The discharge of pollutants and/or increased flows from MS4s may cause or threaten to cause the concentration of pollutants to exceed applicable receiving water quality objectives and impair or threaten to impair designated beneficial uses resulting in a condition of pollution, contamination, or nuisance.
- 10. Pollutants Generated by Land Development.** Land development has created and continues to create new sources of non-storm water discharges and pollutants in storm water discharges as human population density increases. This brings higher

levels of car emissions, car maintenance wastes, municipal sewage, pesticides, household hazardous wastes, pet wastes, and trash. Pollutants from these sources are dumped or washed off the surface by non-storm water or storm water flows into and from the MS4s. When development converts natural vegetated pervious ground cover to impervious surfaces such as paved highways, streets, rooftops, and parking lots, the natural absorption and infiltration abilities of the land are lost. Therefore, runoff leaving a developed area without BMPs that can maintain pre-development runoff conditions will contain greater pollutant loads and have significantly greater runoff volume, velocity, and peak flow rate than pre-development runoff conditions from the same area.

11. Runoff Discharges to Receiving Waters. The MS4s discharge runoff into lakes, drinking water reservoirs, rivers, streams, creeks, bays, estuaries, coastal lagoons, the Pacific Ocean, and tributaries thereto within the eleven hydrologic units comprising the San Diego Region. Historic and current development makes use of natural drainage patterns and features as conveyances for runoff. Rivers, streams and creeks in developed areas used in this manner are part of the Copermittees' MS4s regardless of whether they are natural, anthropogenic, or partially modified features. In these cases, the rivers, streams and creeks in the developed areas of the Copermittees' jurisdictions are both an MS4 and receiving water. Numerous receiving water bodies and water body segments have been designated as impaired by the San Diego Water Board pursuant to CWA section 303(d).

12. Pollutants in Runoff. The most common pollutants in runoff discharged from the MS4s include total suspended solids, sediment, pathogens (e.g., bacteria, viruses, protozoa), heavy metals (e.g., cadmium, copper, lead, and zinc), petroleum products and polynuclear aromatic hydrocarbons, synthetic organics (e.g., pesticides, herbicides, and PCBs), nutrients (e.g., nitrogen and phosphorus), oxygen-demanding substances (e.g., decaying vegetation, animal waste), detergents, and trash. As operators of the MS4s, the Copermittees cannot passively receive and discharge pollutants from third parties. By providing free and open access to an MS4 that conveys discharges to waters of the U.S., the operator essentially accepts responsibility for discharges into the MS4 that it does not prohibit or otherwise control. These discharges may cause or contribute to a condition of pollution or a violation of water quality standards.

13. Human Health and Aquatic Life Impairment. Pollutants in runoff discharged from the MS4s can threaten and adversely affect human health and aquatic organisms. Adverse responses of organisms to chemicals or physical agents in runoff range from physiological responses such as impaired reproduction or growth anomalies to mortality. Increased volume, velocity, rate, and duration of storm water runoff greatly accelerate the erosion of downstream natural channels. This alters stream channels and habitats and can adversely affect aquatic and terrestrial organisms.

14. Water Quality Effects. The Copermittees' water quality monitoring data submitted to date documents persistent exceedances of Basin Plan water quality objectives for

runoff-related pollutants at various watershed monitoring stations. Persistent toxicity has also been observed at several watershed monitoring stations. In addition, bioassessment data indicate that the majority of the monitored receiving waters have Poor to Very Poor Index of Biological Integrity (IBI) ratings. These findings indicate that runoff discharges are causing or contributing to water quality impairments, and are a leading cause of such impairments in the San Diego Region. Non-storm water discharges from the MS4s have been shown to contribute significant levels of pollutants and flow in arid, developed Southern California watersheds, and contribute significantly to exceedances of applicable receiving water quality objectives.

15. Non-Storm Water and Storm Water Discharges. Non-storm water discharges from the MS4s are not considered storm water discharges and therefore are not subject to the MEP standard of CWA section 402(p)(3)(B)(iii), which is explicitly for “Municipal ... *Stormwater Discharges* (emphasis added)” from the MS4s. Pursuant to CWA 402(p)(3)(B)(ii), non-storm water discharges into the MS4s must be effectively prohibited.

16. Best Management Practices. Waste and pollutants which are deposited and accumulate in MS4 drainage structures will be discharged from these structures to waters of the U.S. unless they are removed. These discharges may cause or contribute to, or threaten to cause or contribute to, a condition of pollution in receiving waters. For this reason, pollutants in storm water discharges from the MS4s can be and must be effectively reduced in runoff by the application of a combination of pollution prevention, source control, and treatment control BMPs. Pollution prevention is the reduction or elimination of pollutant generation at its source and is the best “first line of defense.” Source control BMPs (both structural and non-structural) minimize the contact between pollutants and runoff, therefore keeping pollutants onsite and out of receiving waters. Treatment control BMPs remove pollutants that have been mobilized by storm water or non-storm water flows.

17. BMP Implementation. Runoff needs to be addressed during the three major phases of development (planning, construction, and use) in order to reduce the discharge of storm water pollutants to the MEP, effectively prohibit non-storm water discharges, and protect receiving waters. Development which is not guided by water quality planning policies and principles can result in increased pollutant load discharges, flow rates, and flow durations which can negatively affect receiving water beneficial uses. Construction sites without adequate BMP implementation result in sediment runoff rates which greatly exceed natural erosion rates of undisturbed lands, causing siltation and impairment of receiving waters. Existing development can generate substantial pollutant loads which are discharged in runoff to receiving waters. Retrofitting areas of existing development with storm water pollutant control and hydromodification management BMPs is necessary to address storm water discharges from existing development that may cause or contribute to a condition of pollution or a violation of water quality standards.

18. Water Quality Improvements. Since 1990, the Copermittees have been developing and implementing programs and BMPs intended to effectively prohibit non-storm water discharges to the MS4s and control pollutants in storm water discharges from the MS4s to receiving waters. As a result, several water body / pollutant combinations have been de-listed from the CWA Section 303(d) List, beach closures have been significantly reduced, and public awareness of water quality issues has increased. The Copermittees have been able to achieve improvements in water quality in some respects, but significant improvements to the quality of receiving waters and discharges from the MS4s are still necessary to meet the requirements and objectives of the CWA.

19. Long Term Planning and Implementation. Federal regulations require municipal storm water permits to expire 5 years from adoption, after which the permit must be renewed and reissued. The San Diego Water Board recognizes that the degradation of water quality and impacts to beneficial uses of the waters in the San Diego Region occurred over several decades. The San Diego Water Board further recognizes that a decade or more may be necessary to realize demonstrable improvement to the quality of waters in the San Diego Region. This Order includes a long term planning and implementation approach that will require more than a single permit term to complete.

WATER QUALITY STANDARDS

20. Basin Plan. The San Diego Water Board adopted the Water Quality Control Plan for the San Diego Basin (Basin Plan) on September 8, 1994, that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for receiving waters addressed through the plan. The Basin Plan was subsequently approved by the State Water Resources Control Board (State Water Board) on December 13, 1994. Subsequent revisions to the Basin Plan have also been adopted by the San Diego Water Board and approved by the State Water Board. Requirements of this Order implement the Basin Plan.

The Basin Plan identifies the following existing and potential beneficial uses for inland surface waters in the San Diego Region: Municipal and Domestic Supply (MUN), Agricultural Supply (AGR), Industrial Process Supply (PROC), Industrial Service Supply (IND), Ground Water Recharge (GWR), Contact Water Recreation (REC1), Non-contact Water Recreation (REC2), Warm Freshwater Habitat (WARM), Cold Freshwater Habitat (COLD), Wildlife Habitat (WILD), Rare, Threatened, or Endangered Species (RARE), Freshwater Replenishment (FRSH), Hydropower Generation (POW), and Preservation of Biological Habitats of Special Significance (BIOL). The following additional existing and potential beneficial uses are identified for coastal waters of the San Diego Region: Navigation (NAV), Commercial and Sport Fishing (COMM), Estuarine Habitat (EST), Marine Habitat (MAR), Aquaculture (AQUA), Migration of Aquatic Organisms (MIGR), Spawning,

Reproduction, and/or Early Development (SPWN), and Shellfish Harvesting (SHELL).

21. Ocean Plan. The State Water Board adopted the Water Quality Control Plan for Ocean Waters of California, California Ocean Plan (Ocean Plan) in 1972 and amended it in 1978, 1983, 1988, 1990, 1997, 2000, and 2005. The State Water Board adopted the latest amendment on April 21, 2005 and it became effective on February 14, 2006. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. Requirements of this Order implement the Ocean Plan.

The Ocean Plan identifies the following beneficial uses of ocean waters of the state to be protected: Industrial water supply; water contact and non-contact recreation, including aesthetic enjoyment; navigation; commercial and sport fishing; mariculture; preservation and enhancement of designated Areas of Special Biological Significance; rare and endangered species; marine habitat; fish spawning and shellfish harvesting.

22. Sediment Quality Control Plan. On September 16, 2008, the State Water Board adopted the Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality (Sediment Quality Control Plan). The Sediment Quality Control Plan became effective on August 25, 2009. The Sediment Quality Control Plan establishes: 1) narrative sediment quality objectives for benthic community protection from exposure to contaminants in sediment and to protect human health, and 2) a program of implementation using a multiple lines of evidence approach to interpret the narrative sediment quality objectives. Requirements of this Order implement the Sediment Quality Control Plan.

23. National Toxics Rule and California Toxics Rule. USEPA adopted the National Toxics Rule (NTR) on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the California Toxics Rule (CTR). The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants.

24. Antidegradation Policy. This Order is in conformance with the federal Antidegradation Policy described in 40 CFR 131.12, and State Water Board Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality Waters in California*. Federal regulations at 40 CFR 131.12 require that the State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. State Water Board Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. State Water Board Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies.

25. Anti-Backsliding Requirements. Section 402(o)(2) of the CWA and federal regulations at 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at least as stringent as effluent limitations in the previous permits.

CONSIDERATIONS UNDER FEDERAL AND STATE LAW

26. Coastal Zone Act Reauthorization Amendments. Section 6217(g) of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA) requires coastal states with approved coastal zone management programs to address non-point source pollution impacting or threatening coastal water quality. CZARA addresses five sources of non-point source pollution: agriculture, silviculture, urban, marinas, and hydromodification. This Order addresses the management measures required for the urban category, with the exception of septic systems. The runoff management programs developed pursuant to this Order fulfill the need for coastal cities to develop a runoff non-point source plan identified in the Non-Point Source Program Strategy and Implementation Plan. The San Diego Water Board addresses septic systems through the administration of other programs.

27. Endangered Species Act. This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the Federal Endangered Species Act (16 USC sections 1531 to 1544). This Order requires compliance with receiving water limits, and other requirements to protect the beneficial uses of waters of the State. The Copermittees are responsible for meeting all requirements of the applicable Endangered Species Act.

28. Report of Waste Discharge Process. The waste discharge requirements set forth in this Order are based upon the Report of Waste Discharge submitted by the San Diego County Copermittees prior to the expiration of Order No. R9-2007-0001 (NPDES No. CAS0109266) and the Report of Waste Discharge submitted by the Orange County Copermittees prior to the expiration of Order No. R9-2009-0002 (CAS0108740). The ~~Orange County and~~ Riverside County Copermittees are not immediately covered by the waste discharge requirements in this Order. The San Diego Water Board understands that each municipality is unique although the Counties share watersheds and/or geographical boundaries. The Order will continue to use the Report of Waste Discharge process prior to initially making ~~Orange County or~~ Riverside County Copermittees subject to the requirements of this Order.

The federal regulations (40 CFR 122.21(d)(2)) and CWC section 13376 impose a duty on the Copermittees to reapply for continued coverage through submittal of a

Report of Waste Discharge no later than 180 days prior to expiration of a currently effective permit. This requirement is set forth in the ~~Orange County Copermittees' and Riverside County Copermittees'~~ currently effective permits at Provisions ~~K.2.b and K.2.c, respectively~~. The ~~Orange County Permit, Order No. R9-2009-0002 (NPDES No. CAS0108740) expires on December 16, 2014 and the~~ Riverside County MS4 Permit, Order No. R9-2010-0016 (NPDES No. CAS0108766) expires on November 10, 2015.

Unless the ~~Orange County or~~ Riverside County Copermittees apply for and receive early coverage under this Order, ~~the Orange County Copermittees' and the~~ Riverside County Copermittees' ~~respective~~ permits will be superseded by this Order upon expiration of their ~~respective~~ permits, subject to any necessary revisions to the requirements of this Order made after the San Diego Water Board considers their ~~respective~~ Reports of Waste Discharge through the public process provided in 40 CFR Part 124.

29. Regional Water Board Designation. The Cities of Laguna Hills, Laguna Woods, and Lake Forest are located partially within the jurisdictions of the California Regional Water Quality Control Board, Santa Ana Region (Santa Ana Water Board) and the San Diego Water Board and their discharges are subject to regulation by both Regional Water Boards. Pursuant to CWC section 13228, the Cities of Laguna Hills, Laguna Woods, and Lake Forest submitted written requests that one Regional Water Board be designated to regulate Phase I MS4 discharges for each of the Cities. The Santa Ana Water Board and the San Diego Water Board have entered into an agreement dated February 10, 2015, whereby the Cities of Laguna Woods and Laguna Hills are largely regulated by the San Diego Water Board under this Order, including those portions of the Cities of Laguna Woods and Laguna Hills not within the San Diego Water Board's jurisdiction, upon the effective date of this Order or Santa Ana Water Board Order No. R8-2015-0001, whichever is later. Similarly, the City of Lake Forest, including those portions of the City of Lake Forest within the San Diego Water Board's jurisdiction, is largely regulated by the Santa Ana Water Board under Order No. R8-2015-0001 (NPDES No. CAS618030) upon the later effective date of this Order or Order No. R8-2015-0001. The agreement provides that the City of Lake Forest is required to retain, and continue implementation of, its over-irrigation discharge prohibition in Title 15, Chapter 14.030, List (b) of the City Municipal Code for regulating storm water quality throughout its jurisdiction. The agreement also requires the City of Lake Forest to actively participate during development and implementation of the Aliso Creek Watershed Management Area Water Quality Improvement Plan required pursuant to this Order. Each Regional Water Board retains the authority to enforce provisions of its Phase I MS4 permits issued to each city but compliance will be determined based upon the Phase I MS4 permit in which a particular city is regulated as a Copermittee under the terms of the agreement (Water Code section 13228 (b)). Under the terms of the agreement, any TMDL and associated MS4 permit requirements issued by the San Diego Water Board or the Santa Ana Water Board which include the Cities of Laguna Woods, Laguna Hills or Lake Forest as a responsible party, will be incorporated into the

appropriate Phase I MS4 permit by reference. Enforcement of the applicable TMDL will remain with the Regional Water Board which has jurisdiction over the targeted impaired water body. Applicable TMDLs subject to the terms of the agreement include, but are not limited to, the Santa Ana Water Board's San Diego Creek/Newport Bay TMDL and the San Diego Water Board's Indicator Bacteria Project I Beaches and Creeks TMDL. The San Diego Water Board will periodically review the effectiveness of the agreement during each MS4 permit reissuance. Based on this periodic review the San Diego Water Board may terminate the agreement with Santa Ana Water Board or otherwise modify the agreement subject to the approval of the Santa Ana Water Board.

29-30. Integrated Report and Clean Water Act Section 303(d) List. The San Diego Water Board and State Water Board submit an Integrated Report to USEPA to comply with the reporting requirements of CWA sections 303(d), 305(b) and 314, which lists the attainment status of water quality standards for water bodies in the San Diego Region. USEPA issued its *Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act* on July 29, 2005, which advocates the use of a five category approach for classifying the attainment status of water quality standards for water bodies in the Integrated Report. Water bodies included in Category 5 in the Integrated Report indicate at least one beneficial use is not being supported or is threatened, and a TMDL is required. Water bodies included in Category 5 in the Integrated Report are placed on the 303(d) List.

Water bodies with available data and/or information that indicate at least one beneficial use is not being supported or is threatened, but a TMDL is not required, are included in Category 4 in the Integrated Report. Impaired surface water bodies may be included in Category 4 if a TMDL has been adopted and approved (Category 4a); if other pollution control requirements required by a local, state or federal authority are stringent enough to implement applicable water quality standards within a reasonable period of time (Category 4b); or, if the failure to meet an applicable water quality standard is not caused by a pollutant, but caused by other types of pollution (Category 4c).

Implementation of the requirements of this Order may allow the San Diego Water Board to include surface waters impaired by discharges from the Copermittees' MS4s in Category 4 in the Integrated Report for consideration during the next 303(d) List submittal by the State to USEPA.

30-31. Economic Considerations. The California Supreme Court has ruled that although CWC section 13263 requires the State and Regional Water Boards (collectively Water Boards) to consider factors set forth in CWC section 13241 when issuing an NPDES permit, the Water Board may not consider the factors to justify imposing pollutant restrictions that are less stringent than the applicable federal regulations require. (*City of Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4th 613, 618, 626-627.) However, when pollutant restrictions in an NPDES permit are more stringent than federal law requires, CWC section 13263 requires

that the Water Boards consider the factors described in CWC section 13241 as they apply to those specific restrictions.

As noted in the following finding, the San Diego Water Board finds that the requirements in this Order are not more stringent than the minimum federal requirements. Therefore, a CWC section 13241 analysis is not required for permit requirements that implement the effective prohibition on the discharge of non-storm water into the MS4 or for controls to reduce the discharge of pollutants in storm water to the MEP, or other provisions that the San Diego Water Board has determined appropriate to control such pollutants, as those requirements are mandated by federal law. Notwithstanding the above, the San Diego Water Board has developed an economic analysis of the requirements in this Order. The economic analysis is provided in the Fact Sheet.

31.32. Unfunded Mandates. This Order does not constitute an unfunded local government mandate subject to subvention under Article XIII B, Section (6) of the California Constitution for several reasons, including, but not limited to, the following:

- a. This Order implements federally mandated requirements under CWA section 402 (33 USC section 1342(p)(3)(B)).
- b. The local agency Copermittees' obligations under this Order are similar to, and in many respects less stringent than, the obligations of non-governmental and new dischargers who are issued NPDES permits for storm water and non-storm water discharges.
- c. The local agency Copermittees have the authority to levy service charges, fees, or assessments sufficient to pay for compliance with this Order.
- d. The Copermittees have requested permit coverage in lieu of compliance with the complete prohibition against the discharge of pollutants contained in CWA section 301(a) (33 USC section 1311(a)) and in lieu of numeric restrictions on their MS4 discharges (i.e. effluent limitations).
- e. The local agencies' responsibility for preventing discharges of waste that can create conditions of pollution or nuisance from conveyances that are within their ownership or control under State law predates the enactment of Article XIII B, Section (6) of the California Constitution.
- f. The provisions of this Order to implement TMDLs are federal mandates. The CWA requires TMDLs to be developed for water bodies that do not meet federal water quality standards (33 USC section 1313(d)). Once the USEPA or a state develops a TMDL, federal law requires that permits must contain water quality based effluent limitations consistent with the assumptions and requirements of any applicable wasteload allocation (40 CFR 122.44(d)(1)(vii)(B)).

See the Fact Sheet for further discussion of unfunded mandates.

32.33. California Environmental Quality Act. The issuance of waste discharge requirements and an NPDES permit for the discharge of runoff from MS4s to waters of the U.S. is exempt from the requirement for preparation of environmental documents under the California Environmental Quality Act (CEQA) (Public Resources Code, Division 13, Chapter 3, section 21000 et seq.) in accordance with CWC section 13389.

STATE WATER BOARD DECISIONS

33.34. Compliance with Prohibitions and Limitations. The receiving water limitation language specified in this Order is consistent with language recommended by the USEPA and established in State Water Board Order WQ 99-05, *Own Motion Review of the Petition of Environmental Health Coalition to Review Waste Discharge Requirements Order No. 96-03, NPDES Permit No. CAS0108740*, adopted by the State Water Board on June 17, 1999. The receiving water limitation language in this Order requires storm water discharges from MS4s to not cause or contribute to a violation of water quality standards, which is to be achieved through an iterative approach requiring the implementation of improved and better-tailored BMPs over time. Implementation of the iterative approach to comply with receiving water limitations based on applicable water quality standards is necessary to ensure that storm water discharges from the MS4 will not ultimately cause or contribute to violations of water quality standards and will not create conditions of pollution, contamination, or nuisance.

34.35. Special Conditions for Areas of Special Biological Significance. On March 20, 2012, the State Water Board approved Resolution No. 2012-0012 approving a general exception to the Ocean Plan prohibition against discharges to Areas of Special Biological Significance (ASBS) for certain nonpoint source discharges and NPDES permitted municipal storm water discharges (General Exception). On June 19, 2012, the State Water Board adopted Order No. 2012-0031, amending the General Exception to require pollutant reductions to be achieved within six years in accordance with ASBS Compliance Plans and ASBS Pollution Prevention Plans. The General Exception ~~State Water Board Resolution No. 2012-0012~~ requires monitoring and testing of marine aquatic life and water quality in several ASBS to protect California's coastline during storms when rain water overflows into coastal waters. Specific terms, prohibitions, and special conditions were adopted to provide special protections for marine aquatic life and natural water quality in ASBS. The City of San Diego's municipal storm water discharges to the San Diego Marine Life Refuge in La Jolla, and the City of Laguna Beach's municipal storm water discharges to the Heisler Park ASBS are subject to the terms and conditions of the General Exception as amended ~~State Water Board Resolution No. 2012-0012~~. The Special Protections contained in Attachment B to the General Exception as amended ~~Resolution No. 2012-0012~~, are applicable to these discharges, and are hereby incorporated into Attachment A of this Order. ~~as if fully set forth herein.~~

ADMINISTRATIVE FINDINGS

- 35-36. Executive Officer Delegation of Authority.** The San Diego Water Board by prior resolution has delegated all matters that may legally be delegated to its Executive Officer to act on its behalf pursuant to CWC section 13223. Therefore, the Executive Officer is authorized to act on the San Diego Water Board's behalf on any matter within this Order unless such delegation is unlawful under CWC section 13223 or this Order explicitly states otherwise.
- 36-37. Standard Provisions.** Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment B to this Order.
- 37-38. Fact Sheet.** The Fact Sheet for this Order contains background information, regulatory and legal citations, references and additional explanatory information and data in support of the requirements of this Order. The Fact Sheet is hereby incorporated into this Order and constitutes part of the Findings of this Order.
- 38-39. Public Notice.** In accordance with State and federal laws and regulations, the San Diego Water Board notified the Copermittees, and interested agencies and persons of its intent to prescribe waste discharge requirements for the control of discharges into and from the MS4s to waters of the U.S. and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet.
- 39-40. Public Hearings.** The San Diego Water Board held a public hearing on April 10 and 11, 2013, that was continued to May 8, 2013 and heard and considered all comments pertaining to the terms and conditions of this Order. [The San Diego Water Board also held a public workshop on October 8, 2015, and a public hearing on February 11, 2015, and heard and considered all comments pertaining to the amendment of this Order through Order No. R9-2015-0001.](#) Details of these public hearings are provided in the Fact Sheet.
- 40-41. Effective Date.** This Order serves as an NPDES permit pursuant to CWA section 402 or amendments thereto, and [as to the San Diego County Copermittees listed in Table 2.a., became becomes](#) effective fifty (50) days after the date of its adoption, [and as to the Orange County Copermittees listed in Table 2.b., becomes effective on April 1, 2015, after Order R9-2015-0001 is adopted,](#) provided that the Regional Administrator, USEPA, Region IX, does not object to this Order.
- 41-42. Review by the State Water Board.** Any person aggrieved by this action of the San Diego Water Board may petition the State Water Board to review the action in accordance with CWC section 13320 and California Code of Regulations, title 23, sections 2050, [et seq and following](#). The State Water Board must receive the petition by 5:00 p.m., 30 days after the [date of this Order](#) ~~San Diego Water Board~~

action, except that if the thirtieth day following the **action**date of this Order falls on a Saturday, Sunday or State holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

THEREFORE, IT IS HEREBY ORDERED that the Copermittees, in order to meet the provisions contained in division 7 of the CWC (commencing with section 13000) and regulations adopted thereunder, and the provisions of the CWA and regulations adopted thereunder, must each comply with the requirements of this Order. This action in no way prevents the San Diego Water Board from taking enforcement action for past violations of the previous Order. If any part of this Order is subject to a temporary stay of enforcement, unless otherwise specified, the Copermittees must comply with the analogous portions of the previous Order, which will remain in effect for all purposes during the pendency of the stay.

II. PROVISIONS

A. PROHIBITIONS AND LIMITATIONS

The purpose of this provision is to describe the conditions under which storm water and non-storm water discharges into and from MS4s are prohibited or limited. The goal of the prohibitions and limitations is to protect the water quality and designated beneficial uses of waters of the state from adverse impacts caused or contributed to by MS4 discharges. This goal will be accomplished through the implementation of water quality improvement strategies and runoff management programs that effectively prohibit non-storm water discharges into the Copermittees' MS4s, and reduce pollutants in storm water discharges from the Copermittees' MS4s to the MEP.

1. Discharge Prohibitions

- a.** Discharges from MS4s in a manner causing, or threatening to cause, a condition of pollution, contamination, or nuisance in receiving waters of the state are prohibited.
- b.** Non-storm water discharges into MS4s are to be effectively prohibited, through the implementation of Provision E.2, unless such discharges are authorized by a separate NPDES permit.
- c.** Discharges from MS4s are subject to all waste discharge prohibitions in the Basin Plan, included in Attachment A to this Order.
- d.** Storm water discharges from the City of San Diego's MS4 to the San Diego Marine Life Refuge in La Jolla, and the City of Laguna Beach's MS4 to the Heisler Park ASBS are authorized under this Order subject to the Special Protections contained in Attachment B to State Water Board Resolution No. 2012-0012 applicable to these discharges, included in Attachment A to this Order. All other discharges from the Copermittees' MS4s to ASBS are prohibited.

2. Receiving Water Limitations

- a. Discharges from MS4s must not cause or contribute to the violation of water quality standards in any receiving waters, including but not limited to all applicable provisions contained in:
- (1) The San Diego Water Board's Basin Plan, including beneficial uses, water quality objectives, and implementation plans;
 - (2) State Water Board plans for water quality control including the following:
 - (a) Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries (Thermal Plan), and
 - (b) The Ocean Plan, including beneficial uses, water quality objectives, and implementation plans;
 - (3) State Water Board policies for water and sediment quality control including the following:
 - (a) Water Quality Control Policy for the Enclosed Bays and Estuaries of California,
 - (b) Sediment Quality Control Plan which includes the following narrative objectives for bays and estuaries:
 - (i) Pollutants in sediments shall not be present in quantities that, alone or in combination, are toxic to benthic communities, and
 - (ii) Pollutants shall not be present in sediments at levels that will bioaccumulate in aquatic life to levels that are harmful to human health,
 - (c) The Statement of Policy with Respect to Maintaining High Quality of Waters in California;²
 - (4) Priority pollutant criteria promulgated by the USEPA through the following:
 - (a) National Toxics Rule (NTR)³ (promulgated on December 22, 1992 and amended on May 4, 1995), and
 - (b) California Toxics Rule (CTR).^{4,5}
- b. Discharges from MS4s composed of storm water runoff must not alter natural ocean water quality in an ASBS.

² State Water Board Resolution No. 68-16

³ 40 CFR 131.36

⁴ 65 Federal Register 31682-31719 (May 18, 2000), adding Section 131.38 to 40 CFR

⁵ If a water quality objective and a CTR criterion are in effect for the same priority pollutant, the more stringent of the two applies.

3. Effluent Limitations

a. TECHNOLOGY BASED EFFLUENT LIMITATIONS

Pollutants in storm water discharges from MS4s must be reduced to the MEP.⁶

b. WATER QUALITY BASED EFFLUENT LIMITATIONS

Each Copermittee must comply with applicable WQBELs established for the TMDLs in Attachment E to this Order, pursuant to the applicable TMDL compliance schedules.

4. Compliance with Discharge Prohibitions and Receiving Water Limitations

Each Copermittee must achieve compliance with Provisions A.1.a, A.1.c and A.2.a of this Order through timely implementation of control measures and other actions as specified in Provisions B and E of this Order, including any modifications. The Water Quality Improvement Plans required under Provision B must be designed and adapted to ultimately achieve compliance with Provisions A.1.a, A.1.c and A.2.a.

a. If exceedance(s) of water quality standards persist in receiving waters notwithstanding implementation of this Order, the Copermittees must comply with the following procedures:

(1) For exceedance(s) of a water quality standard in the process of being addressed by the Water Quality Improvement Plan, the Copermittee(s) must implement the Water Quality Improvement Plan as accepted by the San Diego Water Board, and update the Water Quality Improvement Plan, as necessary, pursuant to Provision F.2.c;

(2) Upon a determination by either the Copermittees or the San Diego Water Board that discharges from the MS4 are causing or contributing to a new exceedance of an applicable water quality standard not addressed by the Water Quality Improvement Plan, the Copermittees must submit the following updates to the Water Quality Improvement Plan pursuant to Provision F.2.c or as part of the Water Quality Improvement Plan Annual Report required under Provision F.3.b, unless the San Diego Water Board directs an earlier submittal:

(a) The water quality improvement strategies being implemented that are effective and will continue to be implemented,

⁶ This does not apply to MS4 discharges which receive subsequent treatment to reduce pollutants in storm water discharges to the MEP prior to entering receiving waters (e.g., low flow diversions to the sanitary sewer). Runoff treatment must occur prior to the discharge of runoff into receiving waters per Finding 7.

- (b) Water quality improvement strategies (i.e. BMPs, retrofitting projects, stream and/or habitat rehabilitation projects, adjustments to jurisdictional runoff management programs, etc.) that will be implemented to reduce or eliminate any pollutants or conditions that are causing or contributing to the exceedance of water quality standards,
 - (c) Updates to the schedule for implementation of the existing and additional water quality improvement strategies, and
 - (d) Updates to the monitoring and assessment program to track progress toward achieving compliance with Provisions A.1.a, A.1.c and A.2.a of this Order;
 - (3) The San Diego Water Board may require the incorporation of additional modifications to the Water Quality Improvement Plan required under Provision B. The applicable Copermittees must submit any modifications to the update to the Water Quality Improvement Plan within 90 days of notification that additional modifications are required by the San Diego Water Board, or as otherwise directed;
 - (4) Within 90 days of the San Diego Water Board determination that the modifications to the Water Quality Improvement Plan required under Provision A.4.a.(3) meet the requirements of this Order, the applicable Copermittees must revise the jurisdictional runoff management program documents to incorporate the modified water quality improvement strategies that have been and will be implemented, the implementation schedule, and any additional monitoring required; and
 - (5) Each Copermittee must implement the updated Water Quality Improvement Plan.
- b.** The procedure set forth above to achieve compliance with Provisions A.1.a, A.1.c and A.2.a of this Order do not have to be repeated for continuing or recurring exceedances of the same water quality standard(s) following implementation of scheduled actions unless directed to do otherwise by the San Diego Water Board.
- c.** Nothing in Provisions A.4.a and A.4.b prevents the San Diego Water Board from enforcing any provision of this Order while the applicable Copermittees prepare and implement the above update to the Water Quality Improvement Plan and jurisdictional runoff management programs.

PROVISION A: PROHIBITIONS AND LIMITATIONS

A.4. Compliance with Discharge Prohibitions and Receiving Water Limitations

B. WATER QUALITY IMPROVEMENT PLANS

The purpose of this provision is to develop Water Quality Improvement Plans that guide the Copermittees' jurisdictional runoff management programs towards achieving the outcome of improved water quality in MS4 discharges and receiving waters. The goal of the Water Quality Improvement Plans is to further the Clean Water Act's objective to protect, preserve, enhance, and restore the water quality and designated beneficial uses of waters of the state. This goal will be accomplished through an adaptive planning and management process that identifies the highest priority water quality conditions within a watershed and implements strategies through the jurisdictional runoff management programs to achieve improvements in the quality of discharges from the MS4s and receiving waters.

1. Watershed Management Areas

The Copermittees must develop a Water Quality Improvement Plan for each of the Watershed Management Areas in Table B-1. A total of ten Water Quality Improvement Plans must be developed for the San Diego Region.

Table B-1. Watershed Management Areas

Hydrologic Unit(s)	Watershed Management Area	Major Surface Water Bodies	Responsible Copermittees
San Juan (901.00)	South Orange County	- Aliso Creek - San Juan Creek - San Mateo Creek - Pacific Ocean - Heisler Park ASBS	- City of Aliso Viejo ⁴ - City of Dana Point ⁴ - City of Laguna Beach ⁴ - City of Laguna Hills ¹ - City of Laguna Niguel ⁴ - City of Laguna Woods ¹ - City of Lake Forest ^{4,2} - City of Mission Viejo ⁴ - City of Rancho Santa Margarita ⁴ - City of San Clemente ⁴ - City of San Juan Capistrano ⁴ - County of Orange ⁴ - Orange County Flood Control District ⁴
Santa Margarita (902.00)	Santa Margarita River	- Murrieta Creek - Temecula Creek - Santa Margarita River - Santa Margarita Lagoon - Pacific Ocean	- City of Murrieta ²³ - City of Temecula ²³ - City of Wildomar ²³ - County of Riverside ²³ - County of San Diego ³⁴ - Riverside County Flood Control and Water Conservation District ²³
San Luis Rey (903.00)	San Luis Rey River	- San Luis Rey River - San Luis Rey Estuary - Pacific Ocean	- City of Oceanside - City of Vista - County of San Diego

Table B-1. Watershed Management Areas

Hydrologic Unit(s)	Watershed Management Area	Major Surface Water Bodies	Responsible Copermittees
Carlsbad (904.00)	Carlsbad	- Loma Alta Slough - Buena Vista Lagoon - Agua Hedionda Lagoon - Batiquitos Lagoon - San Elijo Lagoon - Pacific Ocean	- City of Carlsbad - City of Encinitas - City of Escondido - City of Oceanside - City of San Marcos - City of Solana Beach - City of Vista - County of San Diego
San Dieguito (905.00)	San Dieguito River	- San Dieguito River - San Dieguito Lagoon - Pacific Ocean	- City of Del Mar - City of Escondido - City of Poway - City of San Diego - City of Solana Beach - County of San Diego
Penasquitos (906.00)	Penasquitos	- Los Penasquitos Lagoon - Pacific Ocean	- City of Del Mar - City of Poway - City of San Diego - County of San Diego
	Mission Bay	- Mission Bay - Pacific Ocean - San Diego Marine Life Refuge ASBS	- City of San Diego
San Diego (907.00)	San Diego River	- San Diego River - Pacific Ocean	- City of El Cajon - City of La Mesa - City of San Diego - City of Santee - County of San Diego
Pueblo San Diego (908.00) Sweetwater (909.00) Otay (910.00)	San Diego Bay	- Sweetwater River - Otay River - San Diego Bay - Pacific Ocean	- City of Chula Vista - City of Coronado - City of Imperial Beach - City of La Mesa - City of Lemon Grove - City of National City - City of San Diego - County of San Diego - San Diego County Regional Airport Authority - San Diego Unified Port District
Tijuana (911.00)	Tijuana River	- Tijuana River - Tijuana Estuary - Pacific Ocean	- City of Imperial Beach - City of San Diego - County of San Diego

Notes:

- [The Orange County Copermittees will be covered under this Order after expiration of Order No. R9-2009-0002, or earlier if the Orange County Copermittees meet the conditions in Provision F.6. By agreement dated February 10, 2015, pursuant to Water Code section 13228, the Phase I MS4 discharges within the jurisdiction of the City of Laguna Hills and the City of Laguna Woods located in the Santa Ana Region are regulated by San Diego Water Board Order No. R9-2013-0001 as amended by Order No. R9-2015-0001, upon the later effective date of Order No. R9-2015-0001 or Santa Ana Water Board Tentative Order No. R8-2015-0001. The City of Laguna Hills and Laguna Woods must also comply with the requirements of the San Diego Creek/Newport Bay TMDL in section XVIII of Santa Ana Water Board Order No. R8-2015-0001.](#)
- [The Riverside County Copermittees will be covered under this Order after expiration of Order No. R9-2010-0016, or earlier if the Riverside County Copermittees meet the conditions in Provision F.6. By agreement dated February 10, 2015, pursuant to Water Code section 13228, Phase I MS4 discharges within the City of Lake Forest located within the San Diego Water Board Region are regulated by the Santa Ana Water Board Order No. R8-2015-0001 \(NPDES No. CAS618030\) upon the later effective date of this Order or Santa Ana Water Board Tentative Order No. R8-2015-0001. In accordance with the terms of the agreement between the San Diego Water Board and the Santa Ana Water Board, the City of Lake Forest must implement the requirements of the Bacteria TMDL in Attachment E of this Order, participate in preparation and implementation of the Water Quality Improvement Plan for the Aliso Creek Watershed Management Area as described in Provision B of this Order and continue implementation of its over-irrigation discharge prohibition in its City Ordinance, Title 15, Chapter 15, section 14.030, List \(b\).](#)
- [The Riverside County Copermittees will be covered under this Order after expiration of Order No. R9-2010-0016, or earlier if the Riverside County Copermittees meet the conditions in Provision F.6, upon further amendment of this Order.](#)
- The County of San Diego is not required to implement the requirements of Provision B for its jurisdiction within the Santa Margarita River Watershed Management Area until the Riverside County Copermittees have been notified of coverage under this Order. The County of San Diego is required to implement the requirements of Provisions D, F.3.b, and Attachment E until the Riverside County Copermittees have been notified of coverage under this Order.

2. Priority Water Quality Conditions

The Copermittees must identify the water quality priorities within each Watershed Management Area that will be addressed by the Water Quality Improvement Plan. Where appropriate, Watershed Management Areas may be separated into subwatersheds to focus water quality prioritization and jurisdictional runoff management program implementation efforts by receiving water.

a. ASSESSMENT OF RECEIVING WATER CONDITIONS

The Copermittees must consider the following, at a minimum, to identify water quality priorities based on impacts of MS4 discharges on receiving water beneficial uses:

- (1) Receiving waters listed as impaired on the CWA Section 303(d) List of Water Quality Limited Segments (303(d) List);
- (2) TMDLs adopted and under development by the San Diego Water Board;
- (3) Receiving waters recognized as sensitive or highly valued by the Copermittees, including estuaries designated under the National Estuary Program under CWA section 320, [marine protected areas](#), wetlands defined by the State or U.S. Fish and Wildlife Service's National Wetlands Inventory as wetlands, waters having the Preservation of Biological Habitats of Special Significance (BIOL) beneficial use designation, and receiving waters identified as ASBS subject to the provisions of Attachment B to State Water Board Resolution No. 2012-0012 (see Attachment A);
- (4) The receiving water limitations of Provision A.2;
- (5) Known historical versus current physical, chemical, and biological water quality conditions;
- (6) Available, relevant, and appropriately collected and analyzed physical, chemical, and biological receiving water monitoring data, including, but not limited to, data describing:
 - (a) Chemical constituents,
 - (b) Water quality parameters (i.e. pH, temperature, conductivity, etc.),
 - (c) Toxicity Identification Evaluations for both receiving water column and sediment,
 - (d) Trash impacts,

- (e) Bioassessments, and
- (f) Physical habitat;
- (7) Available evidence of erosional impacts in receiving waters due to accelerated flows (i.e. hydromodification);
- (8) Available evidence of adverse impacts to the chemical, physical, and biological integrity of receiving waters; and
- (9) The potential improvements in the overall condition of the Watershed Management Area that can be achieved.

b. ASSESSMENT OF IMPACTS FROM MS4 DISCHARGES

The Copermittees must consider the following, at a minimum, to identify the potential impacts to receiving waters that may be caused or contributed to by discharges from the Copermittees' MS4s:

- (1) The discharge prohibitions of Provision A.1 and effluent limitations of Provision A.3; and
- (2) Available, relevant, and appropriately collected and analyzed storm water and non-storm water monitoring data from the Copermittees' MS4 outfalls;
- (3) Locations of each Copermittee's MS4 outfalls that discharge to receiving waters;
- (4) Locations of MS4 outfalls that are known to persistently discharge non-storm water to receiving waters likely causing or contributing to impacts on receiving water beneficial uses;
- (5) Locations of MS4 outfalls that are known to discharge pollutants in storm water causing or contributing to impacts on receiving water beneficial uses; and
- (6) The potential improvements in the quality of discharges from the MS4 that can be achieved.

c. IDENTIFICATION OF PRIORITY WATER QUALITY CONDITIONS

- (1) The Copermittees must use the information gathered for Provisions B.2.a and B.2.b to develop a list of priority water quality conditions as pollutants, stressors and/or receiving water conditions that are the highest threat to receiving water quality or that most adversely affect the quality of receiving waters. The list must include the following information for each priority water

quality condition:

- (a) The beneficial use(s) associated with the priority water quality condition;
 - (b) The geographic extent of the priority water quality condition within the Watershed Management Area, if known;
 - (c) The temporal extent of the priority water quality condition (e.g., dry weather and/or wet weather);
 - (d) The Copermittees with MS4s discharges that may cause or contribute to the priority water quality condition; and
 - (e) An assessment of the adequacy of and data gaps in the monitoring data to characterize the conditions causing or contributing to the priority water quality condition, including a consideration of spatial and temporal variation.
- (2) The Copermittees must identify the highest priority water quality conditions to be addressed by the Water Quality Improvement Plan, and provide a rationale for selecting a subset of the water quality conditions identified pursuant to Provision B.2.c.(1) as the highest priorities.

d. IDENTIFICATION OF MS4 SOURCES OF POLLUTANTS AND/OR STRESSORS

The Copermittees must identify and prioritize known and suspected sources of storm water and non-storm water pollutants and/or other stressors associated with MS4 discharges that cause or contribute to the highest priority water quality conditions identified under Provision B.2.c. The identification of known and suspected sources of pollutants and/or stressors that cause or contribute to the highest priority water quality conditions as identified for Provision B.2.c must consider the following:

- (1) Pollutant generating facilities, areas, and/or activities within the Watershed Management Area, including:
 - (a) Each Copermittee's inventory of construction sites, commercial facilities or areas, industrial facilities, municipal facilities, and residential areas,
 - (b) Publicly owned parks and/or recreational areas,
 - (c) Open space areas,
 - (d) All currently operating or closed municipal landfills or other treatment, storage or disposal facilities for municipal waste, and
 - (e) Areas not within the Copermittees' jurisdictions (e.g., Phase II MS4s, tribal

lands, state lands, federal lands) that are known or suspected to be discharging to the Copermittees' MS4s;

- (2) Locations of the Copermittees' MS4s, including the following:
 - (a) All MS4 outfalls that discharge to receiving waters, and
 - (b) Locations of major structural controls for storm water and non-storm water (e.g., retention basins, detention basins, major infiltration devices, etc.);
- (3) Other known and suspected sources of non-storm water or pollutants in storm water discharges to receiving waters within the Watershed Management Area, including the following:
 - (a) Other MS4 outfalls (e.g., Phase II Municipal and Caltrans),
 - (b) Other NPDES permitted discharges,
 - (c) Any other discharges that may be considered point sources (e.g., private outfalls), and
 - (d) Any other discharges that may be considered non-point sources (e.g., agriculture, wildlife or other natural sources);
- (4) Review of available data, including but not limited to:
 - (a) Findings from the Copermittees' illicit discharge detection and elimination programs,
 - (b) Findings from the Copermittees' MS4 outfall discharge monitoring,
 - (c) Findings from the Copermittees' receiving water monitoring,
 - (d) Findings from the Copermittees' MS4 outfall discharge and receiving water assessments, and
 - (e) Other available, relevant, and appropriately collected data, information, or studies related to pollutant sources and/or stressors that contribute to the highest priority water quality conditions as identified for Provision B.2.c.
- (5) The adequacy of the available data to identify and prioritize sources and/or stressors associated with MS4 discharges that cause or contribute to the highest priority water quality conditions identified under Provision B.2.c.

e. IDENTIFICATION OF POTENTIAL WATER QUALITY IMPROVEMENT STRATEGIES

The Copermittees must evaluate the findings identified under Provisions B.2.a-d, and identify potential strategies that can result in improvements to water quality in MS4 discharges and/or receiving waters within the Watershed Management

Area. Potential water quality improvement strategies that may be implemented within the Watershed Management Area must include the following:

- (1) Structural BMPs, non-structural BMPs, incentives, or programs that can potentially be implemented to address the highest priority water quality conditions identified under Provision B.2.c, or MS4 sources of pollutants or stressors identified under Provision B.2.d,
- (2) Retrofitting projects in areas of existing development within the Watershed Management Area that can potentially be implemented to reduce MS4 sources of pollutants or stressors identified under Provision B.2.d causing or contributing to the highest priority water quality conditions identified under Provision B.2.c, and
- (3) Stream, channel, and/or habitat rehabilitation projects within the Watershed Management Area that can potentially be implemented to protect and/or improve conditions in receiving waters from MS4 pollutants and/or stressors identified under Provision B.2.d causing or contributing to the highest priority water quality conditions identified under Provision B.2.c.

3. Water Quality Improvement Goals, Strategies and Schedules

The Copermittees must identify and develop specific water quality improvement goals and strategies to address the highest priority water quality conditions identified within a Watershed Management Area. The water quality improvement goals and strategies must address the highest priority water quality conditions by effectively prohibiting non-storm water discharges to the MS4, reducing pollutants in storm water discharges from the MS4 to the MEP, and protecting the water quality standards of receiving waters.

a. WATER QUALITY IMPROVEMENT GOALS AND SCHEDULES

(1) Numeric Goals

The Copermittees must develop and incorporate numeric goals⁷ into the Water Quality Improvement Plan. Numeric goals must be used to support Water Quality Improvement Plan implementation and measure reasonable progress towards addressing the highest priority water quality conditions identified under Provision B.2.c. The Copermittees must establish and incorporate the following numeric goals in the Water Quality Improvement

⁷ Interim and final numeric goals may take a variety of forms such as TMDL established WQBELs, action levels, pollutant concentration, load reductions, number of impaired water bodies delisted from the List of Water Quality Impaired Segments, Index of Biotic Integrity (IBI) scores, or other appropriate metrics. Interim and final numeric goals are not necessarily limited to one criterion or indicator, but may include multiple criteria and/or indicators. Except for TMDL established WQBELs, interim and final numeric goals and corresponding schedules may be revised through the adaptive management process under Provision B.5.

Plan:

- (a) Final numeric goals must be based on measurable criteria or indicators capable of demonstrating one or more of the following:
- (i) Discharges from the Copermittees' MS4s will not cause or contribute to exceedances of water quality standards in receiving waters, AND/OR
 - (ii) The conditions of receiving waters and associated habitat are protected from MS4 discharges, AND/OR
 - (iii) Beneficial uses of receiving waters are protected from MS4 discharges and will be supported.
- (b) Interim numeric goals must be based on measurable criteria or indicators capable of demonstrating reasonable incremental progress toward achieving the final numeric goals in the receiving waters and/or MS4 discharges as follows:
- (i) One or more interim numeric goals may be established to demonstrate progress toward achieving each final numeric goal,
 - (ii) For each final numeric goal, at least one interim numeric goal must be expressed as a reasonable increment toward achievement of the final numeric goal,
 - (iii) For each final numeric goal, reasonable interim numeric goals must be established to be accomplished during each 5 year period between the acceptance of the Water Quality Improvement Plan and the achievement of the final numeric goals.

(2) Schedules for Achieving Numeric Goals

The Copermittees must develop and incorporate schedules for achieving the numeric goals into the Water Quality Improvement Plan. The schedules must demonstrate reasonable progress toward achieving the final numeric goals required for Provision B.3.a.(1). The Copermittees must incorporate the schedules for achieving the numeric goals into the Water Quality Improvement Plan based on the following considerations:

- (a) Final dates for achieving all final numeric goals must be established considering the following:
- (i) Final compliance dates for any applicable TMDLs in Attachment E to this Order;
 - (ii) Compliance schedules for any ASBS subject to the provisions of Attachment B to State Water Board Resolution No. 2012-0012 (see Attachment A);

- (iii) Achievement of the final numeric goals for the highest water quality priorities must be as soon as possible;
 - (iv) Final dates for achieving the final numeric goals must reflect a realistic assessment of the shortest practicable time required based on the temporal and spatial extent and factors associated with the highest priority water quality conditions identified under Provision B.2.c, and taking into account the time reasonably required to implement the water quality improvement strategies required pursuant to Provision B.3.b.
- (b) Interim dates for achieving all interim numeric goals must be established considering the following:
- (i) Interim compliance dates for any applicable TMDLs in Attachment E to this Order;
 - (ii) Compliance schedules for any ASBS subject to the provisions of Attachment B to State Water Board Resolution No. 2012-0012 (see Attachment A);
 - (iii) Interim dates for achieving the interim numeric goals must reflect a realistic assessment of the shortest practicable time reasonably required, taking into account the time needed to implement new or significantly expanded programs and securing financing, if necessary; and
 - (iv) For each final numeric goal, at least one interim numeric goal must be established that the Copermittees will work toward achieving within the term of this Order.

b. WATER QUALITY IMPROVEMENT STRATEGIES AND SCHEDULES

Based on the likely effectiveness and efficiency of the potential water quality improvement strategies identified under Provision B.2.e to effectively prohibit non-storm water discharges to the MS4, reduce pollutants in storm water discharges from the MS4 to the MEP, protect the beneficial uses of receiving waters from MS4 discharges, and/or achieve the interim and final numeric goals identified under Provision B.3.a, the Copermittees must identify the strategies that will be implemented in each Watershed Management Area as follows:

(1) Jurisdictional Strategies

- (a) Each Copermittee in the Watershed Management Area must identify the strategies that will be implemented within its jurisdiction as part of its jurisdictional runoff management program requirements under Provisions E.2 through E.7, including descriptions of the following:
 - (i) For each of the inventories developed for its jurisdiction, as required

- under Provisions D.2.a.(1), E.3.e.(2), E.4.b, and E.5.a, each Copermittee must identify the known and suspected areas or sources causing or contributing to the highest priority water quality conditions in the Watershed Management Area that the Copermittee will focus on in its efforts to effectively prohibit non-storm water discharges to its MS4, reduce pollutants in storm water discharges from its MS4 to the MEP, and achieve the interim and final numeric goals identified under Provision B.3.a;
- (ii) BMPs that each Copermittee will implement, or require to be implemented, as applicable, for those areas or sources within its jurisdiction;
 - (iii) Education programs that each Copermittee will implement, as applicable, for those areas or sources within its jurisdiction;
 - (iv) Frequencies that each Copermittee will conduct inspections on those areas or sources within its jurisdiction;
 - (v) Incentive and enforcement programs that each Copermittee will implement, as applicable, for those areas or sources within its jurisdiction; and
 - (vi) Any other BMPs, incentives, or programs that each Copermittee will implement for those areas or sources within its jurisdiction.
- (b) Identify the optional jurisdictional strategies that each Copermittee will implement within its jurisdiction, as necessary, to effectively prohibit non-storm water discharges to its MS4, reduce pollutants in storm water discharges from its MS4 to the MEP, protect the beneficial uses of receiving waters from MS4 discharges, and/or achieve the interim and final numeric goals identified under Provision B.3.a. Descriptions of the optional jurisdictional strategies must include:
- (i) BMPs, incentives, or programs that may be implemented by the Copermittee within its jurisdiction in addition to the requirements of Provisions B.3.b.(1)(a);
 - (ii) Incentives or programs that may be implemented by the Copermittee to encourage or implement projects to retrofit areas of existing development within its jurisdiction;
 - (iii) Incentives or programs that may be implemented by the Copermittee to encourage or implement projects that will rehabilitate the conditions of channels or habitats within its jurisdiction;
 - (iv) The funds and/or resources that must be secured by the Copermittee to implement the optional strategies described for Provisions B.3.b.(1)(b)(i)-(iii) within its jurisdiction; and

- (v) The circumstances necessary to trigger implementation of the optional jurisdictional strategies, in addition to the requirements of Provision B.3.b.(1)(a), to achieve the interim and final numeric goals within the schedules established under Provision B.3.a.

- (c) Identify the strategies that will be implemented by the Copermittee in coordination with or with the cooperation of other agencies (e.g. Caltrans, water districts, school districts) and/or entities (e.g. non-governmental organizations) within its jurisdiction.

(2) Watershed Management Area Strategies

The Copermittees must identify the optional regional or multi-jurisdictional strategies that will be implemented in the Watershed Management Area, as necessary, to effectively prohibit non-storm water discharges to the MS4, reduce pollutants in storm water discharges from the MS4 to the MEP, protect the beneficial uses of receiving waters from MS4 discharges, and/or achieve the interim and final numeric goals identified under Provision B.3.a.

Descriptions of the optional regional or multi-jurisdictional strategies must include:

- (a) Regional or multi-jurisdictional BMPs, incentives, or programs that may be implemented by the Copermittees in the Watershed Management Area;
- (b) Incentives or programs that may be implemented by the Copermittees in the Watershed Management Area to encourage or implement regional or multi-jurisdictional projects to retrofit areas of existing development;
- (c) Incentives or programs that may be implemented by the Copermittees to encourage or implement regional or multi-jurisdictional projects that will rehabilitate the conditions of channels, streams, or habitats within the Watershed Management Area;
- (d) The funds and/or resources that must be secured by the Copermittees to implement the optional strategies described for Provisions B.3.b.(2)(a)-(c) within the Watershed Management Area; and
- (e) The circumstances necessary to trigger implementation of the optional regional or multi-jurisdictional strategies to achieve the interim and final numeric goals within the schedules established under Provision B.3.a.

(3) Schedules for Implementing Strategies

The Copermittees must develop reasonable schedules for implementing the water quality improvement strategies identified under Provisions B.3.b.(1) and B.3.b.(2) to achieve the interim and final numeric goals identified and

schedules established under Provision B.3.a. The Copermittees must incorporate the schedules to implement the water quality improvement strategies into the Water Quality Improvement Plan as follows:

(a) Each Copermittee must develop schedules for the jurisdictional strategies identified pursuant to Provisions B.3.b.(1)(a)-(b). Each schedule must specify:

- (i) If each jurisdictional strategy identified pursuant to Provision B.3.b.(1)(a) will or will not be initiated upon acceptance of the Water Quality Improvement Plan;
- (ii) For each jurisdictional strategy identified pursuant to Provision B.3.b.(1)(a) that will not be initiated upon ~~acceptance~~approval of the Water Quality Improvement Plan, the shortest practicable time in which each jurisdictional strategy will be initiated after acceptance of the Water Quality Improvement Plan;
- (iii) For each optional jurisdictional strategy identified pursuant to Provision B.3.b.(1)(b), a realistic assessment of the shortest practicable time required to:
 - [a] Secure the resources needed to fund the optional jurisdictional strategy, and
 - [b] Procure the resources, materials, labor, and applicable permits necessary to initiate implementation of the optional jurisdictional strategy;
- (iv) If each jurisdictional strategy identified pursuant to Provisions B.3.b.(1)(a)-(b) is expected to be continuously implemented (e.g. inspections) or completed within a schedule (e.g. construction of structural BMP); and
- (v) If a jurisdictional strategy identified pursuant to Provisions B.3.b.(1)(a)-(b) is expected to be completed within a schedule, the anticipated time to complete based on a realistic assessment of the shortest practicable time required.

(b) The Copermittees in the Watershed Management Area must develop schedules for the regional or multi-jurisdictional strategies identified pursuant to Provision B.3.b.(2). Each schedule must specify:

- (i) A realistic assessment of the shortest practicable time to:
 - [a] Secure the resources needed to fund the optional regional or multi-jurisdictional strategy, and
 - [b] Procure the resources, materials, labor, and permits necessary to initiate the implementation of the optional regional or multi-jurisdictional strategy;

- (ii) If each regional or multi-jurisdictional strategy identified pursuant to Provision B.3.b.(2) is expected to be continuously implemented (e.g. inspections) or completed within a schedule (e.g. construction of structural BMP); and
- (iii) If a regional or multi-jurisdictional strategy and/or activity identified pursuant to Provisions B.3.b.(2) is expected to be completed within a schedule, the anticipated time to complete based on a realistic assessment of the shortest practicable time required.

(4) Optional Watershed Management Area Analysis

- (a) For each Watershed Management Area, the Copermittees have the option to perform a Watershed Management Area Analysis for the purpose of developing watershed-specific requirements for structural BMP implementation, as described in Provision E.3.c.(3). The Watershed Management Area Analysis must include GIS layers (maps) as output. The analysis must include the following information, to the extent it is available, in order to characterize the Watershed Management Areas:
 - (i) A description of dominant hydrologic processes, such as areas where infiltration or overland flow likely dominates;
 - (ii) A description of existing streams in the watershed, including bed material and composition, and if they are perennial or ephemeral;
 - (iii) Current and anticipated future land uses;
 - (iv) Potential coarse sediment yield areas; and
 - (v) Locations of existing flood control structures and channel structures, such as stream armoring, constrictions, grade control structures, and hydromodification or flood management basins.
- (b) The Copermittees must use the results of the Watershed Management Area Analysis performed pursuant to Provision B.3.b.(4)(a) to identify and compile a list of candidate projects that could potentially be used as alternative compliance options for Priority Development Projects, to be implemented in lieu of onsite structural BMP performance requirements described in Provisions E.3.c.(1) and E.3.c.(2). Specifically, the Copermittees must identify opportunities to be included in the list of candidate projects in each Watershed Management Area, such as:
 - (i) Stream or riparian area rehabilitation;
 - (ii) Retrofitting existing infrastructure to incorporate storm water retention or treatment;
 - (iii) Regional BMPs;

- (iv) Groundwater recharge projects;
 - (v) Water supply augmentation projects; and
 - (vi) Land purchases to preserve floodplain functions.
- (c) The Copermittees must use the results of the Watershed Management Area Analysis performed pursuant to Provision B.3.b.(4)(a) to identify areas within the Watershed Management Area where it is appropriate to allow Priority Development Projects to be exempt from the hydromodification management BMP performance requirements described in Provision E.3.c.(2), including supporting rationale.

4. Water Quality Improvement Monitoring and Assessment Program

- a. The Copermittees in each Watershed Management Area must develop and incorporate an integrated monitoring and assessment program into the Water Quality Improvement Plan that assesses: 1) the progress toward achieving the numeric goals and schedules, 2) the progress toward addressing the highest priority water quality conditions for each Watershed Management Area, and 3) each Copermittee's overall efforts to implement the Water Quality Improvement Plan.
- b. The monitoring and assessment program must incorporate the monitoring and assessment requirements of Provision D, which may allow the Copermittees to modify the program to be consistent with and focus on the highest priority water quality conditions for each Watershed Management Area.
- c. For Watershed Management Areas with applicable TMDLs, the monitoring and assessment program must incorporate the specific monitoring and assessment requirements of Attachment E.
- d. For Watershed Management Areas with any ASBS, the water quality monitoring and assessment program must incorporate the monitoring requirements of Attachment B to State Water Board Resolution No. 2012-0012 (see Attachment A).

5. Iterative Approach and Adaptive Management Process

The Copermittees in each Watershed Management Area must implement the iterative approach pursuant to Provision A.4 to adapt the Water Quality Improvement Plan, monitoring and assessment program, and jurisdictional runoff management programs to become more effective toward achieving compliance with Provisions A.1.a, A.1.c and A.2.a, and must include the following:

- PROVISION B: WATER QUALITY IMPROVEMENT PLANS
- B.3. Water Quality Improvement Goals, Strategies and Schedules
- B.4. Water Quality Improvement Monitoring and Assessment Program
- B.5. Iterative Approach and Adaptive Management Process

a. RE-EVALUATION OF PRIORITY WATER QUALITY CONDITIONS

The priority water quality conditions and potential water quality improvement strategies included in the Water Quality Improvement Plan pursuant to Provisions B.2.c and B.2.e may be re-evaluated by the Copermittees as needed during the term of this Order as part of the Water Quality Improvement Plan Annual Report. Re-evaluation and recommendations for modifications to the priority water quality conditions and potential water quality improvement strategies must be provided in the Report of Waste Discharge, and must consider the following:

- (1) Achieving the outcome of improved water quality in MS4 discharges and receiving waters through implementation of the water quality improvement strategies identified in the Water Quality Improvement Plan;
- (2) New information developed when the requirements of Provisions B.2.a-c have been re-evaluated;
- (3) Spatial and temporal accuracy of monitoring data collected to inform prioritization of water quality conditions and implementation strategies to address the highest priority water quality conditions;
- (4) Availability of new information and data from sources other than the jurisdictional runoff management programs within the Watershed Management Area that informs the effectiveness of the actions implemented by the Copermittees;
- (5) San Diego Water Board recommendations; and
- (6) Recommendations for modifications solicited through a public participation process.

b. ADAPTATION OF GOALS, STRATEGIES AND SCHEDULES

The water quality improvement goals, strategies and schedules, included in the Water Quality Improvement Plan pursuant to Provisions B.3, must be re-evaluated and adapted as new information becomes available to result in more effective and efficient measures to address the highest priority water quality conditions identified pursuant to Provision B.2.c. Re-evaluation of and modifications to the water quality improvement goals, strategies and schedules must be provided in the Water Quality Improvement Plan Annual Report, and must consider the following:

- (1) Modifications to the priority water quality conditions based on Provision B.5.a;

- (2) Progress toward achieving interim and final numeric goals in receiving waters and MS4 discharges for the highest priority water quality conditions in the Watershed Management Area,
- (3) Progress toward achieving outcomes according to established schedules;
- (4) New policies or regulations that may affect identified numeric goals;
- (5) Measurable or demonstrable reductions of non-storm water discharges to and from each Copermittee's MS4;
- (6) Measurable or demonstrable reductions of pollutants in storm water discharges from each Copermittee's MS4 to the MEP;
- (7) New information developed when the requirements of Provisions B.2.b and B.2.d have been re-evaluated;
- (8) Efficiency in implementing the Water Quality Improvement Plan;
- (9) San Diego Water Board recommendations; and
- (10) Recommendations for modifications solicited through a public participation process.

c. ADAPTATION OF MONITORING AND ASSESSMENT PROGRAM

The water quality improvement monitoring and assessment program, included in the Water Quality Improvement Plan pursuant to Provision B.4, must be re-evaluated and adapted when new information becomes available. Re-evaluation and recommendations for modifications to the monitoring and assessment program, pursuant to the requirements of Provision D, may be provided in the Water Quality Improvement Plan Annual Report, but must be provided in the Report of Waste Discharge.

6. Water Quality Improvement Plan Submittal, Updates, and Implementation

- a. The Copermittees must submit and commence implementation of the Water Quality Improvement Plans in accordance with the requirements of Provision F.1.
- b. The Copermittees must submit proposed updates to the Water Quality Improvement Plan for acceptance by the San Diego Water Board Executive Officer in accordance with the requirements of Provision F.2.c.

PROVISION B: WATER QUALITY IMPROVEMENT PLANS

B.5. Iterative Approach and Adaptive Management Process

B.6. Water Quality Improvement Plan Submittal, Updates, and Implementation

C. ACTION LEVELS

The purpose of this provision is for the Copermittees to incorporate numeric action levels in the Water Quality Improvement Plans. The goal of the action levels is to guide Water Quality Improvement Plan implementation efforts and measure progress towards the protection of water quality and designated beneficial uses of waters of the state from adverse impacts caused or contributed to by MS4 discharges. This goal will be accomplished through monitoring and assessing the quality of the MS4 discharges during the implementation of the Water Quality Improvement Plans.

1. Non-Storm Water Action Levels⁸

The Copermittees must develop and incorporate numeric non-storm water action levels (NALs) into the Water Quality Improvement Plan to: 1) support the development and prioritization of water quality improvement strategies for effectively prohibiting non-storm water discharges to the MS4s, 2) assess the effectiveness of the water quality improvement strategies toward addressing MS4 non-storm water discharges, required pursuant to Provision D.4.b.(1), and 3) support the detection and elimination of non-storm water and illicit discharges to the MS4, required pursuant to Provision E.2.⁹

a. The following NALs must be incorporated:

(1) Non-Storm Water Discharges from MS4s to Ocean Surf Zone

Table C-1. Non-Storm Water Action Levels for Discharges from MS4s to Ocean Surf Zone

Parameter	Units	AMAL	MDAL	Instantaneous Maximum	Basis
Total Coliform	MPN/100 ml	1,000	-	10,000/1,000 ¹	OP
Fecal Coliform	MPN/100 ml	200 ²	-	400	OP
<i>Enterococci</i>	MPN/100 ml	35	-	104 ³	OP

Abbreviations/Acronyms

AMAL – average monthly action level
 OP – Ocean Plan water quality objective

MDAL – maximum daily action level
 MPN/100 ml – most probable number per 100 milliliters

Notes:

- Total coliform density NAL is 1,000 MPN/100 ml when the fecal/total coliform ratio exceeds 0.1.
- Fecal coliform density NAL is 200 MPN per 100 ml during any 30 day period.
- This value has been set to the Basin Plan water quality objective for saltwater “designated beach areas.”

⁸ NALs incorporated into the Water Quality Improvement Plans are not considered by the San Diego Water Board to be enforceable effluent limitations, unless the NAL is based on a WQBEL expressed as an interim or final effluent limitation for a TMDL in Attachment E and the interim or final compliance date has passed.

⁹ The Copermittees may utilize NALs or other benchmarks currently established by the Copermittees as interim NALs until the Water Quality Improvement Plans are accepted by the San Diego Water Board Executive Officer.

(2) Non-Storm Water Discharges from MS4s to Bays, Harbors, and Lagoons/Estuaries

Table C-2. Non-Storm Water Action Levels for Discharges from MS4s to Bays, Harbors, and Lagoons/Estuaries

Parameter	Units	AMAL	MDAL	Instantaneous Maximum	Basis
Turbidity	NTU	75	-	225	OP
pH	Units	Within limit of 6.0 to 9.0 at all times			OP
Fecal Coliform	MPN/100 ml	200 ¹	-	400 ²	BP
<i>Enterococci</i>	MPN/100 ml	35	-	104 ³	BP
Priority Pollutants	µg/L	See Table C-3			

Abbreviations/Acronyms:

AMAL – average monthly action level
 OP – Ocean Plan water quality objective
 NTU – Nephelometric Turbidity Units
 µg/L – micrograms per liter

MDAL – maximum daily action level
 BP – Basin Plan water quality objective
 MPN/100 ml – most probable number per 100 milliliters

Notes:

- Based on a minimum of not less than five samples for any 30-day period.
- The NAL is reached if more than 10 percent of total samples exceed 400 MPN per 100 ml during any 30 day period.
- This value has been set to the Basin Plan water quality objective for saltwater “designated beach areas” and is not applicable to water bodies that are not designated with the water contact recreation (REC-1) beneficial use.

Table C-3. Non-Storm Water Action Levels for Priority Pollutants

Parameter	Units	Freshwater (CTR)		Saltwater (CTR)	
		MDAL	AMAL	MDAL	AMAL
Cadmium	µg/L	**	**	16	8
Copper	µg/L	*	*	5.8	2.9
Chromium III	µg/L	**	**	-	-
Chromium VI	µg/L	16	8.1	83	41
Lead	µg/L	*	*	14	2.9
Nickel	µg/L	**	**	14	6.8
Silver	µg/L	*	*	2.2	1.1
Zinc	µg/L	*	*	95	47

Abbreviations/Acronyms:

CTR – California Toxic Rule
 AMAL – average monthly action level
 µg/L – micrograms per liter
 MDAL – maximum daily action level

Notes:

- * Action levels developed on a case-by-case basis (see below)
 ** Action levels developed on a case-by-case basis (see below), but calculated criteria are not to exceed Maximum Contaminant Levels (MCLs) under the California Code of Regulations, Title 22, Division 4, Chapter 15, Article 4, Section 64431

The Cadmium, Copper, Chromium (III), Lead, Nickel, Silver and Zinc NALs for MS4 discharges to freshwater receiving waters will be developed on a case-by-case basis based on site-specific water quality data (receiving water hardness). For these priority pollutants, refer to 40 CFR 131.38(b)(2).

(3) Non-Storm Water Discharges from MS4s to Inland Surface Waters

Table C-4. Non-Storm Water Action Levels for Discharges from MS4s to Inland Surface Waters

Parameter	Units	AMAL	MDAL	Instantaneous Maximum	Basis
Dissolved Oxygen	mg/L	Not less than 5.0 in WARM waters and not less than 6.0 in COLD waters			BP
Turbidity	NTU	-	20	See MDAL	BP
pH	Units	Within limit of 6.5 to 8.5 at all times			BP
Fecal Coliform	MPN/100 ml	200 ¹	-	400 ²	BP
<i>Enterococci</i>	MPN/100 ml	33	-	61 ³	BP
Total Nitrogen	mg/L	-	1.0	See MDAL	BP
Total Phosphorus	mg/L	-	0.1	See MDAL	BP
MBAS	mg/L	-	0.5	See MDAL	BP
Iron	mg/L	-	0.3	See MDAL	BP
Manganese	mg/L	-	0.05	See MDAL	BP
Priority Pollutants	µg/L	See Table C-3			

Abbreviations/Acronyms:

AMAL – average monthly action level
 BP – Basin Plan water quality objective
 COLD – cold freshwater habitat beneficial use
 NTU – Nephelometric Turbidity Units
 mg/L – milligrams per liter

MDAL – maximum daily action level
 WARM – warm freshwater habitat beneficial use
 MBAS – Methylene Blue Active Substances
 MPN/100 ml – most probable number per 100 milliliters
 µg/L – micrograms per liter

Notes:

1. Based on a minimum of not less than five samples for any 30-day period.
2. The NAL is reached if more than 10 percent of total samples exceed 400 MPN per 100 ml during any 30 day period.
3. This value has been set to the Basin Plan water quality objective for freshwater “designated beach areas” and is not applicable to water bodies that are not designated with the water contact recreation (REC-1) beneficial use.

- b. If not identified in Provision C.1.a, NALs must be identified, developed and incorporated in the Water Quality Improvement Plan for any pollutants or waste constituents that cause or contribute, or are threatening to cause or contribute to a condition of pollution or nuisance in receiving waters associated with the highest priority water quality conditions related to non-storm water discharges from the MS4s. NALs must be based on:

(1) Applicable water quality standards which may be dependent upon site-specific or receiving water-specific conditions or assumptions to be identified by the Copermittees; or

(2) Applicable numeric WQBELs required to meet the WLAs established for the TMDLs in Attachment E to this Order.

- c. For the NALs incorporated into the Water Quality Improvement Plan, the Copermittees may develop and incorporate secondary NALs specific to the Watershed Management Area at levels greater than the NALs required by Provisions C.1.a and C.1.b which can be utilized to further refine the prioritization and assessment of water quality improvement strategies for effectively prohibiting non-storm water discharges to the MS4s, as well as the detection and elimination of non-storm water and illicit discharges to and from the MS4. The

secondary NALs may be developed using an approach acceptable to the San Diego Water Board.

- d. Dry weather monitoring data from MS4 outfalls collected in accordance with Provision D.2.b may be utilized to develop or revise NALs based on watershed-specific data, subject to San Diego Water Board Executive Officer approval.

2. Storm Water Action Levels¹⁰

The Copermittees must develop and incorporate numeric storm water action levels (SALs) in the Water Quality Improvement Plans to: 1) support the development and prioritization of water quality improvement strategies for reducing pollutants in storm water discharges from the MS4s, and 2) assess the effectiveness of the water quality improvement strategies toward reducing pollutants in storm water discharges, required pursuant to Provision D.4.b.(2).¹¹

- a. The following SALs for discharges of storm water from the MS4 must be incorporated:

Table C-5. Storm Water Action Levels for Discharges from MS4s to Receiving Waters

Parameter	Units	Action Level
Turbidity	NTU	126
Nitrate & Nitrite (Total)	mg/L	2.6
Phosphorus (Total P)	mg/L	1.46
Cadmium (Total Cd)*	µg/L	3.0
Copper (Total Cu)*	µg/L	127
Lead (Total Pb)*	µg/L	250
Zinc (Total Zn)*	µg/L	976

Abbreviations/Acronyms:

NTU – Nephelometric Turbidity Units

mg/L – milligrams per liter

µg/L – micrograms per liter

Notes:

- * The sampling must include a measure of receiving water hardness at each MS4 outfall. If a total metal concentration exceeds the corresponding metals SAL in Table C-5, that concentration must be compared to the California Toxics Rule criteria and the USEPA 1-hour maximum concentration for the detected level of receiving water hardness associated with that sample. If it is determined that the sample's total metal concentration for that specific metal exceeds that SAL, but does not exceed the applicable USEPA 1-hour maximum concentration criterion for the measured level of hardness, then the sample result will not be considered above the SAL for that measurement.

¹⁰ SALs incorporated into the Water Quality Improvement Plans are not considered by the San Diego Water Board to be enforceable effluent limitations, unless the SAL is based on a WQBEL expressed as an interim or final effluent limitation for a TMDL in Attachment E and the interim or final compliance date has passed.

¹¹ The Copermittees may utilize SALs or other benchmarks currently established by the Copermittees as interim SALs until the Water Quality Improvement Plans are accepted by the San Diego Water Board Executive Officer.

- b.** If not identified in Provision C.2.a, SALs must be identified, developed and incorporated in the Water Quality Improvement Plan for pollutants or waste constituents that cause or contribute, or are threatening to cause or contribute to a condition of pollution or nuisance in receiving waters associated with the highest priority water quality conditions related to storm water discharges from the MS4s. SALs must be based on:
- (1) Federal and State water quality guidance and/or water quality standards; and
 - (2) Site-specific or receiving water-specific conditions; or
 - (3) Applicable numeric WQBELs required to meet the WLAs established for the TMDLs in Attachment E to this Order.
- c.** For the SALs incorporated into the Water Quality Improvement Plan, the Copermitees may develop and incorporate secondary SALs specific to the Watershed Management Area at levels greater than the SALs required by Provisions C.2.a and C.2.b which can be utilized to further refine the prioritization and assessment of water quality improvement strategies for reducing pollutants in storm water discharges from the MS4s. The secondary SALs may be developed based on the approaches recommended by the State Water Board's Storm Water Panel¹² or using an approach acceptable to the San Diego Water Board.
- d.** Wet weather monitoring data from MS4 outfalls collected in accordance with Provision D.2.c may be used to develop or revise SALs based upon watershed-specific data, subject to San Diego Water Board Executive Officer approval.

¹² Storm Water Panel Recommendations to the California State Water Resources Control Board: The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities (June 2006)

D. MONITORING AND ASSESSMENT PROGRAM REQUIREMENTS

The purpose of this provision is for the Copermitees to monitor and assess the impact on the conditions of receiving waters caused by discharges from the Copermitees' MS4s under wet weather and dry weather conditions. The goal of the monitoring and assessment program is to inform the Copermitees about the nexus between the health of receiving waters and the water quality condition of the discharges from their MS4s. This goal will be accomplished through monitoring and assessing the conditions of the receiving waters, discharges from the MS4s, pollutant sources and/or stressors, and effectiveness of the water quality improvement strategies implemented as part of the Water Quality Improvement Plans.

1. Receiving Water Monitoring Requirements

The Copermitees must develop and conduct a program to monitor the condition of the receiving waters in each Watershed Management Area during dry weather and wet weather. **Following San Diego Water Board acceptance of the Water Quality Improvement Plans for each Watershed Management Area, the Copermitees must conduct long-term receiving water monitoring during implementation of the Water Quality Improvement Plan to assess the long term trends and determine if conditions in receiving waters are improving.** Any available monitoring data not collected specifically for this Order that meet the quality assurance criteria of the Copermitees and the monitoring requirements of this Order may be utilized by the Copermitees. The Copermitees must conduct the following receiving water monitoring procedures:

a. TRANSITIONAL RECEIVING WATER MONITORING

Until the monitoring requirements and schedules of Provisions D.1.b-e are incorporated into a Water Quality Improvement Plan that is accepted by the San Diego Water Board pursuant to Provision F.1.b, the Copermitees must conduct the following receiving water monitoring in the Watershed Management Area:

- (1) Continue the receiving water monitoring programs required in Order Nos. R9-2007-0001 (Monitoring and Reporting Program No. R9-2007-0001 Sections II.A.1-A.5), R9-2009-0002, and R9-2010-0016, unless the Executive Officer provides conditional approval for Copermitees to proceed with implementation of the proposed monitoring and assessment program developed in accordance with Provision B.4;
- (2) Continue the monitoring in the Hydromodification Management Plans approved by the San Diego Water Board;
- (3) Participate in the following regional receiving water monitoring programs, as applicable to the Watershed Management Area:

- (a) Storm Water Monitoring Coalition Regional Monitoring,
 - (b) Southern California Bight Regional Monitoring, and
 - (c) Sediment Quality Monitoring;
- (4) Implement the monitoring programs developed as part of any implementation plans or load reduction plans (e.g. Bacteria Load Reduction Plans, Comprehensive Load Reduction Plans) for the TMDLs in Attachment E to this Order; and
 - (5) For Watershed Management Areas with ASBS, implement the monitoring requirements of Attachment B to State Water Board Resolution No. 2012-0012, included in Attachment A to this Order.

b. LONG-TERM RECEIVING WATER MONITORING STATIONS

The Copermittees must select at least one long-term receiving water monitoring station from among the existing mass loading stations, temporary watershed assessment stations, bioassessment stations, and stream assessment stations previously established by the Copermittees to be representative of the receiving water quality in the Watershed Management Area. Additional long-term receiving water monitoring stations must be selected where necessary to support the implementation and adaptation of the Water Quality Improvement Plan.

c. DRY WEATHER RECEIVING WATER MONITORING

During the term of the Order, the Copermittees **must perform monitoring during at least three dry weather monitoring events at each of the long-term receiving water monitoring stations.** At least one monitoring event must be conducted during the dry season (May 1 – September 30) and at least one monitoring event must be conducted during a dry weather period during the wet season (October 1 – April 30), after the first wet weather event of the season, with an antecedent dry period of at least 72 hours following a storm event producing measureable rainfall of greater than 0.1 inch.

(1) Dry Weather Receiving Water Field Observations

For each dry weather monitoring event, the Copermittees must record field observations consistent with Table D-1 at each long-term receiving water monitoring station.

Table D-1. Field Observations for Receiving Water Monitoring Stations

Field Observations
<ul style="list-style-type: none">• Station identification and location• Presence of flow, or pooled or ponded water• If flow is present:<ul style="list-style-type: none">- Flow estimation (i.e. width of water surface, approximate depth of water, approximate flow velocity, flow rate)- Flow characteristics (i.e. presence of floatables, surface scum, sheens, odor, color)• If pooled or ponded water is present:<ul style="list-style-type: none">- Characteristics of pooled or ponded water (i.e. presence of floatables, surface scum, sheens, odor, color)• Station description (i.e. deposits or stains, vegetation condition, structural condition, and observable biology)• Presence and assessment of trash in and around station

(2) Dry Weather Receiving Water Field Monitoring

For each dry weather monitoring event, if conditions allow the collection of the data, the Copermittees must monitor and record the parameters in Table D-2 at each long-term receiving water monitoring station.

Table D-2. Field Monitoring Parameters for Receiving Water Monitoring Stations

Parameters
<ul style="list-style-type: none">• pH• Temperature• Specific conductivity• Dissolved oxygen• Turbidity

(3) Dry Weather Receiving Water Analytical Monitoring

For each dry weather monitoring event, the Copermittees must collect and analyze samples from each long-term receiving water monitoring station as follows:

- (a) Analytes that are field measured are not required to be analyzed by a laboratory;
- (b) The Copermittees must implement consistent sample collection methods for regional comparability of data, unless site-specific conditions indicate the need for alternate methods;
- (c) Grab samples may be collected for pH, temperature, specific conductivity, dissolved oxygen, turbidity, hardness, and indicator bacteria;

- (d) For all other constituents, composite samples must be collected for a duration adequate to be representative of changes in pollutant concentrations and runoff flows using one of the following techniques:
- (i) Time-weighted composites composed of 24 discrete hourly samples, which may be collected through the use of automated equipment, or
 - (ii) Flow-weighted composites collected over a typical 24-hour period, which may be collected through the use of automated equipment;
- (e) Only one analysis of the composite of aliquots is required;
- (f) Analysis for the following constituents is required:
- (i) Constituents contributing to the highest priority water quality conditions identified in the Water Quality Improvement Plan,
 - (ii) Constituents listed as a cause for impairment of receiving waters in the Watershed Management Area listed on the CWA section 303(d) List,
 - (iii) Constituents for implementation plans or load reduction plans (e.g. Bacteria Load Reduction Plans, Comprehensive Load Reduction Plans) developed for watersheds where the Copermitttees are listed responsible parties under the TMDLs in Attachment E to this Order,
 - (iv) Applicable NAL constituents, and
 - (v) Constituents listed in Table D-3.

Table D-3. Analytical Monitoring Constituents for Receiving Water Monitoring Stations

Conventionals, Nutrients	Metals (Total and Dissolved)	Pesticides	Indicator Bacteria
<ul style="list-style-type: none"> • Total Dissolved Solids • Total Suspended Solids • Turbidity • Total Hardness • Total Organic Carbon • Dissolved Organic Carbon • Sulfate • Methylene Blue Active Substances (MBAS) • Total Phosphorus • Orthophosphate • Nitrite¹ • Nitrate¹ • Total Kjeldhal Nitrogen • Ammonia 	<ul style="list-style-type: none"> • Arsenic • Cadmium • Chromium • Copper • Iron • Lead • Mercury • Nickel • Selenium • Thallium • Zinc 	<ul style="list-style-type: none"> • Organophosphate Pesticides • Pyrethroid Pesticides 	<ul style="list-style-type: none"> • Total Coliform • Fecal Coliform² • <i>Enterococcus</i>

Notes:

- 1. Nitrite and nitrate may be combined and reported as nitrite+nitrate.
- 2. *E. Coli* may be substituted for Fecal Coliform.

(4) Dry Weather Receiving Water Toxicity Monitoring

For each dry weather monitoring event, the Copermittees must collect grab or composite samples from each long-term receiving water monitoring station to be analyzed for aquatic toxicity in accordance with Table D-4. When the State Water Board’s Policy for Toxicity Assessment and Control (Toxicity Policy) is approved and in effect, the San Diego Water Board Executive Officer may direct the Copermittees to replace current toxicity program elements with standardized procedures in the Toxicity Policy.

Table D-4. Dry Weather Chronic¹ Toxicity Testing for Receiving Water Monitoring Stations

Organism	Units	Test	USEPA Protocol
Freshwater			
<i>Pimephales promelas</i> (Fathead Minnow)	Pass / Fail	Larval Survival and Growth	EPA-821-R-02-013
<i>Ceriodaphnia dubia</i> (Daphnid)	Pass / Fail	Survival and Production	EPA-821-R-02-013
<i>Selenastrum capricornutum</i> (Green Algae)	Pass / Fail	Growth	EPA-821-R-02-013
Marine and Estuarine			
<i>Strongylocentrotus purpuratus</i> (Purple Sea Urchin)	Pass / Fail	Embryo-Larval Development	EPA-600-R-95-136

Notes:

1. Chronic toxicity testing is not required at receiving water monitoring stations located at mass loading stations if the channel flows are diverted year-round during dry weather conditions to the sanitary sewer for treatment.

(a) Freshwater Test Species and Methods: If samples are collected in receiving waters with salinity less than 1 ppt, the Copermittees must follow the methods for chronic toxicity tests as established in 40 CFR 136.3 using a single-concentration test design for routine monitoring, or a five-concentration test design for additional toxicity testing if the limitation is exceeded. The Copermittees must estimate the critical life stage chronic toxicity on undiluted samples in accordance with species and short term test methods in Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms (EPA-821-R-02-013; Table IA, 40 CFR 136). Additional test species may be used by the Copermittees if approved by the San Diego Water Board Executive Officer. The Copermittees must conduct:

- (i) A static renewal toxicity test with the fathead minnow, *Pimephales promelas* (Larval Survival and Growth Test Method 1000.0);
- (ii) A static renewal toxicity test with the daphnid, *Ceriodaphnia dubia* (Survival and Reproduction Test Method 1002.0); and
- (iii) A static renewal toxicity test with the green alga, *Selenastrum capricornutum* (also named *Raphidocelis subcapitata*) (Growth Test Method 1003.0).

- (b) Marine and Estuarine Test Species and Methods: If samples are collected in receiving waters with salinity greater or equal to 1 ppt, the Copermittees must follow the methods for chronic toxicity tests as established in 40 CFR 136.3 using a single-concentration test design for routine monitoring, or a five-concentration test design for additional toxicity testing if the limitation is exceeded. The Copermittees must conduct the following critical life state chronic toxicity tests on undiluted samples in accordance with species and short term test methods in Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms (EPA-600-R-95-136; 1995). Artificial sea salts must be used to increase sample salinity. The Copermittees must conduct a static non-renewal toxicity test with the purple sea urchin, *Strongylocentrotus purpuratus* (Embryo-larval Development Test Method). Additional species may be used by the Copermittees if approved by the San Diego Water Board Executive Officer.
- (c) Holding Times: All toxicity tests must be conducted as soon as possible following sample collection. The 36-hour sample holding time for test initiation shall be targeted. However, no more than 72 hours shall elapse before the conclusion of sample collection and test initiation.
- (d) Test Species Sensitivity Screening: To determine the most sensitive test species for freshwater, the Copermittees must screen 2 wet weather and 2 dry weather toxicity tests with a vertebrate, an invertebrate, and a plant species. After this screening period, subsequent monitoring must be conducted using the most sensitive test species. Alternatively, if a sensitive test species has already been determined, or if there is prior knowledge of potential toxicant(s) and a test species is sensitive to such toxicant(s), then monitoring must be conducted using only that test species. Sensitive test species determinations must also consider the most sensitive test species used for proximal receiving water monitoring. Rescreening must occur once each permit term.
- (e) Chronic toxicity test biological endpoint data must be analyzed using the Test of Significant Toxicity t-test approach specified in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (USEPA, Office of Wastewater Management, Washington, D.C., EPA-833-R-10-003, 2010). For this monitoring program, the critical chronic instream waste concentration (IWC) is set at 100 percent receiving water (i.e. no dilution) for receiving water samples. A 100 percent receiving water and a control must be tested.
- (f) Toxicity Identification Evaluation (TIE) / Toxicity Reduction Evaluation (TRE): If chronic toxicity is detected in receiving waters, the Copermittees must discuss the need for conducting a TIE/TRE in the assessments required under Provision D.4.a.(2), and develop a plan for implementing the TIE/TRE to be incorporated in the Water Quality Improvement Plan.

(5) Dry Weather Receiving Water Bioassessment Monitoring

Bioassessment monitoring for each long-term receiving water monitoring station is required at least once during the term of this Order. The Copermittees must conduct bioassessment monitoring during at least one dry weather monitoring event at each long-term receiving water monitoring station as follows:

- (a) The following bioassessment samples and measurements must be collected:
 - (i) Macroinvertebrate samples must be collected in accordance with the “Reachwide Benthos (Multihabitat) Procedure” in the most current Surface Water Ambient Monitoring Program (SWAMP) Bioassessment Standard Operating Procedures (SOP), and amendments, as applicable;¹³
 - (ii) The “Full” suite of physical habitat characterization measurements must be collected in accordance with the most current SWAMP Bioassessment SOP, and as summarized in the SWAMP Stream Habitat Characterization Form – Full Version;¹⁴ and
 - (iii) Freshwater algae samples must be collected in accordance with the SWAMP Standard Operating Procedures for Collecting Algae Samples.¹⁵ Analysis of samples must include algal taxonomic composition (diatoms and soft algae) and algal biomass.
- (b) The bioassessment samples, measurements, and appropriate water chemistry data must be used to calculate the following:
 - (i) An Index of Biological Integrity (IBI) for macroinvertebrates for each monitoring station where bioassessment monitoring was conducted, based on the most current calculation method;¹⁶ and

¹³ Ode, P.R.. 2007. Standard operating procedures for collecting macroinvertebrate samples and associated physical and chemical data for ambient bioassessments in California. California State Water Resources Control Board Surface Water Ambient Monitoring Program (SWAMP) Bioassessment SOP 001. http://www.swrcb.ca.gov/water_issues/programs/swamp/tools.shtml#monitoring

¹⁴ Available at:
http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/reports/fieldforms_fullversion052908.pdf

¹⁵ Fetscher et al. 2009. Standard Operating Procedures for Collecting Stream Algae Samples and Associated Physical Habitat and Chemical Data for Ambient Bioassessments in California.

¹⁶ The most current calculation method at the time the Order was adopted is outlined in “A Quantitative Tool for Assessing the Integrity of Southern California Coastal Streams” (Ode, et al. 2005. Environmental Management. Vol. 35, No. 1, pp. 1-13). If an updated or new calculation method is developed, either both (i.e. current and updated/new) methods must be used, or historical IBIs must be recalculated with the updated or new calculation method.

- (ii) An IBI for algae for each monitoring station where bioassessment monitoring was conducted, when a calculation method is developed.¹⁷

- (c) In lieu of the requirements of Provision D.1.c.(5)(a), the Copermittees may conduct the bioassessment monitoring in accordance with the “Triad” assessment approach¹⁸ to calculate the IBIs required for Provision D.1.c.(5)(b). The Copermittees must conduct sampling, analysis, and reporting of specified in-stream biological and habitat data according to the protocols specified in the SCCWRP Technical Report No. 539, or subsequent protocols, if developed.

(6) Dry Weather Receiving Water Hydromodification Monitoring

In addition to the hydromodification monitoring conducted as part of the Copermittees’ Hydromodification Management Plans, hydromodification monitoring for each long-term receiving water monitoring station is required at least once during the term of this Order. The Copermittees must collect the following hydromodification monitoring observations and measurements within an appropriate domain of analysis during at least one dry weather monitoring event for each long-term receiving water monitoring station:

- (a) Channel conditions, including:
 - (i) Channel dimensions,
 - (ii) Hydrologic and geomorphic conditions, and
 - (iii) Presence and condition of vegetation and habitat;
- (b) Location of discharge points;
- (c) Habitat integrity;
- (d) Photo documentation of existing erosion and habitat impacts, with location (i.e. latitude and longitude coordinates) where photos were taken;
- (e) Measurement or estimate of dimensions of any existing channel bed or bank eroded areas, including length, width, and depth of any incisions; and

¹⁷ When a calculation method is developed, IBIs must be calculated for all available and appropriate historical data.

¹⁸ Stormwater Monitoring Coalition Model Monitoring Technical Committee, 2004. Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California. Technical Report #419. August 2004.

- (f) Known or suspected cause(s) of existing downstream erosion or habitat impact, including flow, soil, slope, and vegetation conditions, as well as upstream land uses and contributing new and existing development.

d. WET WEATHER RECEIVING WATER MONITORING

During the term of the Order, the Copermittees must perform monitoring during at least three wet weather monitoring events at each long-term receiving water monitoring station. At least one wet weather monitoring event must be conducted during the first wet weather event of the wet season (October 1 – April 30), and at least one wet weather monitoring event during a wet weather event that occurs after February 1.

(1) Wet Weather Receiving Water Field Observations

For each wet weather monitoring event, the following narrative descriptions and observations must be recorded at each long-term receiving water monitoring station:

- (a) A narrative description of the station that includes the location, date and duration of the storm event(s) sampled, rainfall estimates of the storm event, and the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event;
- (b) The flow rates and volumes measured or estimated (data from nearby USGS gauging stations may be utilized, or flow rates may be measured or estimated in accordance with the USEPA Storm Water Sampling Guidance Document (EPA-833-B-92-001), section 3.2.1, or other method proposed by the Copermittees that is acceptable to the San Diego Water Board);
- (c) Station condition (i.e. deposits or stains, vegetation condition, structural condition, observable biology); and
- (d) Presence and assessment of trash in and around station.

(2) Wet Weather Receiving Water Field Monitoring

For each wet weather monitoring event, the Copermittees must monitor and record the parameters in Table D-2 at each long-term receiving water monitoring station.

(3) Wet Weather Receiving Water Analytical Monitoring

For each wet weather monitoring event, the Copermittees must collect and analyze samples from each long-term receiving water monitoring station as follows:

- (a) Analytes that are field measured are not required to be analyzed by a laboratory;
- (b) The Copermittees must implement consistent sample collection methods for regional comparability of data, unless site-specific conditions indicate the need for alternate methods;
- (c) Grab samples may be collected for pH, temperature, specific conductivity, dissolved oxygen, turbidity, hardness, and indicator bacteria;
- (d) For all other constituents, composite samples must be collected for a duration adequate to be representative of changes in pollutant concentrations and runoff flows using one of the following techniques:
 - (i) Time-weighted composites composed of 24 discrete hourly samples, which may be collected through the use of automated equipment, or
 - (ii) Flow-weighted composites collected over the length of the storm event or a typical 24-hour period, which may be collected through the use of automated equipment;
- (e) Only one analysis of the composite of aliquots is required;
- (f) Analysis for the following constituents is required:
 - (i) Constituents contributing to the highest priority water quality conditions identified in the Water Quality Improvement Plan,
 - (ii) Constituents listed as a cause for impairment of receiving waters in the Watershed Management Area listed on the CWA section 303(d) List,
 - (iii) Constituents for implementation plans or load reduction plans (e.g. Bacteria Load Reduction Plans, Comprehensive Load Reduction Plans) developed for watersheds where the Copermittees are listed responsible parties under the TMDLs in Attachment E to this Order,
 - (iv) Applicable SAL constituents, and
 - (v) Constituents listed in Table D-3.

(4) Wet Weather Receiving Water Toxicity Monitoring

For each wet weather monitoring event, the Copermittees must collect grab or composite samples from each long-term receiving water monitoring station to be analyzed for chronic aquatic toxicity in accordance with Provisions D.1.c.(4)(a)-(f).

e. OTHER RECEIVING WATER MONITORING REQUIREMENTS

(1) Regional Monitoring

The Copermittees must participate in the following regional receiving waters monitoring programs, as applicable to the Watershed Management Area:

(a) Storm Water Monitoring Coalition Regional Monitoring; and

(b) Southern California Bight Regional Monitoring; and

(c) Unified Beach Water Quality Monitoring and Assessment Program. The Orange County Copermittees shall participate in and, together with South Orange County Wastewater Authority and Orange County Health Care Agency, shall share responsibility for implementation of a unified regional beach water quality monitoring and assessment program in south Orange County, as set forth in the October 2014 report, *Workgroup Recommendation for a Unified Beach Water Quality Monitoring and Assessment Program in South Orange County*, issued pursuant to CWC section 13383 and subject to future revision in the San Diego Water Board December 5, 2014 Letter Directive.

(2) Sediment Quality Monitoring

The Copermittees must perform sediment monitoring to assess compliance with sediment quality receiving water limits applicable to MS4 discharges to enclosed bays and estuaries. The monitoring may be performed either by individual or multiple Copermittees to assess compliance with receiving water limits, or through participation in a water body monitoring coalition. A Sediment Monitoring Plan which satisfies the requirements of the State Water Board's Water Quality Control Plan for Enclosed Bays and Estuaries of California – Part 1 Sediment Quality (Sediment Control Plan) must be submitted as part of the monitoring and assessment program in the Water Quality Improvement Plan.

(a) The Sediment Monitoring Plan design must include the following:

- (i) The elements required under Section VII.D (Receiving Water Limits Monitoring Frequency) and Section VII.E (Sediment Monitoring) of the Sediment Control Plan;
- (ii) A Quality Assurance Project Plan (QAPP) describing the project objectives and organization, functional activities, and quality assurance/quality control protocols for the water and sediment monitoring; and
- (iii) A schedule for completion of all sample collection and analysis activities and submission of Sediment Monitoring Reports.

- (b) The Copermitees must implement the Sediment Monitoring Plan in accordance with the schedule contained in the Sediment Monitoring Plan, unless otherwise directed in writing by the San Diego Water Board Executive Officer.
- (c) The Copermitees must incorporate a Sediment Monitoring Report as part of the Water Quality Improvement Plan Annual Report in accordance with the schedule contained in the Sediment Monitoring Plan, unless otherwise directed in writing by the San Diego Water Board Executive Officer. The Sediment Monitoring Report must contain the following information:
 - (i) Analysis: An evaluation, interpretation and tabulation of the water and sediment monitoring data, including interpretations and conclusions as to whether applicable Receiving Water Limitations in this Order have been attained at each sample station;
 - (ii) Sample Location Map: The locations, type, and number of samples must be identified and shown on a site map; and
 - (iii) California Environmental Data Exchange Network: A statement certifying that the monitoring data and results have been uploaded into the California Environmental Data Exchange Network (CEDEN).
- (d) Based on the Sediment Monitoring Report conclusions the San Diego Water Board may require a human health risk assessment to determine if the human health objective contained in Receiving Water Limitations in Provision A.2.a.(3)(b)(ii) has been attained at each sample station. In conducting a risk assessment, the Copermitees must consider any applicable and relevant information, including California Environmental Protection Agency's (Cal/EPA) Office of Environmental Health Hazard Assessment (OEHHA) policies for fish consumption and risk assessment, Cal/EPA's Department of Toxic Substances Control (DTSC) Risk Assessment, and USEPA Human Health Risk Assessment policies.

(3) ASBS Monitoring

For Watershed Management Areas with ASBS, the Copermitees must implement the monitoring requirements of Attachment B to State Water Board Resolution No. 2012-0012, included in Attachment A to this Order.

f. ALTERNATIVE WATERSHED MONITORING REQUIREMENTS

The San Diego Water Board may direct the Copermitees to participate in an effort to develop alternative watershed monitoring with other regulated entities, other interested parties, and the San Diego Water Board to refine, coordinate, and implement regional monitoring and assessment programs to determine the status and trends of water quality conditions in 1) coastal waters, 2) enclosed

bays, harbors, estuaries, and lagoons, and 3) streams.

2. MS4 Outfall Discharge Monitoring Requirements

The Copermittees must develop and conduct a program to monitor the discharges from the MS4 outfalls in each Watershed Management Area during dry weather and wet weather. Following San Diego Water Board acceptance of the Water Quality Improvement Plans for each Watershed Management Area, the Copermittees must conduct MS4 outfall discharge monitoring during implementation of the Water Quality Improvement Plan to assess the effectiveness of their jurisdictional runoff management programs toward effectively prohibiting non-storm water discharges into the MS4 and reducing pollutants in storm water discharges from their MS4s to the MEP. Any available monitoring data not collected specifically for this Order that meet the quality assurance criteria of the Copermittees and the monitoring requirements of this Order may be utilized by the Copermittees. The Copermittees must conduct the following MS4 outfall monitoring procedures:

a. **TRANSITIONAL MS4 OUTFALL DISCHARGE MONITORING**

Until the monitoring requirements and schedules of Provisions D.2.b-c are incorporated into a Water Quality Improvement Plan that is accepted by the San Diego Water Board pursuant to Provision F.1.b, the Copermittees must conduct the following MS4 outfall discharge monitoring in the Watershed Management Area:

(1) MS4 Outfall Discharge Monitoring Station Inventory

Each Copermittee must identify all major MS4 outfalls that discharge directly to receiving waters within its jurisdiction and geo-locate those outfalls on a map of the MS4 pursuant to Provision E.2.b.(1). This information must be compiled into a MS4 outfall discharge monitoring station inventory, and must include the following information:

- (a) Latitude and longitude of MS4 outfall point of discharge;
- (b) Watershed Management Area;
- (c) Hydrologic subarea;
- (d) Outlet size;
- (e) Accessibility (i.e. safety and without disturbance of critical habitat);
- (f) Approximate drainage area; and

- (g) Classification of whether the MS4 outfall is known to have persistent dry weather flows, transient dry weather flows, no dry weather flows, or unknown dry weather flows.

(2) **Transitional Dry Weather MS4 Outfall Discharge Field Screening Monitoring**

Until the monitoring requirements and schedules of Provision D.2.b are incorporated into a Water Quality Improvement Plan that is accepted by the San Diego Water Board pursuant to Provision F.1.b, each Copermittee must perform dry weather MS4 outfall field screening monitoring to identify non-storm water and illicit discharges within its jurisdiction in accordance with Provision E.2.c, to determine which discharges are transient flows and which are persistent flows, and prioritize the dry weather MS4 discharges that will be investigated and eliminated in accordance with Provision E.2.d.

(a) Transitional Dry Weather MS4 Outfall Discharge Field Screening Monitoring Frequency

Each Copermittee must field screen the MS4 outfalls in its inventory developed pursuant to Provision D.2.a.(1) as follows:

- (i) For Copermittees with less than 125 major MS4 outfalls that discharge to receiving waters within a Watershed Management Area, at least 80 percent of the outfalls must be visually inspected two times per year during dry weather conditions. For any Copermittee with portions of its jurisdiction in more than one Watershed Management Area and more than 500 major outfalls, see Provision D.2.a.(2)(a)(iv).
- (ii) For Copermittees with 125 major MS4 outfalls or more, but less than or equal to 500 that discharge to receiving waters within a Watershed Management Area, all the outfalls must be visually inspected at least annually during dry weather conditions. For any Copermittee with portions of its jurisdiction in more than one Watershed Management Area and more than 500 major outfalls, see Provision D.2.a.(2)(a)(iv).
- (iii) For Copermittees with more than 500 major MS4 outfalls that discharge to receiving waters within a Watershed Management Area, at least 500 outfalls must be visually inspected at least annually during dry weather conditions. For any Copermittee with portions of its jurisdiction in more than one Watershed Management Area and more than 500 major outfalls, see Provision D.2.a.(2)(a)(iv). Copermittees with more than 500 major MS4 outfalls within a Watershed Management Area must identify and prioritize at least 500 outfalls to be inspected considering the following:

- [a] Assessment of connectivity of the discharge to a flowing receiving water;

- [b] Reported exceedances of NALs in water quality monitoring data;
 - [c] Surrounding land uses;
 - [d] Presence of constituents listed as a cause for impairment of receiving waters in the Watershed Management Area listed on the CWA section 303(d) List; and
 - [e] Flow rate.
- (iv) For any Copermitttee with portions of its jurisdiction in more than one Watershed Management Area and more than 500 major MS4 outfalls within its jurisdiction, at least 500 major MS4 outfalls within its inventory must be visually inspected at least annually during dry weather conditions. Copermitttees with more than 500 major MS4 outfalls in more than one Watershed Management Area must identify and prioritize at least 500 outfalls to be inspected considering the following:
- [a] Assessment of connectivity of the discharge to a flowing receiving water;
 - [b] Reported exceedances of NALs in water quality monitoring data;
 - [c] Surrounding land uses;
 - [d] Presence of constituents listed as a cause for impairment of receiving waters in the Watershed Management Area listed on the CWA section 303(d) List; and
 - [e] Flow rate.
- (v) Inspections of major MS4 outfalls conducted in response to public reports and staff or contractor reports and notifications may count toward the required visual inspections of MS4 outfall discharge monitoring stations.
- (b) Transitional Dry Weather MS4 Outfall Discharge Field Screening Visual Observations
- (i) An antecedent dry period of at least 72 hours following any storm event producing measurable rainfall greater than 0.1 inch is required prior to conducting field screening visual observations during a field screening monitoring event.
 - (ii) During the field screening monitoring event, each Copermitttee must record visual observations consistent with Table D-5 at each MS4 outfall discharge monitoring station inspected.

Table D-5. Field Screening Visual Observations for MS4 Outfall Discharge Monitoring Stations

Field Observations
<ul style="list-style-type: none">• Station identification and location• Presence of flow, or pooled or ponded water• If flow is present:<ul style="list-style-type: none">- Flow estimation (i.e. width of water surface, approximate depth of water, approximate flow velocity, flow rate)- Flow characteristics (i.e. presence of floatables, surface scum, sheens, odor, color)- Flow source(s) suspected or identified from non-storm water source investigation- Flow source(s) eliminated during non-storm water source identification• If pooled or ponded water is present:<ul style="list-style-type: none">- Characteristics of pooled or ponded water (i.e. presence of floatables, surface scum, sheens, odor, color)- Known or suspected source(s) of pooled or ponded water• Station description (i.e. deposits or stains, vegetation condition, structural condition, observable biology)• Presence and assessment of trash in and around station• Evidence or signs of illicit connections or illegal dumping

- (iii) Each Copermittee must implement the requirements of Provisions E.2.d.(2)(c)-(e) based on the field observations required pursuant to Provision D.2.a.(2)(b)(ii).
- (iv) Each Copermittee must evaluate field observations together with existing information available from prior reports, inspections and monitoring results to determine whether any observed flowing, pooled, or ponded waters are likely to be transient or persistent flow.¹⁹

(c) Transitional Dry Weather MS4 Outfall Discharge Field Screening Monitoring Records

Based upon the results of the transitional dry weather MS4 outfall discharge field screening monitoring conducted pursuant to Provisions D.2.a.(2)(a)-(b), each Copermittee must update its MS4 outfall discharge monitoring station inventory, compiled pursuant to Provision D.2.a.(1), with any new information on the classification of whether the MS4 outfall produces persistent flow, transient flow, or no dry weather flow.

(3) Transitional Wet Weather MS4 Outfall Discharge Monitoring

Until the monitoring requirements and schedules of Provision D.2.c are incorporated into a Water Quality Improvement Plan that is accepted by the

¹⁹ Persistent flow is defined as the presence of flowing, pooled, or ponded water more than 72 hours after a measureable rainfall event of 0.1 inch or greater during three consecutive monitoring and/or inspection events. All other flowing, pooled, or ponded water is considered transient.

San Diego Water Board pursuant to Provision F.1.b, the Copermittees must conduct the following wet weather MS4 outfall discharge monitoring within the Watershed Management Area:

(a) Transitional Wet Weather MS4 Outfall Discharge Monitoring Stations

The Copermittees must select wet weather MS4 outfall discharge monitoring stations from the inventories developed pursuant to Provision D.2.a.(1) for each Watershed Management Area as follows:

- (i) At least five wet weather MS4 outfall discharge monitoring stations that are representative of storm water discharges from areas consisting primarily of residential, commercial, industrial, and typical mixed-use land uses present within the Watershed Management Area;
- (ii) At least one wet weather MS4 outfall discharge monitoring station for each Copermittee within the Watershed Management Area; and
- (iii) The County of San Diego may select at least two (2) wet weather MS4 outfall discharge monitoring stations for the portion of the Santa Margarita River Watershed Management Area within its jurisdiction to be monitored during the transitional period until the Riverside County Copermittees are notified of coverage under this Order. After the Riverside County Copermittees are notified of coverage under this Order, the Copermittees in the Watershed Management Area must select wet weather MS4 outfall discharge monitoring stations consistent with the requirements above.

(b) Transitional Wet Weather MS4 Outfall Discharge Monitoring Frequency

Each wet weather MS4 outfall discharge monitoring station selected pursuant to Provision D.2.a.(3)(a) must be monitored once during the wet season (October 1 – April 30). The wet weather monitoring events must be selected to be representative of the range of hydrological conditions experienced in the region. At least 10 percent of samples must be conducted during the first wet weather event of the wet season, to include at least one such sample in each Watershed Management Area..

(c) Transitional Wet Weather MS4 Outfall Discharge Field Observations

For each wet weather monitoring event, the following narrative descriptions and observations must be recorded at each wet weather MS4 outfall discharge monitoring station:

- (i) A narrative description of the station that includes the location, date and duration of the storm event(s) sampled, rainfall estimates of the

storm event, and the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event; and

- (ii) The flow rates and volumes measured or estimated from the MS4 outfall (data from nearby USGS gauging stations may be utilized, or flow rates may be measured or estimated in accordance with the USEPA Storm Water Sampling Guidance Document (EPA-833-B-92-001), section 3.2.1, or other method proposed by the Copermittees that is acceptable to the San Diego Water Board);

(d) Transitional Wet Weather MS4 Outfall Discharge Field Monitoring

For each wet weather monitoring event, the Copermittees must monitor and record the parameters in Table D-2 at each wet weather MS4 outfall discharge monitoring station.

(e) Transitional Wet Weather MS4 Outfall Discharge Analytical Monitoring

For each wet weather monitoring event, the Copermittees must collect and analyze samples from each wet weather MS4 outfall discharge monitoring station as follows:

- (i) Analytes that are field measured are not required to be analyzed by a laboratory;
- (ii) The Copermittees must implement consistent sample collection methods for regional comparability of data, unless site-specific conditions indicate the need for alternate methods;
- (iii) Grab samples may be collected for pH, temperature, specific conductivity, dissolved oxygen, turbidity, and indicator bacteria;
- (iv) For all other constituents, composite samples must be collected for a duration adequate to be representative of changes in pollutant concentrations and runoff flows using one of the following techniques:
 - [a] Time-weighted composites collected over the length of the storm event or the first 24 hour period whichever is shorter, composed of discrete samples, which may be collected through the use of automated equipment, or
 - [b] Flow-weighted composites collected over the length of the storm event or a typical 24 hour period, whichever is shorter, which may be collected through the use of automated equipment, or
 - [c] If automated compositing is not feasible, a composite sample may be collected using a minimum of 4 grab samples, collected during the first 24 hours of the storm water discharge, or for the entire storm water discharge if the storm event is less than 24 hours;

- (v) Only one analysis of the composite of aliquots is required;
- (vi) The samples must be analyzed for the following constituents:
 - [a] Constituents listed as a cause for impairment of receiving waters in the Watershed Management Area listed on the CWA section 303(d) List,
 - [b] Constituents for implementation plans or load reduction plans (e.g. Bacteria Load Reduction Plans, Comprehensive Load Reduction Plans) developed for watersheds where the Copermittees are listed responsible parties under the TMDLs in Attachment E to this Order, and
 - [c] Constituents listed in Table D-6.

Table D-6. Analytical Monitoring Constituents for Wet Weather MS4 Outfall Discharge Monitoring Stations

Conventionals, Nutrients	Metals (Total and Dissolved)	Indicator Bacteria
<ul style="list-style-type: none"> • Total Dissolved Solids • Total Suspended Solids • Turbidity • Total Hardness • Total Organic Carbon • Dissolved Organic Carbon • Sulfate • Methylene Blue Active Substances (MBAS) • Total Phosphorus • Orthophosphate • Nitrite¹ • Nitrate¹ • Total Kjeldhal Nitrogen • Ammonia 	<ul style="list-style-type: none"> • Arsenic • Cadmium • Chromium • Copper • Iron • Lead • Nickel • Selenium • Thallium • Zinc 	<ul style="list-style-type: none"> • Total Coliform • Fecal Coliform² • <i>Enterococcus</i>

Notes:

- 1. Nitrite and nitrate may be combined and reported as nitrite+nitrate.
- 2. *E. Coli* may be substituted for Fecal Coliform.

(f) Other Transitional Wet Weather MS4 Outfall Discharge Monitoring

The San Diego County Copermittees must continue the wet weather MS4 outfall monitoring program developed under Order No. R9-2007-0001, as approved by the San Diego Water Board, through its planned completion.

b. DRY WEATHER MS4 OUTFALL DISCHARGE MONITORING

Each Copermittee must perform dry weather MS4 outfall monitoring to identify non-storm water and illicit discharges within its jurisdiction pursuant to Provision E.2.c, and to prioritize the dry weather MS4 discharges that will be investigated and eliminated pursuant to Provision E.2.d. Each Copermittee must conduct the following dry weather MS4 outfall discharge monitoring within its jurisdiction:

(1) **Dry Weather MS4 Outfall Discharge Field Screening Monitoring**

Each Copermittee must continue to perform the dry weather MS4 outfall discharge field screening monitoring in accordance with the requirements of Provision D.2.a.(2). The Copermittee may adjust the field screening monitoring frequencies and locations for the MS4 outfalls in its inventory, as needed, to identify and eliminate sources of persistent flow non-storm water discharges in accordance with the highest priority water quality conditions identified in the Water Quality Improvement Plan, provided the number of visual inspections performed is equivalent to the number of visual inspections required under Provision D.2.a.(2)(a).

(2) **Non-Storm Water Persistent Flow MS4 Outfall Discharge Monitoring**

Each Copermittee must perform non-storm water persistent flow MS4 outfall discharge monitoring to determine which persistent non-storm water discharges contain concentrations of pollutants below NALs, and which persistent non-storm water discharges impact receiving water quality during dry weather. Each Copermittee must conduct the following non-storm water persistent flow MS4 outfall discharge monitoring within its jurisdiction:

(a) **Prioritization of Non-Storm Water Persistent Flow MS4 Outfalls**

Based upon the dry weather MS4 outfall discharge field screening monitoring records developed pursuant to Provision D.2.a.(2)(c), each Copermittee must identify and prioritize the MS4 outfalls with persistent flows based on the highest priority water quality conditions identified in the Water Quality Improvement Plan and any additional criteria developed by the Copermittee, which may include historical data and data from sources other than what the Copermittee collects.

(b) **Non-Storm Water Persistent Flow MS4 Outfall Discharge Monitoring Frequency**

- (i) Based on the prioritization of major MS4 outfalls developed under Provision D.2.b.(2)(a), each Copermittee must identify, at a minimum, the 5 highest priority major MS4 outfalls with non-storm water persistent flows that the Copermittee will monitor within its jurisdiction in each Watershed Management Area. For Responsible Copermittees identified by a TMDL in Attachment E to this Order, if the 5 chosen outfall locations are not sufficient to determine compliance with the TMDL(s), then each Responsible Copermittee must identify additional MS4 outfall monitoring locations within its jurisdiction sufficient to address compliance with the TMDL(s). If a Copermittee has less than 5 major outfalls within a Watershed

Management Area, then the Copermittee must monitor all of its major MS4 outfalls with persistent flows within each Watershed Management Area. The location of the highest priority non-storm water persistent flow MS4 outfall monitoring stations must be identified on the map required pursuant to Provision E.2.b.(1). The map must specify which MS4 outfalls are being monitored for compliance with a TMDL.

- (ii) Each of the highest priority non-storm water persistent flow MS4 outfall monitoring stations identified pursuant to Provision D.2.b.(2)(b)(i) must be monitored under dry weather conditions at least semi-annually until one of the following occurs:
 - [a] The non-storm water discharges have been effectively eliminated (i.e. no flowing, pooled, or ponded water) for three consecutive dry weather monitoring events; or
 - [b] The source(s) of the persistent flows has been identified as a category of non-storm water discharges that does not require an NPDES permit and does not have to be addressed as an illicit discharge because it was not identified as a source of pollutants (i.e. constituents in non-storm water discharge do not exceed NALs), and the persistent flow can be re-prioritized to a lower priority; or
 - [c] The constituents in the persistent flow non-storm water discharge do not exceed NALs, and the persistent flow can be re-prioritized to a lower priority; or
 - [d] The source(s) of the persistent flows has been identified as a non-storm water discharge authorized by a separate NPDES permit.
 - (iii) Where the criteria under Provision D.2.b.(2)(b)(ii) are not met, but the threat to water quality has been reduced by the Copermittee, the highest priority persistent flow MS4 outfall monitoring stations may be reprioritized accordingly for continued dry weather MS4 outfall discharge field screening monitoring required pursuant to Provision D.2.b.(1).
 - (iv) Each Copermittee must document removal or re-prioritization of the highest priority persistent flow MS4 outfall monitoring stations identified under Provision D.2.b.(2)(a) in the Water Quality Improvement Plan Annual Report. Persistent flow MS4 outfall monitoring stations that have been removed must be replaced with the next highest prioritized major MS4 outfall in the Watershed Management Area within its jurisdiction, unless there are no remaining qualifying major MS4 outfalls within the Copermittee's jurisdiction in the Watershed Management Area.
- (c) Non-Storm Water Persistent Flow MS4 Outfall Discharge Field Observations

During each semi-annual monitoring event, each Copermittee must record field observations consistent with Table D-5 at each of the highest priority persistent flow MS4 outfall monitoring stations within its jurisdiction.

(d) Non-Storm Water Persistent Flow MS4 Outfall Discharge Field Monitoring

During each semi-annual monitoring event, if conditions allow the collection of the data, each Copermittee must monitor and record the parameters in Table D-2 at each of the highest priority persistent flow MS4 outfall monitoring stations within its jurisdiction.

(e) Non-Storm Water Persistent Flow MS4 Outfall Discharge Analytical Monitoring

During each semi-annual monitoring event in which measurable flow is present, each Copermittee must collect and analyze samples from each of the highest priority persistent flow MS4 outfall monitoring stations within its jurisdiction as follows:

- (i) Analytes that are field measured are not required to be analyzed by a laboratory;
- (ii) The Copermittees must implement consistent sample collection methods for regional comparability of data, unless site-specific conditions indicate the need for alternate methods;
- (iii) Collect grab or composite samples to be analyzed at a qualified laboratory for the following constituents:
 - [a] Constituents contributing to the highest priority water quality conditions identified in the Water Quality Improvement Plan,
 - [b] Constituents listed as a cause for impairment of receiving waters in the Watershed Management Area listed on the CWA section 303(d) List,
 - [c] Constituents for implementation plans or load reduction plans (e.g. Bacteria Load Reduction Plans, Comprehensive Load Reduction Plans) developed for watersheds where the Copermittees are listed responsible parties under the TMDLs in Attachment E to this Order,
 - [d] Applicable NAL constituents, and
 - [e] Constituents listed in Table D-7. The Copermittees may adjust the list of constituents for the Watershed Management Area if historical data or supporting information can be provided that demonstrates or justifies the analysis of a constituent is not necessary.

Table D-7. Analytical Monitoring Constituents for Persistent Flow MS4 Outfall Discharge Monitoring Stations

Conventional, Nutrients	Metals (Total and Dissolved)	Indicator Bacteria
<ul style="list-style-type: none"> • Total Dissolved Solids • Total Suspended Solids • Total Hardness • Total Phosphorus • Orthophosphate • Nitrite¹ • Nitrate¹ • Total Kjeldhal Nitrogen • Ammonia 	<ul style="list-style-type: none"> • Cadmium • Copper • Lead • Zinc 	<ul style="list-style-type: none"> • Total Coliform • Fecal Coliform² • <i>Enterococcus</i>

Notes:

1. Nitrite and nitrate may be combined and reported as nitrite+nitrate.
2. *E. Coli* may be substituted for Fecal Coliform.

- (iv) If the Copermittee identifies and eliminates the source of the persistent flow non-storm water discharge, analysis of the sample is not required.

c. WET WEATHER MS4 OUTFALL DISCHARGE MONITORING

The Copermittees must perform wet weather MS4 outfall monitoring to identify pollutants in storm water discharges from the MS4s, to guide pollutant source identification efforts, and to determine compliance with the WQBELs associated with the applicable TMDLs in Attachment E to this Order. The Copermittees must conduct the following wet weather MS4 outfall discharge monitoring within the Watershed Management Area:

(1) Wet Weather MS4 Outfall Discharge Monitoring Stations

The Copermittees may adjust the wet weather MS4 outfall discharge monitoring locations in the Watershed Management Area, as needed, to identify pollutants in storm water discharges from MS4s, to guide pollutant source identification efforts, and to determine compliance with the WQBELs associated with the applicable TMDLs in Attachment E to this Order in accordance with the highest priority water quality conditions identified in the Water Quality Improvement Plan, provided the number of stations is at least equivalent to the number of stations required under Provision D.2.a.(3)(a). Additional outfall monitoring locations, above the minimum per jurisdiction, may be required to demonstrate compliance with the WQBELs associated with the applicable TMDLs in Attachment E.

(2) Wet Weather MS4 Outfall Discharge Monitoring Frequency

The Copermittees must monitor the wet weather MS4 outfall discharge monitoring stations in the Watershed Management Area at least once (1) per year. The Copermittees may need to increase the frequency of monitoring in order to identify pollutants in storm water discharges from the MS4s causing or contributing to the highest priority water quality conditions, to guide pollutant source identification efforts, or to determine compliance with the WQBELs associated with the applicable TMDLs in Attachment E to this Order.

(3) Wet Weather MS4 Outfall Discharge Field Observations

For each wet weather monitoring event, the following narrative descriptions and observations must be recorded at each wet weather MS4 outfall discharge monitoring station:

- (a) A narrative description of the station that includes the location, date and duration of the storm event(s) sampled, rainfall estimates of the storm event, and the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event; and
- (b) The flow rates and volumes measured or estimated (data from nearby USGS gauging stations may be utilized, or flow rates may be measured or estimated in accordance with the USEPA Storm Water Sampling Guidance Document (EPA-833-B-92-001), section 3.2.1, or other method proposed by the Copermittees that is acceptable to the San Diego Water Board);

(4) Wet Weather MS4 Outfall Discharge Field Monitoring

For each wet weather monitoring event, the Copermittees must monitor and record the parameters in Table D-2 at each wet weather MS4 outfall discharge monitoring station.

(5) Wet Weather MS4 Outfall Discharge Analytical Monitoring

For each wet weather monitoring event, the Copermittees must collect and analyze samples from each wet weather MS4 outfall discharge monitoring station as follows:

- (a) Analytes that are field measured are not required to be analyzed by a laboratory;
- (b) The Copermittees must implement consistent sample collection methods for regional comparability of data, unless site-specific conditions indicate

the need for alternate methods;

- (c) Grab samples may be collected for pH, temperature, specific conductivity, dissolved oxygen, turbidity, hardness, and indicator bacteria;
- (d) For all other constituents, composite samples must be collected for a duration adequate to be representative of changes in pollutant concentrations and runoff flows using one of the following techniques:
 - (i) Time-weighted composites collected over the length of the storm event or the first 24 hour period, whichever is shorter, composed of discrete samples, which may be collected through the use of automated equipment, or
 - (ii) Flow-weighted composites collected over the length of the storm event or a typical 24 hour period, whichever is shorter, which may be collected through the use of automated equipment, or
 - (iii) If automated compositing is not feasible, a composite sample may be collected using a minimum of 4 grab samples, collected during the first 24 hours of the storm water discharge, or for the entire storm water discharge if the storm event is less than 24 hours.
- (e) Only one analysis of the composite of aliquots is required;
- (f) Analysis for the following constituents is required:
 - (i) Constituents contributing to the highest priority water quality conditions identified in the Water Quality Improvement Plan,
 - (ii) Constituents listed as a cause for impairment of receiving waters in the Watershed Management Area listed on the CWA section 303(d) List,
 - (iii) Constituents for implementation plans or load reduction plans (e.g. Bacteria Load Reduction Plans, Comprehensive Load Reduction Plans) developed for watersheds where the Copermittees are listed responsible parties under the TMDLs in Attachment E to this Order,
 - (iv) Applicable SAL constituents, and
 - (v) The Copermittees may adjust the analytical monitoring required for the Watershed Management Area, if the Copermittees have historical data or supporting information that can demonstrate or provide justification that the analysis of a constituent is not necessary.

3. Special Studies

- a. Within the term of this Order, the Copermittees must initiate the following special studies:

- (1) At least two special studies in each Watershed Management Area to address pollutant and/or stressor data gaps and/or develop information necessary to more effectively address the pollutants and/or stressors that cause or contribute to highest priority water quality conditions identified in the Water Quality Improvement Plan.
 - (2) At least one special study for the San Diego Region to address pollutant and/or stressor data gaps and/or develop information necessary to more effectively address the pollutants and/or stressors that are impacting receiving waters on a regional basis in the San Diego Region.
 - (3) One of the two special studies in each Watershed Management Area required pursuant to Provision D.3.a.(1) may be replaced by a special study implemented pursuant to Provision D.3.a.(2).
- b.** The special studies must, at a minimum, be in conformance with the following criteria:
- (1) The special studies must be related to the highest priority water quality conditions identified by the Copermittees in the Watershed Management Area and/or for the entire San Diego Region;
 - (2) The special studies developed pursuant to Provision D.3.a.(1) must:
 - (a) Be implemented within the applicable Watershed Management Area, and
 - (b) Require some form of participation by all the Copermittees within the Watershed Management Area;
 - (3) The special studies developed pursuant to Provision D.3.a.(2) must:
 - (a) Be implemented within the San Diego Region, and
 - (b) Require some form of participation by all Copermittees covered under the requirements of this Order.
 - (4) The Copermittees are encouraged to partner with environmental groups or third parties knowledgeable of watershed conditions to complete the required special studies.
- c.** Special studies developed to identify sources of pollutants and/or stressors should be pollutant and/or stressor specific and based on historical monitoring data and monitoring performed pursuant to Provisions D.1 and D.2. Development of source identification special studies should include the following:
- (1) A compilation of known information on the specific pollutant and/or stressor,

including data on potential sources and movement of the pollutant and/or stressor within the watershed. Data generated by the Copermittees and others, as well as information available from a literature research on the pollutant and/or stressor should be compiled and analyzed as appropriate.

- (2) An identification of data gaps, based on the compiled information generated on the specific pollutant and/or stressor identified in Provision D.3.c.(1). Source identification special studies should be developed to fill identified data gaps.
- (3) A monitoring plan that will collect and provide data the Copermittees can utilize to do the following:
 - (a) Quantify the relative loading or impact of a pollutant and/or stressor from a particular source or pollutant generating activity;
 - (b) Improve understanding of the fate of a pollutant and/or stressor in the environment;
 - (c) Develop an inventory of known and suspected sources of a pollutant and/or stressor in the Watershed Management Area; and/or
 - (d) Prioritize known and suspected sources of a pollutant and/or stressor based on relative magnitude in discharges, geographical distribution (i.e., regional or localized), frequency of occurrence in discharges, human health risk, and controllability.
- d. Special studies initiated prior to the effective date of this Order that meet the requirements of Provision D.3.b and are implemented during the term of this Order as part of the Water Quality Improvement Plan may be utilized to fulfill the special study requirements of Provision D.3.a. Special studies completed before the effective date of this Order cannot be utilized to fulfill the special study requirements of Provision D.3.a.
- e. The Copermittees must submit the monitoring plans for the special studies in the Water Quality Improvement Plans required pursuant to Provision F.1.
- f. The Copermittees are encouraged to share the results of the special studies regionally among the Copermittees to provide information useful in improving and adapting the management of non-storm water and storm water runoff through the implementation of the Water Quality Improvement Plans.

4. Assessment Requirements

Each Copermittee must evaluate the data collected pursuant to Provisions D.1, D.2 and D.3, and information collected during the implementation of the jurisdictional

runoff management programs required pursuant to Provision E, to assess the progress of the water quality improvement strategies in the Water Quality Improvement Plan toward achieving compliance with Provisions A.1.a, A.1.c and A.2.a. Assessments must be performed as described in the following provisions:

a. RECEIVING WATERS ASSESSMENTS

- (1) The Copermittees must assess and report the conditions of the receiving waters in the Watershed Management Area as follows:
 - (a) Based on data collected pursuant to Provision D.1.a, the assessments under Provision D.4.a.(2) must be included in the Transitional Monitoring and Assessment Program Annual Reports required pursuant to Provision F.3.b.(2).
 - (b) Based on the data collected pursuant to Provisions D.1.a-e, the assessments required under Provision D.4.a.(2) must be included in the Report of Waste Discharge required pursuant to Provision F.5.b.
- (2) The Copermittees must assess the status and trends of receiving water quality conditions in 1) coastal waters, 2) enclosed bays, harbors, estuaries, and lagoons, and 3) streams under dry weather and wet weather conditions. For each of the three types of receiving waters in each Watershed Management Area the Copermittees must:
 - (a) Determine whether or not the conditions of the receiving waters are meeting the numeric goals established pursuant to Provision B.3.a;
 - (b) Identify the most critical beneficial uses that must be protected to ensure overall health of the receiving water;
 - (c) Determine whether or not those critical beneficial uses are being protected;
 - (d) Identify short-term and/or long-term improvements or degradation of those critical beneficial uses;
 - (e) Determine whether or not the strategies established in the Water Quality Improvement Plan contribute towards progress in achieving the interim and final numeric goals of the Water Quality Improvement Plan; and
 - (f) Identify data gaps in the monitoring data necessary to assess Provisions D.4.a.(2)(a)-(e).

b. MS4 OUTFALL DISCHARGES ASSESSMENTS

(1) Non-Storm Water Discharges Reduction Assessments

- (a) Each Copermittee must assess and report the progress of its illicit discharge detection and elimination program, required to be implemented pursuant to Provision E.2, toward effectively prohibiting non-storm water and illicit discharges into the MS4 within its jurisdiction as follows:
- (i) Based on data collected pursuant to Provisions D.2.a.(2), the assessments under Provision D.4.b.(1)(b) must be included in the Transitional Monitoring and Assessment Program Annual Reports required pursuant to Provision F.3.b.(2).
 - (ii) Based on the data collected pursuant to Provisions D.2.b, the assessments required under Provision D.4.b.(1)(c) must be included in the Water Quality Improvement Plan Annual Reports required pursuant to Provision F.3.b.(3).
 - (iii) Based on the data collected pursuant to Provisions D.2.b, the assessment required under Provision D.4.b.(1)(c) must be included in the Report of Waste Discharge required pursuant to F.5.b.
- (b) Based on the transitional dry weather MS4 outfall discharge field screening monitoring required pursuant to Provision D.2.a.(2), each Copermittee must assess and report the following:
- (i) Identify the known and suspected controllable sources (e.g. facilities, areas, land uses, pollutant generating activities) of transient and persistent flows within the Copermittee's jurisdiction in the Watershed Management Area;
 - (ii) Identify sources of transient and persistent flows within the Copermittee's jurisdiction in the Watershed Management Area that have been reduced or eliminated; and
 - (iii) Identify modifications to the field screening monitoring locations and frequencies for the MS4 outfalls in its inventory necessary to identify and eliminate sources of persistent flow non-storm water discharges pursuant to Provision D.2.b.
- (c) Based on the dry weather MS4 outfall discharge field screening monitoring required pursuant to Provision D.2.b.(1), each Copermittee must assess and report the following:
- (i) The assessments required pursuant to Provision D.4.b.(1)(b);

- (ii) Based on the data collected and applicable NALs in the Water Quality Improvement Plan, rank the MS4 outfalls in the Copermittee's jurisdiction according to potential threat to receiving water quality, and produce a prioritized list of major MS4 outfalls for follow-up action to update the Water Quality Improvement Plan, with the goal of eliminating persistent flow non-storm water discharges and/or pollutant loads in order of the ranked priority list through targeted programmatic actions and source investigations;
- (iii) For the highest priority major MS4 outfalls with persistent flows that are in exceedance of NALs, identify the known and suspected sources within the Copermittee's jurisdiction in the Watershed Management Area that may cause or contribute to the NAL exceedances;
- (iv) Each Copermittee must analyze the data collected pursuant to Provision D.2.b, and utilize a model or other method, to calculate or estimate the non-storm water volumes and pollutant loads collectively discharged from all the major MS4s outfalls in its jurisdiction identified as having persistent dry weather flows during the monitoring year. These calculations or estimates must be updated annually.
 - [a] Each Copermittee must calculate or estimate the annual non-storm water volumes and pollutant loads collectively discharged from the Copermittee's major MS4 outfalls to receiving waters within the Copermittee's jurisdiction, with an estimate of the percent contribution from each known source for each MS4 outfall;
 - [b] Each Copermittee must annually identify and quantify (i.e. volume and pollutant loads) sources of non-storm water not subject to the Copermittee's legal authority that are discharged from the Copermittee's major MS4 outfalls to downstream receiving waters.
- (v) Each Copermittee must review the data collected pursuant to Provision D.2.b and findings from the assessments required pursuant to Provision D.4.b.(1)(c)(i)-(iv) at least once during the term of this Order to:
 - [a] Identify reductions and progress in achieving reductions in non-storm water and illicit discharges to the Copermittee's MS4 in the Watershed Management Area;
 - [b] Assess the effectiveness of water quality improvement strategies being implemented by the Copermittees within the Watershed Management Area toward reducing or eliminating non-storm water and pollutant loads discharging from the MS4 to receiving waters within its jurisdiction, with an estimate, if possible, of the non-storm water volume and/or pollutant load reductions

attributable to specific water quality strategies implemented by the Copermittee; and

- [c] Identify modifications necessary to increase the effectiveness of the water quality improvement strategies implemented by the Copermittee in the Watershed Management Area toward reducing or eliminating non-storm water and pollutant loads discharging from the MS4 to receiving waters within its jurisdiction.

- (vi) Identify data gaps in the monitoring data necessary to assess Provisions D.4.b.(1)(c)(i)-(v).

(2) Storm Water Pollutant Discharges Reduction Assessments

- (a) The Copermittees must assess and report the progress of the water quality improvement strategies, required to be implemented pursuant to Provisions B and E, toward reducing pollutants in storm water discharges from the MS4s within the Watershed Management Area as follows:

- (i) Based on data collected pursuant to Provisions D.2.a.(3), the assessments under Provision D.4.b.(2)(b) must be included in the Transitional Monitoring and Assessment Program Annual Reports required pursuant to Provision F.3.b.(2).
- (ii) Based on the data collected pursuant to Provisions D.2.c, the assessments required under Provision D.4.b.(2)(c) must be included in the Water Quality Improvement Plan Annual Reports required pursuant to Provision F.3.b.(3).
- (iii) Based on the data collected pursuant to Provisions D.2.c, the assessment required under Provisions D.4.b.(2)(c)-(d) must be included in the Report of Waste Discharge required pursuant to F.5.b.

- (b) Based on the transitional wet weather MS4 outfall discharge monitoring required pursuant to Provision D.2.a.(3) the Copermittees must assess and report the following:

- (i) The Copermittees must analyze the monitoring data collected pursuant to Provision D.2.a.(3), and utilize a watershed model or other method, to calculate or estimate the following for each monitoring year:
- [a] The average storm water runoff coefficient for each land use type within the Watershed Management Area;
- [b] The volume of storm water and pollutant loads discharged from each of the Copermittee's monitored MS4 outfalls in its jurisdiction to receiving waters within the Watershed Management Area for each storm event with measurable rainfall greater than 0.1 inch;

- [c] The total flow volume and pollutant loadings discharged from the Copermittee's jurisdiction within the Watershed Management Area over the course of the wet season, extrapolated from the data produced from the monitored MS4 outfalls; and
 - [d] The percent contribution of storm water volumes and pollutant loads discharged from each land use type within each hydrologic subarea with a major MS4 outfall to receiving waters or within each major MS4 outfall to receiving waters in the Copermittee's jurisdiction within the Watershed Management Area for each storm event with measurable rainfall greater than 0.1 inch.
 - (ii) Identify modifications to the wet weather MS4 outfall discharge monitoring locations and frequencies necessary to identify pollutants in storm water discharges from the MS4s in the Watershed Management Area pursuant to Provision D.2.c.(1).
- (c) Based on the wet weather MS4 outfall discharge monitoring required pursuant to Provision D.2.c the Copermittees must assess and report the following:
 - (i) The assessments required pursuant to Provision D.4.b.(2)(b);
 - (ii) Based on the data collected and applicable SALs in the Water Quality Improvement Plan, analyze and compare the monitoring data to the analyses and assumptions used to develop the Water Quality Improvement Plans, including strategies developed pursuant to Provision B.3, and evaluate whether those analyses and assumptions should be updated as a component of the adaptive management efforts pursuant to Provision B.5 for follow-up action to update the Water Quality Improvement Plan;
 - (iii) The Copermittees must review the data collected pursuant to Provision D.2.c and findings from the assessments required pursuant to Provisions D.4.b.(2)(c)(i)-(ii) at least once during the term of this Order to:
 - [a] Identify reductions or progress in achieving reductions in pollutant concentrations and/or pollutant loads from different land uses and/or drainage areas discharging from the Copermittees' MS4s in the Watershed Management Area;
 - [b] Assess the effectiveness of water quality improvement strategies being implemented by the Copermittees within the Watershed Management Area toward reducing pollutants in storm water discharges from the MS4s to receiving waters within the Watershed Management Area to the MEP, with an estimate, if possible, of the pollutant load reductions attributable to specific water quality strategies implemented by the Copermittees; and

- [c] Identify modifications necessary to increase the effectiveness of the water quality improvement strategies implemented by the Copermittees in the Watershed Management Area toward reducing pollutants in storm water discharges from the MS4s to receiving waters in the Watershed Management Area to the MEP.
- (iv) Identify data gaps in the monitoring data necessary to assess Provisions D.4.b.(2)(c)(i)-(iii).
- (d) The Copermittees must evaluate all the data collected pursuant to Provision D.2.c, and incorporate new outfall monitoring data into time series plots for each long-term monitoring constituent for the Watershed Management Area, and perform statistical trends analysis on the cumulative long-term wet weather MS4 outfall discharge water quality data set.

c. SPECIAL STUDIES ASSESSMENTS

The Copermittees must annually evaluate the results and findings from the special studies developed and implemented pursuant to Provision D.3, and assess their relevance to the Copermittees' efforts to characterize receiving water conditions, understand sources of pollutants and/or stressors, and control and reduce the discharges of pollutants from the MS4 outfalls to receiving waters in the Watershed Management Area. The Copermittees must report the results of the special studies assessments applicable to the Watershed Management Area, and identify any necessary modifications or updates to the Water Quality Improvement Plan based on the results in the Water Quality Improvement Plan Annual Reports required pursuant to Provision F.3.b.(3).

d. INTEGRATED ASSESSMENT OF WATER QUALITY IMPROVEMENT PLAN

As part of the iterative approach and adaptive management process required for the Water Quality Improvement Plan pursuant to Provision B.5, the Copermittees in each Watershed Management Area must integrate the data collected pursuant to Provisions D.1-D.3, the findings from the assessments required pursuant to Provisions D.4.a-c, and information collected during the implementation of the jurisdictional runoff management programs required pursuant to Provision E to assess the effectiveness of, and identify necessary modifications to, the Water Quality Improvement Plan as follows:

- (1) The Copermittees must re-evaluate the priority water quality conditions and numeric goals for the Watershed Management Area, as needed, during the term of this Order pursuant to Provision B.5.a. The re-evaluation and recommendations for modifications to the priority water quality conditions, and/or numeric goals and corresponding schedules may be provided in the Water Quality Improvement Plan Annual Reports required pursuant to

Provision F.3.b.(3), but must at least be provided in the Report of Waste Discharge pursuant to Provision F.5.b. The priority water quality conditions and numeric goals for the Watershed Management Area must be re-evaluated as follows:

- (a) Re-evaluate the receiving water conditions in the Watershed Management Area in accordance with Provision B.2.a;
 - (b) Re-evaluate the impacts on receiving waters in the Watershed Management Area from MS4 discharges in accordance with Provision B.2.b;
 - (c) Re-evaluate the identification of MS4 sources of pollutants and/or stressors in accordance with Provision B.2.d;
 - (d) Identify beneficial uses of the receiving waters that are protected in accordance with Provision D.4.a;
 - (e) Evaluate the progress toward achieving the interim and final numeric goals for protecting impacted beneficial uses in the receiving waters.
- (2) The Copermittees must re-evaluate the water quality improvement strategies for the Watershed Management Area during the term of this Order pursuant to Provision B.5.b. The re-evaluation and recommendations for modifications to the water quality improvement strategies and schedules may be provided in the Water Quality Improvement Plan Annual Reports required pursuant to Provision F.3.b.(3), but must at least be provided in the Report of Waste Discharge pursuant to Provision F.5.b. The water quality improvement strategies for the Watershed Management Area must be re-evaluated as follows:
- (a) Identify the non-storm water and storm water pollutant loads from the Copermittees' MS4 outfalls in the Watershed Management Area, calculated or estimated pursuant to Provisions D.4.b;
 - (b) Identify the non-storm water and storm water pollutant load reductions, or other improvements to receiving water or water quality conditions, that are necessary to attain the interim and final numeric goals identified in the Water Quality Improvement Plan for protecting beneficial uses in the receiving waters;
 - (c) Identify the non-storm water and storm water pollutant load reductions, or other improvements to the quality of MS4 discharges, that are necessary for the Copermittees to demonstrate that non-storm water and storm water discharges from their MS4s are not causing or contributing to exceedances of receiving water limitations;
 - (d) Evaluate the progress of the water quality improvement strategies toward

achieving the interim and final numeric goals identified in the Water Quality Improvement Plan for protecting beneficial uses in the receiving waters.

- (3) The Copermittees must re-evaluate and adapt the water quality monitoring and assessment program for the Watershed Management Area when new information becomes available to improve the monitoring and assessment program pursuant to Provision B.5.c. The re-evaluation and recommendations for modifications to the monitoring and assessment program may be provided in the Water Quality Improvement Plan Annual Reports required pursuant to Provision F.3.b.(3), but must at least be provided in the Report of Waste Discharge pursuant to Provision F.5.b. Modifications to the water quality monitoring and assessment program must be consistent with the requirements of Provision D.1-D.3. The re-evaluation of the water quality monitoring and assessment program for the Watershed Management Area must consider the data gaps identified by the assessments required pursuant to Provisions D.4.a-b, and results of the special studies implemented pursuant to Provision D.4.c.

5. Monitoring Provisions

Each Copermittee must comply with all the monitoring, reporting, and recordkeeping provisions of the Standard Permit Provisions and General Provisions contained in Attachment B to this Order.

E. JURISDICTIONAL RUNOFF MANAGEMENT PROGRAMS

The purpose of this provision is for each Copermittee to implement a program to control the contribution of pollutants to and the discharges from the MS4 within its jurisdiction. The goal of the jurisdictional runoff management programs is to implement strategies that effectively prohibit non-storm water discharges to the MS4 and reduce the discharge of pollutants in storm water to the MEP. This goal will be accomplished through implementing the jurisdictional runoff management programs in accordance with the strategies identified in the Water Quality Improvement Plans.

Each Copermittee must update its jurisdictional runoff management program document, in accordance with Provision F.2.a, to incorporate all the requirements of Provision E. Until the Copermittee has updated its jurisdictional runoff management program document with the requirements of Provision E, the Copermittee must continue implementing its current jurisdictional runoff management program.

1. Legal Authority Establishment and Enforcement

- a. Each Copermittee must establish, maintain, and enforce adequate legal authority within its jurisdiction to control pollutant discharges into and from its MS4 through statute, ordinance, permit, contract, order, or similar means. This legal authority must, at a minimum, authorize the Copermittee to:
 - (1) Prohibit and eliminate all illicit discharges and illicit connections to its MS4;
 - (2) Control the contribution of pollutants in discharges of runoff associated with industrial and construction activity to its MS4 and control the quality of runoff from industrial and construction sites, including industrial and construction sites which have coverage under the statewide General Permit for Discharges of Storm Water Associated with Industrial Activities (Industrial General Permit) or General Permit for Discharges of Storm Water Associated with Construction Activities (Construction General Permit), as well as to those sites which do not;
 - (3) Control the discharge of spills, dumping, or disposal of materials other than storm water into its MS4;
 - (4) Control through interagency agreements among Copermittees the contribution of pollutants from one portion of the MS4 to another portion of the MS4;
 - (5) Control, by coordinating and cooperating with other owners of the MS4 such as Caltrans, the U.S. federal government, or sovereign Native American Tribes through interagency agreements, where possible, the contribution of pollutants from their portion of the MS4 to the portion of the MS4 within the Copermittee's jurisdiction;

- (6) Require compliance with conditions in its statutes, ordinances, permits, contracts, orders, or similar means to hold dischargers to its MS4 accountable for their contributions of pollutants and flows;
 - (7) Require the use of BMPs to prevent or reduce the discharge of pollutants in storm water from its MS4 to the MEP;
 - (8) Require documentation on the effectiveness of BMPs implemented to prevent or reduce the discharge of pollutants in storm water from its MS4 to the MEP;
 - (9) Utilize enforcement mechanisms to require compliance with its statutes, ordinances, permits, contracts, orders, or similar means; and
 - (10) Carry out all inspections, surveillance, and monitoring procedures necessary to determine compliance and noncompliance with its statutes, ordinances, permits, contracts, orders, or similar means and with the requirements of this Order, including the prohibition of illicit discharges and connections to its MS4; the Copermittee must also have authority to enter, monitor, inspect, take measurements, review and copy records, and require regular reports from industrial facilities, including construction sites, discharging into its MS4.
- b. With the first Water Quality Improvement Plan Annual Report required pursuant to Provision F.3.b.(3), each Copermittee must submit a statement certified by its Principal Executive Officer, Ranking Elected Official, or Duly Authorized Representative that the Copermittee has taken the necessary steps to obtain and maintain full legal authority within its jurisdiction to implement and enforce each of the requirements contained in this Order.

2. Illicit Discharge Detection and Elimination

Each Copermittee must implement a program to actively detect and eliminate illicit discharges and improper disposal into the MS4, or otherwise require the discharger to apply for and obtain a separate NPDES permit. The illicit discharge detection and elimination program must be implemented in accordance with the strategies in the Water Quality Improvement Plan described pursuant to Provision B.3.b.(1) and include, at a minimum, the following requirements:

a. NON-STORM WATER DISCHARGES

Each Copermittee must address all non-storm water discharges as illicit discharges unless a non-storm water discharge is either identified as a discharge authorized by a separate NPDES permit, or identified as a category of non-storm water discharges or flows that must be addressed pursuant to the following requirements:

PROVISION E: JURISDICTIONAL RUNOFF MANAGEMENT PROGRAMS

E.1. Legal Authority Establishment and Enforcement

E.2. Illicit Discharge Detection and Elimination

- (1) Discharges of non-storm water to the MS4 from the following categories must be addressed as illicit discharges unless the discharge has coverage under NPDES Permit No. CAG919001 (Order No. R9-2007-0034, or subsequent order) for discharges to San Diego Bay, or NPDES Permit No. CAG919002 (Order No. R9-2008-0002, or subsequent order) for discharges to surface waters other than San Diego Bay:
 - (1) Uncontaminated pumped ground water;
 - (2) Discharges from foundation drains;²⁰
 - (3) Water from crawl space pumps; and
 - (4) Water from footing drains.²⁰
- (2) Discharges of non-storm water from water line flushing and water main breaks to the MS4 must be addressed as illicit discharges unless the discharge has coverage under NPDES Permit No. CAG 679001 (Order No. R9-2010-0003 or subsequent order). This category includes water line flushing and water main break discharges from water purveyors issued a water supply permit by the California Department of Public Health or federal military installations. Discharges from recycled or reclaimed water lines to the MS4 must be addressed as illicit discharges, unless the discharges have coverage under a separate NPDES permit.
- (3) Discharges of non-storm water to the MS4 from the following categories must be addressed by the Copermittee as illicit discharges only if the Copermittee or the San Diego Water Board identifies the discharge as a source of pollutants to receiving waters:
 - (a) Diverted stream flows;
 - (b) Rising ground waters;
 - (c) Uncontaminated ground water infiltration to MS4s;
 - (d) Springs;
 - (e) Flows from riparian habitats and wetlands;
 - (f) Discharges from potable water sources;

²⁰ Provision E.2.a.(1) only applies to this category of non-storm water if the system is designed to be located at or below the groundwater table to actively or passively extract groundwater during any part of the year.

- (g) Discharges from foundation drains;²¹ and
 - (h) Discharges from footing drains.²¹
- (4) Discharges of non-storm water to the MS4 from the following categories must be controlled by the requirements given below through statute, ordinance, permit, contract, order, or similar means. Discharges of non-storm water to the MS4 from the following categories not controlled by the requirements given below through statute, ordinance, permit, contract, order, or similar means must be addressed by the Copermittee as illicit discharges.
- (a) Air conditioning condensation
 - The discharge of air conditioning condensation should be directed to landscaped areas or other pervious surfaces, or to the sanitary sewer, where feasible.
 - (b) Individual residential vehicle washing
 - (i) The discharge of wash water should be directed to landscaped areas or other pervious surfaces where feasible; and
 - (ii) The minimization of water, washing detergent and other vehicle wash products used for residential vehicle washing, and the implementation of other practices or behaviors that will prevent the discharge of pollutants associated with individual residential vehicle washing from entering the MS4 must be encouraged.
 - (c) Dechlorinated swimming pool discharges
 - (i) Residual chlorine, algaecide, filter backwash, or other pollutants from swimming pools must be eliminated prior to discharging to the MS4; and
 - (ii) The discharge of saline swimming pool water must be directed to the sanitary sewer, landscaped areas, or other pervious surfaces that can accommodate the volume of water, unless the saline swimming pool water can be discharged via a pipe or concrete channel directly to a naturally saline water body (e.g. Pacific Ocean).
- (5) Firefighting discharges to the MS4 must be addressed by the Copermittee as illicit discharges only if the Copermittee or the San Diego Water Board identifies the discharge as a significant source of pollutants to receiving waters. Firefighting discharges to the MS4 not identified as a significant source of pollutants to receiving waters, must be addressed, at a minimum, as follows:

²¹ Provision E.2.a.(3) only applies to this category of non-storm water discharge if the system is designed to be located above the groundwater table at all times of the year, and the system is only expected to discharge non-storm water under unusual circumstances.

(a) Non-emergency firefighting discharges

- (i) Building fire suppression system maintenance discharges (e.g. sprinkler line flushing) to the MS4 must be addressed as illicit discharges unless BMPs are implemented to prevent pollutants associated with such discharges to the MS4.
- (ii) Non-emergency firefighting discharges (i.e., discharges from controlled or practice blazes, firefighting training, and maintenance activities not associated with building fire suppression systems) must be addressed by a program, to be developed and implemented by the Copermittee, to reduce or eliminate pollutants in such discharges from entering the MS4.

(b) Emergency firefighting discharges

Each Copermittee should develop and encourage implementation of BMPs to reduce or eliminate pollutants in emergency firefighting discharges to the MS4s and receiving waters within its jurisdiction. During emergency situations, priority of efforts should be directed toward life, property, and the environment (in descending order). BMPs should not interfere with immediate emergency response operations or impact public health and safety.

- (6) If the Copermittee or San Diego Water Board identifies any category of non-storm water discharges listed under Provisions E.2.a.(1)-(4) as a source of pollutants to receiving waters, the category must be prohibited through ordinance, order, or similar means and addressed as an illicit discharge. Alternatively, the Copermittee may propose controls to be implemented for the category of non-storm water discharges as part of the Water Quality Improvement Plan instead of prohibiting the category of non-storm water discharges, and implement the controls if accepted by the San Diego Water Board as part of the Water Quality Improvement Plan.
- (7) Each Copermittee must, where feasible and priorities and resources allow, reduce or eliminate non-storm water discharges listed under Provisions E.2.a.(1)-(4) into its MS4, unless a non-storm water discharge is identified as a discharge authorized by a separate NPDES permit.

b. PREVENT AND DETECT ILLICIT DISCHARGES AND CONNECTIONS

Each Copermittee must include the following measures within its program to prevent and detect illicit discharges to the MS4:

- (1) Each Copermittee must maintain an updated map of its entire MS4 and the corresponding drainage areas. The accuracy of the MS4 map must be confirmed during the field screening required pursuant to Provision E.2.c.

The MS4 map must be included as part of the jurisdictional runoff management program document. Any geographic information system (GIS) layers or files used by the Copermittee to maintain the MS4 map must be made available to the San Diego Water Board upon request. The MS4 map must identify the following:

- (a) All segments of the MS4 owned, operated, and maintained by the Copermittee;
 - (b) All known locations of inlets that discharge and/or collect runoff into the Copermittee's MS4;
 - (c) All known locations of connections with other MS4s not owned or operated by the Copermittee (e.g. Caltrans MS4s);
 - (d) All known locations of MS4 outfalls and private outfalls that discharge runoff collected from areas within the Copermittee's jurisdiction;
 - (e) All segments of receiving waters within the Copermittee's jurisdiction that receive and convey runoff discharged from the Copermittee's MS4 outfalls;
 - (f) Locations of the MS4 outfalls, identified pursuant to Provision D.2.a.(1), within its jurisdiction; and
 - (g) Locations of the non-storm water persistent flow MS4 outfall discharge monitoring stations, identified pursuant to Provision D.2.b.(2), within its jurisdiction.
- (2) Each Copermittee must use Copermittee personnel and contractors to assist in identifying and reporting illicit discharges and connections during their daily employment activities.
- (3) Each Copermittee must promote, publicize, and facilitate public reporting of the presence of illicit discharges or water quality impacts associated with discharges to or from the MS4, including the following methods for public reporting:
- (a) Operate a public hotline, which can be Copermittee-specific or shared by the Copermittees, and must be capable of receiving reports in both English and Spanish 24 hours per day and seven days per week; and
 - (b) Designate an e-mail address for receiving electronic reports from the public, which can be Copermittee-specific or shared by the Copermittees, and must be prominently displayed on the Copermittee's webpage and the Regional Clearinghouse required pursuant to Provision F.4.

- (4) Each Copermittee must implement practices and procedures (including a notification mechanism) to prevent, respond to, contain, and clean up any spills that may discharge into the MS4 within its jurisdiction from any source. The Copermittee must coordinate, to the extent possible, with spill response teams to prevent entry of spills into the MS4, and prevent contamination of surface water, ground water, and soil. The Copermittee must coordinate spill prevention, containment, and response activities throughout all appropriate Copermittee departments, programs, and agencies.
- (5) Each Copermittee must implement practices and procedures to prevent and limit infiltration of seepage from sanitary sewers (including private laterals and failing septic systems) to the MS4.
- (6) Each Copermittee must coordinate, when necessary, with upstream Copermittees and/or entities to prevent illicit discharges from upstream sources into the MS4 within its jurisdiction.

c. FIELD SCREENING

Each Copermittee must conduct field screening (i.e. visual observations, field testing, and/or analytical testing) of MS4 outfalls and other portions of its MS4 within its jurisdiction to detect non-storm water and illicit discharges and connections to the MS4 in accordance with the dry weather MS4 outfall discharge monitoring requirements in Provisions D.2.a.(2) and D.2.b.(1).

d. INVESTIGATE AND ELIMINATE ILLICIT DISCHARGES AND CONNECTIONS

Each Copermittee must include the following measures within its program to investigate and eliminate illicit discharges to the MS4:

- (1) Each Copermittee must prioritize and determine when follow-up investigations will be performed in response to visual observations and/or water quality monitoring data collected during an investigation of a detected non-storm water or illicit discharge to or from the MS4. The criteria for prioritizing investigations must consider the following:
 - (a) Pollutants identified as causing or contributing to the highest water quality priorities identified in the Water Quality Improvement Plan;
 - (b) Pollutants identified as causing or contributing, or threatening to cause or contribute to impairments in water bodies on the 303(d) List and/or in environmentally sensitive areas (ESAs), located within its jurisdiction;
 - (c) Pollutants identified from sources or land uses known to exist within the area, drainage basin, or watershed that discharges to the portion of the MS4 within its jurisdiction included in the investigation;

- (d) Pollutants identified as causing or contributing to an exceedance of a NAL in the Water Quality Improvement Plan; and
 - (e) Pollutants identified as a threat to human health or the environment.
- (2) Each Copermittee must implement procedures to investigate and inspect portions of its MS4 that, based on reports or notifications, field screening, or other appropriate information, indicate a reasonable potential of receiving, containing, or discharging pollutants due to illicit discharges, illicit connections, or other sources of non-storm water. The procedures must include the following:
- (a) Each Copermittee must develop criteria to:
 - (i) Assess the validity of each report or notification received; and
 - (ii) Prioritize the response to each report or notification received.
 - (b) Each Copermittee must prioritize and respond to each valid report or notification (e.g., public reports, staff or contractor reports and notifications, etc.) of an incident in a timely manner.
 - (c) In accordance with the requirements of Provision E.2.d.(1), each Copermittee must investigate and seek to identify the source(s) of discharges of non-storm water where flows are observed in and from the MS4 during the field screening required pursuant to Provision D.2.b.(1) as follows:
 - (i) Obvious illicit discharges must be immediately investigated to identify the source(s) of non-storm water discharges;
 - (ii) The investigation must include field investigations to identify sources or potential sources for the discharge, unless the source or potential source has already been identified during previous investigations; and
 - (iii) The investigation may include follow-up field investigations and/or reviewing Copermittee inventories and other land use data to identify potential sources of the discharge.
 - (d) Each Copermittee must maintain records and a database of the following information:
 - (i) Location of incident, including hydrologic subarea, portion of MS4 receiving the non-storm water or illicit discharge, and point of discharge or potential discharge from MS4 to receiving water;
 - (ii) Source of information initiating the investigation (e.g., public reports, staff or contractor reports and notifications, field screening, etc.);

- (iii) Date the information used to initiate the investigation was received;
 - (iv) Date the investigation was initiated;
 - (v) Dates of follow-up investigations;
 - (vi) Identified or suspected source of the illicit discharge or connection, if determined;
 - (vii) Known or suspected related incidents, if any;
 - (viii) Result of the investigation; and
 - (ix) If a source cannot be identified and the investigation is not continued, document the response pursuant to the requirements of Provision E.2.d.(4).
- (e) Each Copermittee must maintain records and, in accordance with the priorities of the Water Quality Improvement Plan, seek to identify the source(s) of non-storm water discharges from the MS4 where there is evidence of non-storm water having been discharged into or from the MS4 (e.g., pooled water), in accordance with MS4 outfall discharge monitoring requirements in Provisions D.2.a.(2) and D.2.b.(1).
- (3) Each Copermittee must initiate the implementation of procedures, in a timely manner, to eliminate all detected and identified illicit discharges and connections within its jurisdiction. The procedures must include the following responses:
- (a) Each Copermittee must enforce its legal authority, as required under Provision E.1, to eliminate illicit discharges and connections to the MS4.
 - (b) If the Copermittee identifies the source as a controllable source of non-storm water or illicit discharge or connection, the Copermittee must implement its Enforcement Response Plan pursuant to Provision E.6 and enforce its legal authority to prohibit and eliminate illicit discharges and connections to its MS4.
 - (c) If the Copermittee identifies the source of the discharge as a category of non-storm water discharges in Provision E.2.a, and the discharge is in exceedance of NALs in the Water Quality Improvement Plan, then the Copermittee must determine if: (1) this is an isolated incident or set of circumstances that will be addressed through its Enforcement Response Plan pursuant to Provision E.6, or (2) the category of discharge must be addressed through the prohibition of that category of discharge as an illicit discharge pursuant to Provision E.2.a.(6).
 - (d) If the Copermittee suspects the source of the non-storm water discharge as natural in origin (i.e. non-anthropogenically influenced) and in conveyance into the MS4, then the Copermittee must document and

provide the data and evidence necessary to demonstrate to the San Diego Water Board that it is natural in origin and does not require further investigation.

(e) If the Copermittee is unable to identify and document the source of a recurring non-storm water discharge to or from the MS4, then the Copermittee must address the discharge as an illicit discharge and update its jurisdictional runoff management program to address the common and suspected sources of the non-storm water discharge within its jurisdiction in accordance with the Copermittee's priorities.

(4) Each Copermittee must submit a summary of the non-storm water discharges and illicit discharges and connections investigated and eliminated within its jurisdiction with each Water Quality Improvement Plan Annual Report required under Provision F.3.b.(3) of this Order.

3. Development Planning

Each Copermittee must use their land use and planning authorities to implement a development planning program in accordance with the strategies in the Water Quality Improvement Plan described pursuant to Provision B.3.b.(1) and includes, at a minimum, the following requirements:

a. BMP REQUIREMENTS FOR ALL DEVELOPMENT PROJECTS

Each Copermittee must prescribe the following BMP requirements during the planning process (i.e. prior to project approval and issuance of local permits) for all development projects (regardless of project type or size), where local permits are issued, including unpaved roads and flood management projects:

(1) General Requirements

- (a) Onsite BMPs must be located so as to remove pollutants from runoff prior to its discharge to any receiving waters, and as close to the source as possible;
- (b) Structural BMPs must not be constructed within waters of the U.S.
- (c) Onsite BMPs must be designed and implemented with measures to avoid the creation of nuisance or pollution associated with vectors (e.g. mosquitos, rodents, or flies).

(2) Source Control BMP Requirements

The following source control BMPs must be implemented at all development projects where applicable and feasible:

- (a) Prevention of illicit discharges into the MS4;
- (b) Storm drain system stenciling or signage;
- (c) Protect outdoor material storage areas from rainfall, run-on, runoff, and wind dispersal;
- (d) Protect materials stored in outdoor work areas from rainfall, run-on, runoff, and wind dispersal;
- (e) Protect trash storage areas from rainfall, run-on, runoff, and wind dispersal; and
- (f) Any additional BMPs determined to be necessary by the Copermittee to minimize pollutant generation at each project.

(3) Low Impact Development (LID) BMP Requirements

The following LID BMPs must be implemented at all development projects where applicable and feasible:

- (a) Maintenance or restoration of natural storage reservoirs and drainage corridors (including topographic depressions, areas of permeable soils, natural swales, and ephemeral and intermittent streams);²²
- (b) Buffer zones for natural water bodies (where buffer zones are technically infeasible, require project applicant to include other buffers such as trees, access restrictions, etc.);
- (c) Conservation of natural areas within the project footprint including existing trees, other vegetation, and soils;
- (d) Construction of streets, sidewalks, or parking lot aisles to the minimum widths necessary, provided public safety is not compromised;
- (e) Minimization of the impervious footprint of the project;
- (f) Minimization of soil compaction to landscaped areas;
- (g) Disconnection of impervious surfaces through distributed pervious areas;

²² Development projects proposing to dredge or fill materials in waters of the U.S. must obtain a CWA Section 401 Water Quality Certification. Projects proposing to dredge or fill waters of the state must obtain waste discharge requirements.

- (h) Landscaped or other pervious areas designed and constructed to effectively receive and infiltrate, retain and/or treat runoff from impervious areas, prior to discharging to the MS4;
- (i) Small collection strategies located at, or as close as possible to, the source (i.e. the point where storm water initially meets the ground) to minimize the transport of runoff and pollutants to the MS4 and receiving waters;
- (j) Use of permeable materials for projects with low traffic areas and appropriate soil conditions;
- (k) Landscaping with native or drought tolerant species; and
- (l) Harvesting and using precipitation.

b. PRIORITY DEVELOPMENT PROJECTS

Priority Development Projects are land development projects that fall under the planning and building authority of the Copermittee for which the Copermittee must impose specific requirements, in addition to those described in Provision E.3.a, including the implementation of structural BMPs to meet the performance requirements described in Provision E.3.c.

(1) Definition of Priority Development Project

Priority Development Projects include the following:

- (a) New development projects that create 10,000 square feet or more of impervious surfaces (collectively over the entire project site). This includes commercial, industrial, residential, mixed-use, and public development projects on public or private land.
- (b) Redevelopment projects that create and/or replace 5,000 square feet or more of impervious surface (collectively over the entire project site on an existing site of 10,000 square feet or more of impervious surfaces). This includes commercial, industrial, residential, mixed-use, and public development projects on public or private land.
- (c) New and redevelopment projects that create 5,000 square feet or more of impervious surface (collectively over the entire project site), and support one or more of the following uses:
 - (i) Restaurants. This category is defined as a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812).

- (ii) Hillside development projects. This category includes development on any natural slope that is twenty-five percent or greater.
 - (iii) Parking lots. This category is defined as a land area or facility for the temporary parking or storage of motor vehicles used personally, for business, or for commerce.
 - (iv) Streets, roads, highways, freeways, and driveways. This category is defined as any paved impervious surface used for the transportation of automobiles, trucks, motorcycles, and other vehicles.
- (d) New or redevelopment projects that create or replace 2,500 square feet or more of impervious surface (collectively over the entire project site), and discharging directly to an Environmentally Sensitive Area (ESA). "Discharging directly to" includes flow that is conveyed overland a distance of 200 feet or less from the project to the ESA, or conveyed in a pipe or open channel any distance as an isolated flow from the project to the ESA (i.e. not commingled with flows from adjacent lands).
- (e) New development projects that support one or more of the following uses:
- (i) Automotive repair shops. This category is defined as a facility that is categorized in any one of the following Standard Industrial Classification (SIC) codes: 5013, 5014, 5541, 7532-7534, or 7536-7539.
 - (ii) Retail gasoline outlets (RGOs). This category includes RGOs that meet the following criteria: (a) 5,000 square feet or more or (b) a projected Average Daily Traffic (ADT) of 100 or more vehicles per day.
- (f) New or redevelopment projects that result in the disturbance of one or more acres of land and are expected to generate pollutants post construction.

(2) Special Considerations for Redevelopment Projects

The structural BMP performance requirements of Provision E.3.c are applicable to redevelopment Priority Development Projects, as defined in E.3.b.(1), as follows:

- (a) Where redevelopment results in the creation or replacement of impervious surface in an amount of less than fifty percent of the surface area of the previously existing development, then the structural BMP performance requirements of Provision E.3.c apply only to the creation or replacement of impervious surface, and not the entire development; or

- (b) Where redevelopment results in the creation or replacement of impervious surface in an amount of more than fifty percent of the surface area of the previously existing development, then the structural BMP performance requirements of Provision E.3.c apply to the entire development.

(3) Priority Development Project Exemptions

Each Copermittee has the discretion to exempt the following projects from being defined as Priority Development Projects:

- (a) New or retrofit paved sidewalks, bicycle lanes, or trails that meet the following criteria:
- (i) Designed and constructed to direct storm water runoff to adjacent vegetated areas, or other non-erodible permeable areas; OR
 - (ii) Designed and constructed to be hydraulically disconnected from paved streets or roads; OR
 - (iii) Designed and constructed with permeable pavements or surfaces in accordance with USEPA Green Streets guidance.²³
- (b) Retrofitting or redevelopment of existing paved alleys, streets or roads that are designed and constructed in accordance with the USEPA Green Streets guidance.²⁴

c. PRIORITY DEVELOPMENT PROJECT STRUCTURAL BMP PERFORMANCE REQUIREMENTS

In addition to the BMP requirements listed for all development projects under Provision E.3.a, Priority Development Projects must also implement structural BMPs that conform to performance requirements described below.

(1) Storm Water Pollutant Control BMP Requirements

Each Copermittee must require each Priority Development Project to implement onsite structural BMPs to control pollutants in storm water that may be discharged from a project as follows:

- (a) Each Priority Development Project must be required to implement LID BMPs that are designed to retain (i.e. intercept, store, infiltrate, evaporate, and evapotranspire) onsite the pollutants contained in the volume of storm water runoff produced from a 24-hour 85th percentile storm event (design capture volume);²⁵

²³ See "Managing Wet Weather with Green Infrastructure – Municipal Handbook: Green Streets" (USEPA, 2008).

²⁴ Ibid.

²⁵ This volume is not a single volume to be applied to all areas covered by this Order. The size of the 85th percentile storm event is different for various parts of the San Diego Region. The Copermittees are

- (i) If a Copermittee determines that implementing BMPs to retain the full design capture volume onsite for a Priority Development Project is not technically feasible, then the Copermittee may allow the Priority Development Project to utilize biofiltration BMPs. Biofiltration BMPs must be designed to have an appropriate hydraulic loading rate to maximize storm water retention and pollutant removal, as well as to prevent erosion, scour, and channeling within the BMP,²⁶ and must be sized to:
 - [a] Treat 1.5 times the design capture volume not reliably retained onsite, OR
 - [b] Treat the design capture volume not reliably retained onsite with a flow-thru design that has a total volume, including pore spaces and pre-filter detention volume, sized to hold at least 0.75 times the portion of the design capture volume not reliably retained onsite.
- (ii) If a Copermittee determines that biofiltration is not technically feasible, then the Copermittee may allow the Priority Development Project to utilize flow-thru treatment control BMPs to treat runoff leaving the site, AND mitigate for the design capture volume not reliably retained onsite pursuant to Provision E.3.c.(1)(b). Flow thru treatment control BMPs must be sized and designed to:
 - [a] Remove pollutants from storm water to the MEP;
 - [b] Filter or treat either: 1) the maximum flow rate of runoff produced from a rainfall intensity of 0.2 inch of rainfall per hour, for each hour of a storm event, or 2) the maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity (for each hour of a storm event), as determined from the local historical rainfall record, multiplied by a factor of two;
 - [c] Be ranked with high or medium pollutant removal efficiency for the Priority Development Project's most significant pollutants of concern. Flow-thru treatment control BMPs with a low removal efficiency ranking must only be approved by a Copermittee when a feasibility analysis has been conducted which exhibits that implementation of flow-thru treatment control BMPs with high or medium removal efficiency rankings are infeasible for a Priority Development Project or portion of a Priority Development Project.

encouraged to calculate the 85th percentile storm event for each of its jurisdictions using local rain data pertinent to its particular jurisdiction. In addition, isopluvial maps may be used to extrapolate rainfall data to areas where insufficient data exists in order to determine the volume of the local 85th percentile storm event in such areas. Where the Copermittees will use isopluvial maps to determine the 85th percentile storm event in areas lacking rain data, the Copermittees must describe their method for using isopluvial maps in its BMP Design Manuals.

²⁶ As part of the Copermittee's update to its BMP Design Manual, pursuant to Provision E.3.d, the Copermittee must provide guidance for hydraulic loading rates and other biofiltration design criteria necessary to maximize storm water retention and pollutant removal.

- (b) A Priority Development Project may be allowed to utilize alternative compliance under Provision E.3.c.(3) in lieu of complying with the storm water pollutant control BMP performance requirements of Provision E.3.c.(1)(a). The Priority Development Project must mitigate for the portion of the pollutant load in the design capture volume not retained onsite if Provision E.3.c.(3) is utilized. If a Priority Development Project is allowed to utilize alternative compliance, flow-thru treatment control BMPs must be implemented to treat the portion of the design capture volume that is not reliably retained onsite. Flow-thru treatment control BMPs must be sized and designed in accordance with Provisions E.3.c.(1)(a)(ii)[a]-[c].

(2) Hydromodification Management BMP Requirements

Each Copermittee must require each Priority Development Project to implement onsite BMPs to manage hydromodification that may be caused by storm water runoff discharged from a project as follows:

- (a) Post-project runoff conditions (flow rates and durations) must not exceed pre-development runoff conditions by more than 10 percent (for the range of flows that result in increased potential for erosion, or degraded instream habitat downstream of Priority Development Projects).
- (i) In evaluating the range of flows that results in increased potential for erosion of natural (non-hardened) channels, the lower boundary must correspond with the critical channel flow that produces the critical shear stress that initiates channel bed movement or that erodes the toe of channel banks.
- (ii) The Copermittees may use monitoring results collected pursuant to Provision D.1.a.(2) to re-define the range of flows resulting in increased potential for erosion, or degraded instream habitat conditions, as warranted by the data.
- (b) Each Priority Development Project must avoid critical sediment yield areas known to the Copermittee or identified by the optional Watershed Management Area Analysis pursuant to Provision B.3.b.(4), or implement measures that allow critical coarse sediment to be discharged to receiving waters, such that there is no net impact to the receiving water.
- (c) A Priority Development Project may be allowed to utilize alternative compliance under Provision E.3.c.(3) in lieu of complying with the performance requirements of Provision E.3.c.(2)(a). The Priority Development Project must mitigate for the post-project runoff conditions not fully managed onsite if Provision E.3.c.(3) is utilized.

(d) Exemptions

Each Copermittee has the discretion to exempt a Priority Development Project from the hydromodification management BMP performance requirements of Provisions E.3.c.(2) where the project discharges storm water runoff to:

- (i) Existing underground storm drains discharging directly to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean;
- (ii) Conveyance channels whose bed and bank are concrete lined all the way from the point of discharge to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean; or
- (iii) An area identified by the Copermittees as appropriate for an exemption by the optional Watershed Management Area Analysis incorporated into the Water Quality Improvement Plan pursuant to Provision B.3.b.(4).

(e) Interim Timeframe Exemptions

Until the Copermittees have updated their BMP Design Manual in accordance with Provision F.2.b with the requirements of Provision E, the Copermittees have the discretion to exempt a Priority Development Project from the hydromodification management BMP performance requirements of Provision E.3.c.(2) where the project discharges storm water runoff directly to:

- (i) An engineered channel conveyance system with a capacity to convey peak flows generated by the 10-year storm event all the way from the point of discharge to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean; and
- (ii) Large river reaches with a drainage area larger than 100 square miles and a 100-year flow capacity in excess of 20,000 cubic feet per second, provided that properly sized energy dissipation is included at all Priority Development Project discharge points.

(3) Alternative Compliance Program to Onsite Structural BMP Implementation

At the discretion of each Copermittee, Priority Development Projects may be allowed to participate in an alternative compliance program in lieu of implementing the onsite structural BMP performance requirements of Provisions E.3.c.(1) and E.3.c.(2)(a), provided that the Water Quality Improvement Plan includes the optional Watershed Management Area Analysis described in Provision B.3.b.(4), and Water Quality Equivalency

calculations have been accepted by the San Diego Water Board's Executive Officer pursuant to Provision E.3.c.(3)(a). The alternative compliance program is available to a Priority Development Project only if the Priority Development Project applicant enters into a voluntary agreement with the Copermittee authorizing this arrangement. In addition to the voluntary agreement, relief from implementing structural BMPs onsite may be authorized by the Copermittee under the following conditions:

(a) Water Quality Equivalency

Copermittees must submit Water Quality Equivalency calculations for acceptance by the San Diego Water Board's Executive Officer prior to administering an alternative compliance program in order to establish a regional and technical basis for determining the water quality benefits associated with alternative compliance projects. Accepted Water Quality Equivalency calculations must be incorporated as part of any Copermittee's alternative compliance program necessary for evaluating Watershed Management Area Analysis candidate projects, project applicant-proposed alternative compliance projects, alternative compliance in lieu fee structures, and alternative compliance water quality credit systems as described in Provisions E.3.c.(3)(b)-(e).

~~(a)~~(b) Watershed Management Area Analysis Candidate Projects

The Priority Development Project applicant agrees to fund, contribute funds to, or implement a candidate project identified by the Copermittees in the Watershed Management Area Analysis included in the Water Quality Improvement Plan, pursuant to Provisions B.3.b.(4) subject to the following conditions:

- (i) The Copermittee must determine that implementation of the candidate project will have a greater overall water quality benefit for the Watershed Management Area than fully complying with the performance requirements of Provisions E.3.c.(1) and E.3.c.(2)(a) onsite;
- (ii) If the Priority Development Project applicant chooses to fully or partially fund a candidate project, then the in-lieu fee structure described in Provision E.3.c.(3)(c) must be followed;
- (iii) If the Priority Development Project applicant chooses to fully or partially fund a candidate project, then the Copermittee must ensure that the funds to be obtained from the Priority Development Project applicant are sufficient to mitigate for impacts caused by not fully implementing structural BMPs onsite, pursuant to the performance requirements described in Provisions E.3.c.(1) and E.3.c.(2)(a);
- (iv) If the Priority Development Project applicant chooses to implement a candidate project, then the Copermittee must ensure that pollutant

control and/or hydromodification management within the candidate project are sufficient to mitigate for impacts caused by not implementing structural BMPs fully onsite, pursuant to the performance requirements described in Provisions E.3.c.(1) and E.3.c.(2)(a);

- (v) The voluntary agreement to fund, partially fund, or implement a candidate project must include reliable sources of funding for operation and maintenance of the candidate project;
- (vi) Design of the candidate project must be conducted under an appropriately qualified engineer, geologist, architect, landscape architect, or other professional, licenses where applicable, and competent and proficient in the fields pertinent to the candidate project design;
- (vii) The candidate project must be constructed as soon as possible, but no later than 4 years after the certificate of occupancy is granted for the first Priority Development Project that contributed funds toward the construction of the candidate project, unless a longer period of time is authorized by the San Diego Water Board Executive Officer; and
- (viii) If the candidate project is constructed after the Priority Development Project is constructed, the Copermittee must require temporal mitigation for pollutant loads and altered flows that are discharged from the Priority Development Project.

(b)(c) Project Applicant Proposed Alternative Compliance Projects

The Copermittee may allow a Priority Development Project applicant to propose and fund, contribute funds to, or implement an alternative compliance project not identified by the Watershed Management Area Analysis included in the Water Quality Improvement Plan pursuant to Provisions B.3.b.(4). This option is allowed provided the Copermittee determines that implementation of the alternative compliance project will have a greater overall water quality benefit for the Watershed Management Area than fully complying with the performance requirements of Provisions E.3.c.(1) and E.3.c.(2)(a) onsite, and is subject to the requirements described in Provisions E.3.c.(3)(a)(ii)-(viii).

(e)(d) Alternative Compliance In-Lieu Fee Structure

If a Copermittee chooses to allow a Priority Development Project applicant to fund, or partially fund a candidate project or an alternative compliance project, then the Copermittee must develop and implement an in-lieu fee structure. This may be developed individually or with other Copermittees and/or entities, as a means for designing, developing, constructing, operating and maintaining offsite alternative compliance projects. The in-

lieu fee must be transferred to the Copermittee (for public projects) or an escrow account (for private projects) prior to the construction of the Priority Development Project.

~~(d)~~(e) Alternative Compliance Water Quality Credit System Option

The Copermittee may develop and implement an alternative compliance water quality credit system option, individually or with other Copermittees and/or entities, provided that such a credit system clearly exhibits that it will not allow discharges from Priority Development Projects to cause or contribute to a net impact over and above the impact caused by projects meeting the onsite structural BMP performance requirements of Provisions E.3.c.(1) and E.3.c.(2)(a). Any credit system that a Copermittee chooses to implement must be submitted to the San Diego Water Board Executive Officer for review and acceptance as part of the Water Quality Improvement Plan.

(4) Long-Term Structural BMP Maintenance

Each Copermittee must require the project applicant to submit proof of the mechanism under which ongoing long-term maintenance of all structural BMPs will be conducted.

(5) Infiltration and Groundwater Protection

- (a) Structural BMPs designed to primarily function as large, centralized infiltration devices (such as large infiltration trenches and infiltration basins) must not cause or contribute to an exceedance of an applicable groundwater quality objective. At a minimum, such infiltration BMPs must be in conformance with the design criteria listed below, unless the development project applicant demonstrates to the Copermittee that one or more of the specific design criteria listed below are not necessary to protect groundwater quality. The design criteria listed below do not apply to small infiltration systems dispersed throughout a development project.
- (i) Runoff must undergo pretreatment such as sedimentation or filtration prior to infiltration;
 - (ii) Pollution prevention and source control BMPs must be implemented at a level appropriate to protect groundwater quality at sites where infiltration BMPs are to be used;
 - (iii) Infiltration BMPs must be adequately maintained to remove pollutants in storm water to the MEP;
 - (iv) The vertical distance from the base of any infiltration BMP to the seasonal high groundwater mark must be at least 10 feet. Where groundwater basins do not support beneficial uses, this vertical

distance criteria may be reduced, provided groundwater quality is maintained;

- (v) The soil through which infiltration is to occur must have physical and chemical characteristics (e.g., appropriate cation exchange capacity, organic content, clay content, and infiltration rate) which are adequate for proper infiltration durations and treatment of runoff for the protection of groundwater beneficial uses;
 - (vi) Infiltration BMPs must not be used for areas of industrial or light industrial activity, and other high threat to water quality land uses and activities as designated by each Copermittee, unless source control BMPs to prevent exposure of high threat activities are implemented, or runoff from such activities is first treated or filtered to remove pollutants prior to infiltration; and
 - (vii) Infiltration BMPs must be located a minimum of 100 feet horizontally from any water supply wells.
- (b) The Copermittee may develop, individually or with other Copermittees, alternative mandatory design criteria to that listed above for infiltration BMPs which are designed to primarily function as centralized infiltration devices. Before implementing the alternative design criteria in the development planning process the Copermittee(s) must:
- (i) Notify the San Diego Water Board of the intent to implement the alternative design criteria submitted; and
 - (ii) Comply with any conditions set by the San Diego Water Board.

d. BMP DESIGN MANUAL UPDATE

Each Copermittee must update its BMP Design Manual²⁷ pursuant to Provision F.2.b. Until the Copermittee has updated its BMP Design Manual with the requirements of Provisions E.3.a-c, the Copermittee must continue implementing its current BMP Design Manual. Unless directed otherwise by the San Diego Water Board, the Copermittee must implement the BMP Design Manual within 180 days of completing the update. The update of the BMP Design Manual must include the following:

- (1) Updated procedures to determine the nature and extent of storm water requirements applicable to a potential development or redevelopment projects. These procedures must inform project applicants of the storm water management requirements applicable to their project including, but not limited to, general requirements for all development projects, structural BMP design procedures and requirements, hydromodification management requirements,

²⁷ The BMP Design Manual was formerly known as the Standard Storm Water Mitigation Plan under Order Nos. R9-2007-0001, R9-2009-0002, and R9-2010-0016.

requirements specific to phased projects, and procedures specific to private developments and public improvement projects;

- (2) Updated procedures to identify pollutants and conditions of concern for selecting the most appropriate structural BMPs that consider, at a minimum, the following:
 - (a) Receiving water quality (including pollutants for which receiving waters are listed as impaired under the CWA section 303(d) List);
 - (b) Pollutants, stressors, and/or receiving water conditions that cause or contribute to the highest priority water quality conditions identified in the Water Quality Improvement Plan;
 - (c) Land use type of the project and pollutants associated with that land use type; and
 - (d) Pollutants expected to be present onsite.
- (3) Updated procedures for designing structural BMPs, including any updated performance requirements to be consistent with the requirements of Provision E.3.c for all structural BMPs listed in the BMP Design Manual;
- (4) Long-term maintenance criteria for each structural BMP listed in the BMP Design Manual; and
- (5) Alternative compliance criteria, in accordance with the requirements under Provision E.3.c.(3), if the Copermittee elects to allow Priority Development Projects within its jurisdiction to utilize alternative compliance.

e. PRIORITY DEVELOPMENT PROJECT BMP IMPLEMENTATION AND OVERSIGHT

Each Copermittee must implement a program that requires and confirms structural BMPs on all Priority Development Projects are designed, constructed, and maintained to remove pollutants in storm water to the MEP.

(1) Structural BMP Approval and Verification Process

- (a) Each Copermittee must require and confirm that for all Priority Development Project applications that have not received prior lawful approval by the Copermittee by the ~~time effective date of~~ the BMP Design Manual ~~is updated~~ pursuant to Provision E.3.d, the requirements of Provision E.3 ~~are~~ must be implemented. For project applications that have received prior lawful approval before the effective date of the BMP Design Manual ~~is updated~~ pursuant to Provision E.3.d, the Copermittee may allow previous land development requirements to apply.

- (b) Each Copermittee must identify the roles and responsibilities of its various municipal departments in implementing the structural BMP requirements, including each stage of a project from application review and approval through BMP maintenance and inspections.
- (c) Each Copermittee must require and confirm that appropriate easements and ownerships are properly recorded in public records and the information is conveyed to all appropriate parties when there is a change in project or site ownership.
- (d) Each Copermittee must require and confirm that prior to occupancy and/or intended use of any portion of the Priority Development Project, each structural BMP is inspected to verify that it has been constructed and is operating in compliance with all of its specifications, plans, permits, ordinances, and the requirements of this Order.

(2) Priority Development Project Inventory and Prioritization

- (a) Each Copermittee must develop, maintain, and update at least annually, a watershed-based database to track and inventory all Priority Development Projects and associated structural BMPs within its jurisdiction. Inventories must be accurate and complete beginning from December 2002 for the San Diego County Copermittees, February 2003 for the Orange County Copermittees, and July 2005 for the Riverside County Copermittees. The use of an automated database system, such as GIS, is highly recommended. The database must include, at a minimum, the following information:
 - (i) Priority Development Project location (address and hydrologic subarea);
 - (ii) Descriptions of structural BMP type(s);
 - (iii) Date(s) of construction;
 - (iv) Party responsible for structural BMP maintenance;
 - (v) Dates and findings of structural BMP maintenance verifications; and
 - (vi) Corrective actions and/or resolutions, when applicable.
- (b) Each Copermittee must prioritize the Priority Development Projects with structural BMPs within its jurisdiction. The designation of Priority Development Projects as high priority must consider the following:
 - (i) The highest water quality priorities identified in the Water Quality Improvement Plan;
 - (ii) Receiving water quality;
 - (iii) Number and sizes of structural BMPs;

- (iv) Recommended maintenance frequency of structural BMPs;
- (v) Likelihood of operation and maintenance issues of structural BMPs;
- (vi) Land use and expected pollutants generated; and
- (vii) Compliance record.

(3) Structural BMP Maintenance Verifications and Inspections

Each Copermittee is required to verify that structural BMPs on each Priority Development Project are adequately maintained, and continue to operate effectively to remove pollutants in storm water to the MEP through inspections, self-certifications, surveys, or other equally effective approaches.

- (a) All (100 percent) of the structural BMPs at Priority Development Projects that are designated as high priority must be inspected directly by the Copermittee annually prior to each rainy season;
- (b) For verifications performed through a means other than direct Copermittee inspection, adequate documentation must be required by the Copermittee to provide assurance that the required maintenance of structural BMPs at each Priority Development Project has been completed; and
- (c) Appropriate follow-up measures (including re-inspections, enforcement, etc.) must be conducted to ensure that structural BMPs at each Priority Development Project continue to reduce pollutants in storm water to the MEP as originally designed.

f. DEVELOPMENT PROJECT ENFORCEMENT

Each Copermittee must enforce its legal authority established pursuant to Provision E.1 for all development projects, as necessary, to achieve compliance with the requirements of this Order, in accordance with its Enforcement Response Plan pursuant to Provision E.6.

4. Construction Management

Each Copermittee must implement a construction management program in accordance with the strategies in the Water Quality Improvement Plan described pursuant to Provision B.3.b.(1) and includes, at a minimum, the following requirements:

a. PROJECT APPROVAL PROCESS

Prior to issuance of any local permit(s) that allows the commencement of construction projects that involve ground disturbance or soil disturbing activities that can potentially generate pollutants in storm water runoff, each Copermittee must:

- PROVISION E: JURISDICTIONAL RUNOFF MANAGEMENT PROGRAMS
- E.3. Development Planning
- E.4 Construction Management

- (1) Require a pollution control plan, construction BMP plan, and/or an erosion and sediment control plan, to be submitted by the project applicant to the Copermittee;
- (2) Confirm the pollution control plan, construction BMP plan, and/or erosion and sediment control plan, complies with the local grading ordinance, other applicable local ordinances, and the requirements of this Order;
- (3) Confirm the pollution control, construction BMP, and/or erosion and sediment control plan, includes seasonally appropriate and effective BMPs and management measures described in Provision E.4.c, as applicable to the project; and
- (4) Verify that the project applicant has obtained coverage under the statewide Construction General Permit (Order ~~2012-0006~~2009-0009-DWQ or subsequent Order), if applicable.

b. CONSTRUCTION SITE INVENTORY AND TRACKING

- (1) Each Copermittee must maintain and update, at least quarterly, a watershed-based inventory of all construction projects issued a local permit that allows ground disturbance or soil disturbing activities that can potentially generate pollutants in storm water runoff. The use of an automated database system, such as GIS, is highly recommended. The inventory must include:
 - (a) Relevant contact information for each site (e.g., name, address, phone, and email for the owner and contractor);
 - (b) The basic site information including location (address and hydrologic subarea), Waste Discharge Identification (WDID) number (if applicable), size of the site, and approximate area of disturbance;
 - (c) Whether or not the site is considered a high threat to water quality, as defined in Provision E.4.b.(2) below;
 - (d) The project start and completion dates;
 - (e) The required inspection frequency, as defined in the Copermittee's jurisdictional runoff management program document;
 - (f) The date the Copermittee accepted or approved the pollution control plan, construction BMP plan, and/or erosion and sediment control plan; and
 - (g) Whether or not there are ongoing enforcement actions administered to the site.

- (2) Each Copermittee must identify all construction sites within its jurisdiction that represent a high threat to downstream surface water quality. The designation of construction sites as high threat to water quality must consider the following:
 - (a) Sites located within a hydrologic subarea where sediment is known or suspected to contribute to the highest priority water quality conditions identified in the Water Quality Improvement Plan;
 - (b) Sites located within the same hydrologic subarea and tributary to a water body segment listed as impaired for sediment on the CWA section 303(d) List;
 - (c) Sites located within, directly adjacent to, or discharging directly to a receiving water within an ESA; and
 - (d) Other sites determined by the Copermittees or the San Diego Water Board as a high threat to water quality.

c. CONSTRUCTION SITE BMP IMPLEMENTATION

Each Copermittee must implement, or require the implementation of effective BMPs to reduce discharges of pollutants in storm water from construction sites to the MEP, and effectively prohibit non-storm water discharges from construction sites into the MS4. These BMPs must be site specific, seasonally appropriate, and construction phase appropriate. BMPs must be implemented at each construction site year round. Dry season BMP implementation must plan for and address unseasonal rain events that may occur during the dry season (May 1 through September 30). Copermittees must implement, or require the implementation of, BMPs in the following categories:

- (1) Project Planning;
- (2) Good Site Management “Housekeeping”, including waste management;
- (3) Non-storm Water Management;
- (4) Erosion Control;
- (5) Sediment Control;
- (6) Run-on and Run-off Control; and
- (7) Active/Passive Sediment Treatment Systems, where applicable.

d. CONSTRUCTION SITE INSPECTIONS

Each Copermittee must conduct construction site inspections to require and confirm compliance with its local permits and applicable local ordinances, and the requirements of this Order. Priority for site inspections must consider threat to water quality pursuant to Provision E.4.b as well as the nature of the construction activity, topography, and the characteristics of soils and receiving water quality.

(1) Inspection Frequency

- (a) Each Copermittee must conduct inspections at all inventoried sites, including high threat to water quality sites, at an appropriate frequency for each phase of construction to confirm the site reduces the discharge of pollutants in storm water from construction sites to the MEP, and effectively prohibits non-storm water discharges from entering the MS4.
- (b) Each Copermittee must establish appropriate inspection frequencies for high threat to water quality sites, and all other sites, for each phase of construction. Inspection frequencies appropriate for addressing the highest water quality priorities identified in the Water Quality Improvement Plan, and for complying with the requirements of this Order must be identified in each Copermittee's jurisdictional runoff management program document.
- (c) Based upon inspection findings, each Copermittee must implement all follow-up actions (i.e., re-inspection, enforcement) necessary to require and confirm site compliance with its local permits and applicable local ordinances, and the requirements of this Order.

(2) Inspection Content

Inspections of construction sites by the Copermittee must include, at a minimum:

- (a) Verification of coverage under the Construction General Permit (Notice of Intent (NOI) and/or WDID number) during initial inspections, when applicable;
- (b) Assessment of compliance with its local permits and applicable local ordinances related to pollution prevention, including the implementation and maintenance of applicable BMPs;
- (c) Assessment of BMP adequacy and effectiveness;
- (d) Visual observations of actual non-storm water discharges;
- (e) Visual observations of actual or potential discharge of sediment and/or

construction related materials from the site;

- (f) Visual observations of actual or potential illicit connections; and
- (g) If any violations are found and BMP corrections are needed, inspectors must take and document appropriate actions in accordance with the Enforcement Response Plan pursuant to Provision E.6.

(3) Inspection Tracking and Records

Each Copermittee must track all inspections and re-inspections at all inventoried construction sites. The Copermittee must retain all inspection records in an electronic database or tabular format, which must be made available to the San Diego Water Board upon request. Inspection records must include, at a minimum:

- (a) Site name, location (address and hydrologic subarea), and WDID number (if applicable);
- (b) Inspection date;
- (c) Approximate amount of rainfall since last inspection;
- (d) Description of problems observed with BMPs and indication of need for BMP addition/repair/replacement and any scheduled re-inspection, and date of re-inspection;
- (e) Descriptions of any other specific inspection comments which must, at a minimum, include rationales for longer compliance time;
- (f) Description of enforcement actions issued in accordance with the Enforcement Response Plan pursuant to Provision E.6; and
- (g) Resolution of problems noted and date problems fixed.

e. CONSTRUCTION SITE ENFORCEMENT

Each Copermittee must enforce its legal authority established pursuant to Provision E.1 for all its inventoried construction sites, as necessary, to achieve compliance with the requirements of this Order, in accordance with its Enforcement Response Plan pursuant to Provision E.6.

5. Existing Development Management

Each Copermittee must implement an existing development management program in accordance with the strategies in the Water Quality Improvement Plan described pursuant to Provision B.3.b.(1) and includes, at a minimum, the following

- PROVISION E: JURISDICTIONAL RUNOFF MANAGEMENT PROGRAMS
 - E.4. Construction Management
 - E.5 Existing Development Management

requirements:

a. EXISTING DEVELOPMENT INVENTORY AND TRACKING

Each Copermittee must maintain, and update at least annually, a watershed-based inventory of the existing development within its jurisdiction that may discharge a pollutant load to and from the MS4. The use of an automated database system, such as GIS, is highly recommended. The inventory must, at a minimum, include:

- (1) Name, location (hydrological subarea and address, if applicable) of the following types of existing development with its jurisdiction:
 - (a) Commercial facilities or areas;
 - (b) Industrial facilities;
 - (c) Municipal facilities, including:
 - (i) MS4 and related structures;²⁸
 - (ii) Roads, streets, and highways;
 - (iii) Parking facilities;
 - (iv) Municipal airfields;
 - (v) Parks and recreation facilities;
 - (vi) Flood management facilities, flood control devices and structures;
 - (vii) Operating or closed municipal landfills;
 - (viii) Publicly owned treatment works (including water and wastewater treatment plants) and sanitary sewer collection systems;
 - (ix) Corporate yards, including maintenance and storage yards for materials, waste, equipment, and vehicles;
 - (x) Hazardous waste collection facilities;
 - (xi) Other treatment, storage or disposal facilities for municipal waste; and
 - (xii) Other municipal facilities that the Copermittee determines may contribute a significant pollutant load to the MS4.
 - (d) Residential areas, which may be designated by one or more of the following:
 - (i) Residential management area;
 - (ii) Drainage basin or area;

²⁸ The inventory may refer to the MS4 map required to be maintained pursuant to Provision E.2.b.(1).

- (iii) Land use (e.g., single family, multi-family, rural);
 - (iv) Neighborhood;
 - (v) Common Interest Area;
 - (vi) Home Owner Association;
 - (vii) Mobile home park; and/or
 - (viii) Other designations accepted by the San Diego Water Board Executive Officer.
- (2) A description of the facility or area, including the following information:
- (a) Classification as commercial, industrial, municipal, or residential;
 - (b) Status of facility or area as active or inactive;
 - (c) Identification if a business is a mobile business;
 - (d) SIC Code or NAICS Code, if applicable;
 - (e) Industrial General Permit NOI and/or WDID number, if applicable;
 - (f) Identification if a residential area is or includes a Common Interest Area / Home Owner Association, or mobile home park;
 - (g) Identification of pollutants generated and potentially generated by the facility or area;
 - (h) Whether the facility or area is adjacent to an ESA;
 - (i) Whether the facility or area is tributary to and within the same hydrologic subarea as a water body segment listed as impaired on the CWA section 303(d) List and generates pollutants for which the water body segment is impaired; and
- (3) An annually updated map showing the location of inventoried existing development, watershed boundaries, and water bodies.

b. EXISTING DEVELOPMENT BMP IMPLEMENTATION AND MAINTENANCE

Each Copermittee must designate a minimum set of BMPs required for all inventoried existing development, including special event venues. The designated minimum BMPs must be specific to facility or area types and pollutant generating activities, as appropriate.

(1) Commercial, Industrial, and Municipal Facilities and Areas

(a) Pollution Prevention

Each Copermittee must require the use of pollution prevention methods by the commercial, industrial, and municipal facilities and areas in its inventoried existing development to address the priorities and strategies in the Water Quality Improvement Plan.

(b) BMP Implementation

Each Copermittee must require the implementation of designated BMPs at commercial facilities and areas, industrial facilities, and implement designated BMPs at municipal facilities in its inventoried existing development.

(c) BMP Operation and Maintenance

- (i) Each Copermittee must properly operate and maintain, or require the proper operation and maintenance of designated BMPs at commercial facilities and areas, industrial facilities, and municipal facilities in its inventoried existing development.
- (ii) Each Copermittee must implement a schedule of operation and maintenance activities for its MS4 and related structures (including but not limited to catch basins, storm drain inlets, detention basins, etc.), and verify proper operation of all its municipal structural treatment controls designed to reduce pollutants (including floatables) in storm water discharges to or from its MS4s and related drainage structures. Operation and maintenance activities may include, but is not limited to, the following:
 - [a] Inspections of the MS4 and related structures;
 - [b] Cleaning of the MS4 and related structures; and
 - [c] Proper disposal of materials removed from cleaning of the MS4 and related structures.
- (iii) Each Copermittee must implement a schedule of operation and maintenance for public streets, unpaved roads, paved roads, and paved highways within its jurisdiction to minimize pollutants that can be discharged in storm water.
- (iv) Each Copermittee must implement controls to prevent infiltration of sewage into the MS4 from leaking sanitary sewers. Copermittees that operate both a municipal sanitary sewer system and a MS4 must implement controls and measures to prevent and eliminate seeping sewage from infiltrating the MS4. Copermittees that do not operate both a municipal sanitary sewer system and a MS4 must coordinate with sewerage agencies to keep themselves informed of relevant and appropriate maintenance activities and sanitary sewage projects in their jurisdiction that may cause or contribute to seepage of sewage into the MS4.

(d) Pesticides, Herbicides, and Fertilizers BMPs

Each Copermittee must require the implementation of BMPs to reduce pollutants in storm water discharges to the MEP and effectively prohibit non-storm water discharges associated with the application, storage, and disposal of pesticides, herbicides and fertilizers from commercial facilities and areas and industrial facilities, and implement BMPs at municipal facilities in its inventoried existing development. Such BMPs must include, as appropriate, educational activities, permits, certifications and other measures for applicators and distributors.

(2) Residential Areas

(a) Pollution Prevention

Each Copermittee must promote and encourage the use of pollution prevention methods, where appropriate, by the residential areas in its inventoried existing development.

(b) BMP Implementation

Each Copermittee must promote and encourage the implementation of designated BMPs at residential areas in its inventoried existing development.

(c) BMP Operation and Maintenance

Each Copermittee must properly operate and maintain, or require the proper operation and maintenance of designated BMPs at residential areas in its inventoried existing development.

(d) Pesticides, Herbicides, and Fertilizers BMPs

Each Copermittee must promote and encourage the implementation of BMPs to reduce pollutants in storm water discharges to the MEP and effectively prohibit non-storm water discharges associated with the application, storage, and disposal of pesticides, herbicides and fertilizers from residential areas in its inventoried existing development.

c. EXISTING DEVELOPMENT INSPECTIONS

Each Copermittee must conduct inspections of inventoried existing development to ensure compliance with applicable local ordinances and permits, and the requirements of this Order.

(1) Inspection Frequency

- (a) Each Copermittee must establish appropriate inspection frequencies for inventoried existing development in accordance with the following requirements:
- (i) At a minimum, inventoried existing development must be inspected once every five years utilizing one or more of the following methods:
 - [a] Drive-by inspections by Copermittee municipal and contract staff;
 - [b] Onsite inspections by Copermittee municipal and contract staff; and/or
 - [c] Visual inspections of publicly accessible inventoried facilities or areas by volunteer monitoring or patrol programs that have been trained by the Copermittee;
 - (ii) The frequency of inspections must be appropriate to confirm that BMPs are being implemented to reduce the discharge of pollutants in storm water from the MS4 to the MEP and effectively prohibit non-storm water discharges to the MS4;
 - (iii) The frequency of inspections must be based on the potential for a facility or area to discharge non-storm water and pollutants in storm water, and should reflect the priorities set forth in the Water Quality Improvement Plan;
 - (iv) Each Copermittee must annually perform onsite inspections of an equivalent of at least 20 percent of the commercial facilities and areas, industrial facilities, and municipal facilities in its inventoried existing development;²⁹ and
 - (v) Inventoried existing development must be inspected by the Copermittee, as needed, in response to valid public complaints.
- (b) Based upon inspection findings, each Copermittee must implement all follow-up actions (i.e. education and outreach, re-inspection, enforcement) necessary to require and confirm compliance with its applicable local ordinances and permits and the requirements of this Order, in accordance with its Enforcement Response Plan pursuant to Provision E.6.

(2) Inspection Content

- (a) Inspections of existing development must include, at a minimum:
- (i) Visual inspections for the presence of actual non-storm water discharges;

²⁹ If any commercial, industrial, or municipal facilities or areas require multiple onsite inspections during any given year, those additional inspection may count toward the total annual inspection requirement. This requirement excludes linear municipal facilities (i.e., MS4 linear channels, sanitary sewer collection systems, streets, roads and highways).

- (ii) Visual inspections for the presence of actual or potential discharge of pollutants;
 - (iii) Visual inspections for the presence of actual or potential illicit connections; and
 - (iv) Verification that the description of the facility or area in the inventory, required pursuant to Provision E.5.a.(2), has not changed.
- (b) Onsite inspections of existing development by the Copermittee must include, at a minimum:
- (i) Assessment of compliance with its applicable local ordinances and permits related to non-storm water and storm water discharges and runoff;
 - (ii) Assessment of the implementation of the designated BMPs;
 - (iii) Verification of coverage under the Industrial General Permit, when applicable; and
 - (iv) If any problems or violations are found, inspectors must take and document appropriate actions in accordance with the Enforcement Response Plan pursuant to Provision E.6.

(3) Inspection Tracking and Records

Each Copermittee must track all inspections and re-inspections at all inventoried existing development. The Copermittee must retain all inspection records in an electronic database or tabular format, which must be made available to the San Diego Water Board upon request. Inspection records must include, at a minimum:

- (a) Name and location of the facility or area (address and hydrologic subarea) consistent with the inventory name and location, pursuant to Provision E.5.a.(1);
- (b) Inspection and re-inspection date(s);
- (c) Inspection method(s) (i.e. drive-by, onsite);
- (d) Observations and findings from the inspection(s);
- (e) For onsite inspections of existing development by Copermittee municipal or contract staff, the records must also include, as applicable:
 - (i) Description of any problems or violations found during the inspection(s);

- (ii) Description of enforcement actions issued in accordance with the Enforcement Response Plan pursuant to Provision E.6; and
- (iii) The date problems or violations were resolved.

d. EXISTING DEVELOPMENT ENFORCEMENT

Each Copermittee must enforce its legal authority established pursuant to Provision E.1 for all its inventoried existing development, as necessary, to achieve compliance with the requirements of this Order, in accordance with its Enforcement Response Plan pursuant to Provision E.6.

e. RETROFITTING AND REHABILITATING AREAS OF EXISTING DEVELOPMENT

(1) Retrofitting Areas of Existing Development

Each Copermittee must describe in its jurisdictional runoff management program document, a program to retrofit areas of existing development within its jurisdiction to address identified sources of pollutants and/or stressors that contribute to the highest priority water quality conditions in the Watershed Management Area. The program must be implemented as follows:

- (a) Each Copermittee must identify areas of existing development as candidates for retrofitting, focusing on areas where retrofitting will address pollutants and/or stressors that contribute to the highest priority water quality conditions identified in the Water Quality Improvement Plan;
- (b) Candidates for retrofitting projects may be utilized to reduce pollutants that may be discharged in storm water from areas of existing development, and/or address storm water runoff flows and durations from areas of existing development that cause or contribute to hydromodification in receiving waters;
- (c) Each Copermittee must develop a strategy to facilitate the implementation of retrofitting projects in areas of existing development identified as candidates;
- (d) Each Copermittee should identify areas of existing development where Priority Development Projects may be allowed or should be encouraged to implement or contribute toward the implementation of alternative compliance retrofitting projects; and
- (e) Where retrofitting projects within specific areas of existing development are determined to be infeasible to address the highest priority water quality conditions in the Water Quality Improvement Plan, the Copermittee should collaborate and cooperate with other Copermittees and/or entities in the Watershed Management Area to identify, develop, and implement

regional retrofitting projects (i.e. projects that can receive and/or treat storm water from one or more areas of existing development and will result in a net benefit to water quality and the environment) adjacent to and/or downstream of the areas of existing development.

(2) Stream, Channel and/or Habitat Rehabilitation in Areas of Existing Development

Each Copermittee must describe in its jurisdictional runoff management program document, a program to rehabilitate streams, channels, and/or habitats in areas of existing development within its jurisdiction to address the highest priority water quality conditions in the Watershed Management Area. The program must be implemented as follows:

- (a) Each Copermittee must identify streams, channels, and/or habitats in areas of existing development as candidates for rehabilitation, focusing on areas where stream, channel, and/or habitat rehabilitation projects will address the highest priority water quality conditions identified in the Water Quality Improvement Plan;
- (b) Candidates for stream, channel, and/or habitat rehabilitation projects may be utilized to address storm water runoff flows and durations from areas of existing development that cause or contribute to hydromodification in receiving waters, rehabilitate channelized or hydromodified streams, restore wetland and riparian habitat, restore watershed functions, and/or restore beneficial uses of receiving waters;
- (c) Each Copermittee must develop a strategy to facilitate the implementation of stream, channel, and/or habitat rehabilitation projects in areas of existing development identified as candidates;
- (d) Each Copermittee should identify areas of existing development where Priority Development Projects may be allowed or should be encouraged to implement or contribute toward the implementation of alternative compliance stream, channel, and/or habitat rehabilitation projects; and
- (e) Where stream, channel, and/or habitat rehabilitation projects within specific areas of existing development are determined to be infeasible to address the highest priority water quality conditions in the Water Quality Improvement Plan, the Copermittee should collaborate and cooperate with other Copermittees and/or entities in the Watershed Management Area to identify, develop, and implement regional stream, channel, and/or habitat rehabilitation projects (i.e. projects that can receive storm water from one or more areas of existing development and will result in a net benefit to water quality and the environment).

6. Enforcement Response Plans

Each Copermittee must develop and implement an Enforcement Response Plan as part of its jurisdictional runoff management program document. The Enforcement Response Plan must describe the applicable approaches and options to enforce its legal authority established pursuant to Provision E.1, as necessary, to achieve compliance with the requirements of this Order. The Enforcement Response Plan must be in accordance with the strategies in the Water Quality Improvement Plan described pursuant to Provision B.3.b.(1) and include the following:

a. ENFORCEMENT RESPONSE PLAN COMPONENTS

The Enforcement Response Plan must include the following individual components:

- (1) Illicit Discharge Detection and Elimination Enforcement Component;
- (2) Development Planning Enforcement Component;
- (3) Construction Management Enforcement Component; and
- (4) Existing Development Enforcement Component.

b. ENFORCEMENT RESPONSE APPROACHES AND OPTIONS

Each component of the Enforcement Response Plan must describe the enforcement response approaches that the Copermittee will implement to compel compliance with its statutes, ordinances, permits, contracts, orders, or similar means, and the requirements of this Order. The description must include the protocols for implementing progressively stricter enforcement responses. The enforcement response approaches must include appropriate sanctions to compel compliance, including, at a minimum, the following tools or their equivalent:

- (1) Verbal and written notices of violation;
- (2) Cleanup requirements;
- (3) Fines;
- (4) Bonding requirements;
- (5) Administrative and criminal penalties;
- (6) Liens;
- (7) Stop work orders; and

(8) Permit and occupancy denials.

c. CORRECTION OF VIOLATIONS

- (1) Violations must be corrected in a timely manner with the goal of correcting the violations within 30 calendar days after the violations are discovered, or prior to the next predicted rain event, whichever is sooner.
- (2) If more than 30 calendar days are required to achieve compliance, then a rationale must be recorded in the applicable electronic database or tabular system used to track violations.

d. ESCALATED ENFORCEMENT

- (1) The Enforcement Response Plan must include a definition of “escalated enforcement.” Escalated enforcement must include any enforcement scenario where a violation or other non-compliance is determined to cause or contribute to the highest priority water quality conditions identified in the Water Quality Improvement Plan. Escalated enforcement may be defined differently for development planning, construction sites, commercial facilities or areas, industrial facilities, municipal facilities, and residential areas.
- (2) Where the Copermittee determines escalated enforcement is not required, a rationale must be recorded in the applicable electronic database or tabular system used to track violations.
- (3) Escalated enforcement actions must continue to increase in severity, as necessary, to compel compliance as soon as possible.

e. REPORTING OF NON-COMPLIANT SITES

- (1) Each Copermittee must notify the San Diego Water Board in writing within five (5) calendar days of issuing escalated enforcement (as defined in the Copermittee’s Enforcement Response Plan) to a construction site that poses a significant threat to water quality as a result of violations or other non-compliance with its permits and applicable local ordinances, and the requirements of this Order. Written notification may be provided electronically by email to the appropriate San Diego Water Board staff.
- (2) Each Copermittee must notify the San Diego Water Board of any persons required to obtain coverage under the statewide Industrial General Permit and Construction General Permit and failing to do so, within five (5) calendar days from the time the Copermittee become aware of the circumstances. Written notification may be provided electronically by email to R9_Nonfilers@waterboards.ca.gov ~~Nonfilers_R9@waterboards.ca.gov~~.

7. Public Education and Participation

Each Copermittee must implement, individually or with other Copermittees, a public education and participation program in accordance with the strategies identified in the Water Quality Improvement Plan to promote and encourage the development of programs, management practices, and behaviors that reduce the discharge of pollutants in storm water to the MEP, prevent controllable non-storm water discharges from entering the MS4, and protect water quality standards in receiving waters. The public education and participation program must be implemented in accordance with the strategies in the Water Quality Improvement Plan described pursuant to Provision B.3.b.(1) and include, at a minimum, the following requirements:

a. PUBLIC EDUCATION

The public education program component implemented within the Copermittee's jurisdiction must include, at a minimum, the following:

- (1) Educational activities, public information activities, and other appropriate outreach activities intended to reduce pollutants associated with the application of pesticides, herbicides and fertilizer and other pollutants of concern in storm water discharges to and from its MS4 to the MEP, as determined and prioritized by the Copermittee(s) by jurisdiction and/or watershed to address the highest priority water quality conditions identified in the Water Quality Improvement Plan;
- (2) Educational activities, public information activities, and other appropriate outreach activities to facilitate the proper management and disposal of used oil and toxic materials; and
- (3) Appropriate education and training measures for specific target audiences, such as construction site operators, residents, underserved target audiences and school-aged children, as determined and prioritized by the Copermittee(s) by jurisdiction and/or watershed, based on high risk behaviors and pollutants of concern.

b. PUBLIC PARTICIPATION

The public participation program component implemented within the Copermittee's jurisdiction must include, at a minimum, the following:

- (1) A process for members of the public to participate in updating the highest priority water quality conditions, numeric goals, and water quality improvement strategies in the Water Quality Improvement Plan;
- (2) Opportunities for members of the public to participate in providing the Copermittee recommendations for improving the effectiveness of the water

quality improvement strategies implemented within its jurisdiction; and

- (3) Opportunities for members of the public to participate in programs and/or activities that can result in the prevention or elimination of non-storm water discharges to the MS4, reduction of pollutants in storm water discharges from the MS4, and/or protection of the quality of receiving waters.

8. Fiscal Analysis

- a. Each Copermittee must secure the resources necessary to meet all the requirements of this Order.
- b. Each Copermittee must conduct an annual fiscal analysis of its jurisdictional runoff management program in its entirety. The fiscal analysis must include the following:
 - (1) Identification of the various categories of expenditures necessary to implement the requirements of this Order, including a description of the specific capital, operation and maintenance, and other expenditure items to be accounted for in each category of expenditures;
 - (2) The staff resources needed and allocated to meet the requirements of this Order, including any development, implementation, and enforcement activities required;
 - (3) The estimated expenditures for Provisions E.8.b.(1) and E.8.b.(2) for the current fiscal year; and
 - (4) The source(s) of funds that are proposed to meet the necessary expenditures described in Provisions E.8.b.(1) and E.8.b.(2), including legal restrictions on the use of such funds, for the current fiscal year and next fiscal year.
- c. Each Copermittee must submit a summary of the annual fiscal analysis with each Water Quality Improvement Plan Annual Report required pursuant to Provision F.3.b.(3).
- d. Each Copermittee must provide the documentation used to develop the summary of the annual fiscal analysis upon request by the San Diego Water Board.

F. REPORTING

The purpose of this provision is to determine and document compliance with the requirements set forth in this Order. The goal of reporting is to communicate to the San Diego Water Board and the people of the State of California the implementation status of each jurisdictional runoff management program and compliance with the requirements of this Order. This goal is to be accomplished through the submittal of specific deliverables to the San Diego Water Board by the Copermittees.

1. Water Quality Improvement Plans

The Copermittees for each Watershed Management Area must develop and submit the Water Quality Improvement Plan in accordance with the following requirements:

a. WATER QUALITY IMPROVEMENT PLAN DEVELOPMENT

Each Water Quality Improvement Plan must be developed in accordance with the following process:

(1) Public Participation Process

The Copermittees must implement a public participation process to solicit data, information, and recommendations to be utilized in the development of the Water Quality Improvement Plan. The public participation process must include the following:

- (a) The Copermittees must develop a publicly available and noticed schedule of the opportunities for the public to participate and provide comments during the development of the Water Quality Improvement Plan. The schedule may be adjusted as necessary by the Copermittees, provided the public is provided timely notification of the changes to the schedule.
- (b) The Copermittees must form a Water Quality Improvement Consultation Panel to provide recommendations during the development of the Water Quality Improvement Plan. The Water Quality Improvement Consultation Panel must consist of at least the following members:
 - (i) A representative of the San Diego Water Board;
 - (ii) A representative of the environmental community familiar with the water quality conditions of concern of the receiving waters in the Watershed Management Area, preferably from an environmental interest group associated with a water body within the Watershed Management Area; and
 - (iii) A representative of the development community familiar with the opportunities and constraints for implementing structural BMPs, retrofitting projects, and stream, channel or habitat rehabilitation

projects in the Watershed Management Area, preferably with relevant engineering, hydrology, and/or geomorphology experience in the Watershed Management Area.

- (c) The Copermittees must coordinate the schedules for the public participation process among the Watershed Management Areas to provide the public time and opportunity to participate during the development of the Water Quality Improvement Plans.

(2) Priority Water Quality Conditions

- (a) The Copermittees must solicit data, information and recommendations from the public to be utilized in the development and identification of the priority water quality conditions and potential water quality improvement strategies for the Watershed Management Area.
- (b) The Copermittees must review the priority water quality conditions the Copermittees plan on including in the Water Quality Improvement Plan with the Water Quality Improvement Consultation Panel to receive recommendations or concurrence.
- (c) The Copermittees must consider revisions to the priority water quality conditions based on recommendations from the Water Quality Improvement Consultation Panel.
- (d) The Copermittees must include all the potential water quality improvement strategies identified by the public and the Water Quality Improvement Consultation Panel with the submittal of the priority water quality conditions to the San Diego Water Board.
- (e) The Copermittees must submit the Water Quality Improvement Plan requirements of Provision B.2 to the San Diego Water Board as early as 6 months and no later than 12 months after the commencement of coverage under this Order. Upon receipt, the San Diego Water Board will issue a public notice and release the proposed priority water quality conditions and potential water quality improvement strategies for public review and comment for a minimum of 30 days.
- (f) The Copermittees must consider revisions to the priority water quality conditions and potential water quality improvement strategies developed pursuant to Provision B.2 based on public comments received by the close of the comment period.

(3) Water Quality Improvement Goals, Strategies and Schedules

- (a) The Copermittees must solicit recommendations from the public on potential numeric goals for the highest priority water quality conditions

identified for the Watershed Management Area, and recommendations on the strategies that should be implemented to achieve the potential numeric goals.

- (b) The Copermittees must consult with the Water Quality Improvement Consultation Panel and consider revisions to the following items based on the Panel's recommendations:
 - (i) The numeric goals and schedules the Copermittees propose to include in the Water Quality Improvement Plan;
 - (ii) The water quality improvement strategies and schedules the Copermittees propose to implement in the Watershed Management Area and include in the Water Quality Improvement Plan; and
 - (iii) If the Copermittees choose to implement Provision B.3.b.(4), the results of the Watershed Management Area Analysis the Copermittees proposed to incorporate into the Water Quality Improvement Plan.
- (c) The Copermittees must submit the Water Quality Improvement Plan requirements of Provision B.3 to the San Diego Water Board as early as 9 months and no later than 18 months after the commencement of coverage under this Order. Upon receipt, the San Diego Water Board will issue a public notice and release the proposed water quality improvement goals, strategies and schedules for public review and comment for a minimum of 30 days.
- (d) The Copermittees must consider revisions to the water quality improvement goals, strategies and schedules developed pursuant to Provision B.3 based on public comments received by the close of the comment period.

b. WATER QUALITY IMPROVEMENT PLAN SUBMITTAL AND IMPLEMENTATION

- (1) Within 24 months after the commencement of coverage under this Order, the Copermittees for each Watershed Management Area must submit a complete Water Quality Improvement Plan in accordance with the requirements of Provision B of this Order to the San Diego Water Board. The San Diego Water Board will issue a public notice and release the Water Quality Improvement Plan for public review and comment for a minimum of 30 days.
- (2) The Copermittees must consider revisions to the Water Quality Improvement Plan based on written comments received by the close of the public comment period.

- (3) The Copermittees must promptly submit any revisions to the Water Quality Improvement Plan to the San Diego Water Board no later than 60 days after the close of the public comment period.
- (4) If issues concerning the Water Quality Improvement Plan are resolved informally through discussions among the Copermittees, the San Diego Water Board and interested parties, the San Diego Water Board Executive Officer may provide written notification of acceptance to the Copermittees that the Water Quality Improvement Plan meets the requirements of Provision B. However, if the Executive Officer determines that significant issues with the Water Quality Improvement Plan remain, the matter will be scheduled for San Diego Water Board consideration at a public meeting.
- (5) The Copermittees must commence with implementation of the Water Quality Improvement Plan, in accordance with the water quality improvement strategies and schedules therein, upon written notification of acceptance with the Water Quality Improvement Plan by the San Diego Water Board Executive Officer.
- (6) During implementation of the Water Quality Improvement Plan the Copermittees must correct any deficiencies in the Plan identified by the San Diego Water Board in the updates submitted with the Water Quality Improvement Plan Annual Report following a request by the Board to do so.
- (7) The Water Quality Improvement Plan must be made available on the Regional Clearinghouse required pursuant to Provision F.4 within 30 days of receiving notification of acceptance with the Water Quality Improvement Plan by the San Diego Water Board Executive Officer.

2. Updates

a. JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM DOCUMENT UPDATES

Each Copermittee must update its jurisdictional runoff management program document in accordance with the following requirements:

- (1) Each Copermittee is encouraged to seek public and key stakeholder participation and comments, as early and often as possible during the process of developing updates to its jurisdictional runoff management program document;
- (2) Each Copermittee must update its jurisdictional runoff management program document to incorporate the requirements of Provision E concurrent with the submittal of the Water Quality Improvement Plan. Each Copermittee must correct any deficiencies in the jurisdictional runoff management program document based on comments received from the San Diego Water Board in

the updates submitted with the Water Quality Improvement Plan Annual Report;

- (3) Each Copermittee must submit updates to its jurisdictional runoff management program, with the supporting rationale for the modifications, either in the Water Quality Improvement Plan Annual Report required pursuant to Provision F.3.b.(3), or as part of the Report of Waste Discharge required pursuant to Provision F.5.b;
- (4) The Copermittee must revise proposed modifications to its jurisdictional runoff management program as directed by the San Diego Water Board Executive Officer; and
- (5) Updated jurisdictional runoff management program documents must be made available on the Regional Clearinghouse required pursuant to Provision F.4 within 30 days of submitting the Water Quality Improvement Plan Annual Report.

b. BMP DESIGN MANUAL UPDATES

Each Copermittee must update its BMP Design Manual in accordance with the following requirements:

- (1) Each Copermittee must update its BMP Design Manual to incorporate the requirements of Provisions E.3.a-d concurrent with the submittal of the Water Quality Improvement Plan. Each Copermittee must correct any deficiencies in the BMP Design Manual based on comments received from the San Diego Water Board in the updates submitted with the Water Quality Improvement Plan Annual Report;
- (2) Subsequent updates to the BMP Design Manual must be consistent with the requirements of Provisions E.3.a-d and must be submitted as part of the Water Quality Improvement Plan Annual Reports required pursuant to Provision F.3.b.(3), or as part of the Report of Waste Discharge required pursuant to Provision F.5.b; and
- (3) Updated BMP Design Manuals must be made available on the Regional Clearinghouse required pursuant to Provision F.4 within 30 days of completing the update.

C. WATER QUALITY IMPROVEMENT PLAN UPDATES

- (1) The Water Quality Improvement Plans must be updated in accordance with the following process:
 - (a) The Copermitees must develop and implement a public participation process to obtain data, information and recommendations for updating the Water Quality Improvement Plan. The public participation process must provide for a publicly available and noticed schedule of opportunities for the public to participate and provide comments during the development of updates to the Water Quality Improvement Plan;
 - (b) The Copermitees must consult with the Water Quality Improvement Consultation Panel on proposed updates of the Water Quality Improvement Plan, and consider the Water Quality Improvement Consultation Panel's recommendations in finalizing the proposed updates;
 - (c) The Copermitees for each Watershed Management Area must submit 1) proposed updates to the Water Quality Improvement Plan and supporting rationale, and 2) recommendations received from the public and the Water Quality Improvement Consultation Panel and the rationale for the requested updates, either in the Water Quality Improvement Plan Annual Reports required pursuant to Provision F.3.b.(3), or as part of the Report of Waste Discharge required pursuant to Provision F.5.b. The updates submitted will be deemed accepted for inclusion in the Water Quality Improvement Plan ninety (90) days after submission unless otherwise directed in writing by the San Diego Water Board Executive Officer;
 - (d) The Copermitees must revise the requested updates as directed by the San Diego Water Board Executive Officer; and
 - (e) Updated Water Quality Improvement Plans must be made available on the Regional Clearinghouse required pursuant to Provision F.4 within 30 days of acceptance of the requested updates by the San Diego Water Board.
- (2) No later than six months following Office of Administrative Law and USEPA approval of any TMDL Basin Plan amendment with wasteload allocations (WLAs) assigned to the Copermitees during the term of this Order, the Copermitees must initiate an update to the applicable Water Quality Improvement Plans in accordance with Provision F.1 or Provision F.2.c.(1) to incorporate the requirements of the TMDL WLAs.

3. Progress Reporting

a. PROGRESS REPORT PRESENTATIONS

The Copermittees for each Watershed Management Area must periodically appear before the San Diego Water Board, as requested by the Board, to provide progress reports on the implementation of the Water Quality Improvement Plan and jurisdictional runoff management programs.

b. ANNUAL REPORTS

(1) Transitional Jurisdictional Runoff Management Program Annual Reports

- (a) Each Copermittee must complete and submit a Jurisdictional Runoff Management Program Annual Report Form (contained in Attachment D to this Order or a revised form accepted by the San Diego Water Board) no later than October 31 of each year for each jurisdictional runoff management program reporting period (i.e. July 1 to June 30) during the transitional period, until the first Water Quality Improvement Plan Annual Reports are required to be submitted.
- (b) Each Copermittee must submit the information on the Jurisdictional Runoff Management Program Annual Report Form (contained in Attachment D to this Order or a revised form accepted by the San Diego Water Board) specific to the area within its jurisdiction in each Watershed Management Area.
- (c) In addition to submitting the Jurisdictional Runoff Management Program Annual Report Form during the transitional reporting period, each Copermittee may continue to utilize and submit the jurisdictional runoff management program annual reporting format of its previous NPDES permit until the first Water Quality Improvement Plan Annual Report is required to be submitted.

(2) Transitional Monitoring and Assessment Program Annual Reports

The Copermittees for each Watershed Management Area must submit a Transitional Monitoring and Assessment Program Annual Report no later than January 31 for each complete transitional monitoring and assessment program reporting period (i.e. October 1 to September 30) during the transitional period, until the first Water Quality Improvement Plan Annual Reports are required to be submitted under this Order. The Transitional Monitoring and Assessment Program Annual Reports must include:

- (a) The receiving water and MS4 outfall discharge monitoring data collected pursuant to Provisions D.1.a and D.2.a, summarized and presented in tabular and graphical form; and

- (b) The findings from the assessments required pursuant to Provisions D.4.a.(1)(a), D.4.b.(1)(a)(i), D.4.b.(2)(a)(i).

(3) Water Quality Improvement Plan Annual Reports

The Copermittees for each Watershed Management Area must submit a Water Quality Improvement Plan Annual Report for each reporting period no later than January 31 of the following year. The annual reporting period consists of two different periods: 1) July 1 to June 30 of the following year for the jurisdictional runoff management programs, 2) October 1 to September 30 of the following year for the monitoring and assessment programs. The Water Quality Improvement Plan Annual Reports must be made available on the Regional Clearinghouse required pursuant to Provision F.4. Each Annual Report must include the following:

- (a) The receiving water and MS4 outfall discharge monitoring data collected pursuant to Provisions D.1 and D.2, summarized and presented in tabular and graphical form;
- (b) The progress of the special studies required pursuant to Provision D.3, and the findings, interpretations and conclusions of a special study, or each phase of a special study, upon its completion;
- (c) The findings, interpretations and conclusions from the assessments required pursuant to Provision D.4;
- (d) The progress of implementing the Water Quality Improvement Plan, including, but not limited to, the following:
- (i) The progress toward achieving the interim and final numeric goals for the highest water quality priorities for the Watershed Management Area;
 - (ii) The water quality improvement strategies that were implemented and/or no longer implemented by each of the Copermittees during the reporting period and previous reporting periods;
 - (iii) The water quality improvement strategies planned for implementation during the next reporting period;
 - (iv) Proposed modifications to the water quality improvement strategies, the public comments received and the supporting rationale for the proposed modifications;
 - (v) Previous modifications or updates incorporated into the Water Quality Improvement Plan and/or each Copermittee's jurisdictional runoff management program document and implemented by the Copermittees in the Watershed Management Area; and

- (vi) Proposed modifications or updates to the Water Quality Improvement Plan and/or each Copermittee's jurisdictional runoff management program document;
- (e) A completed Jurisdictional Runoff Management Program Annual Report Form (contained in Attachment D to this Order or a revised form accepted by the San Diego Water Board) for each Copermittee in the Watershed Management Area, certified by a Principal Executive Officer, Ranking Elected Official, or Duly Authorized Representative; and
- (f) Each Copermittee must provide any data or documentation utilized in developing the Water Quality Improvement Plan Annual Report upon request by the San Diego Water Board. Any Copermittee monitoring data utilized in developing the Water Quality Improvement Plan Annual Report must be uploaded to the California Environmental Data Exchange Network (CEDEN).³⁰ Any Copermittee monitoring and assessment data utilized in developing the Water Quality Improvement Plan Annual Report must be available for access on the Regional Clearinghouse required pursuant to Provision F.4.

c. REGIONAL MONITORING AND ASSESSMENT REPORT

- (1) The Copermittees must submit a Regional Monitoring and Assessment Report no later than 180 days prior to the expiration date of this Order. The Regional Monitoring and Assessment Report may be submitted as part of the Report of Waste Discharge required pursuant to Provision F.5.b. In preparing the report the Copermittees must consider the receiving water and MS4 outfall discharge monitoring data collected pursuant to Provisions D.1 and D.2, and the findings, interpretations, and conclusions from the assessments required pursuant to Provision D.4. Based on these considerations the report must assess the following:
 - (a) The beneficial uses of the receiving waters within the San Diego Region that are supported and not adversely affected by the Copermittees' MS4 discharges;
 - (b) The beneficial uses of the receiving waters within the San Diego Region that are adversely impacted by the Copermittees' MS4 discharges;
 - (c) The progress toward protecting the beneficial uses in the receiving waters within the San Diego Region from the Copermittees' discharges; and

³⁰ Data must be uploaded to CEDEN Southern California Regional Data Center (<http://www.sccwrp.org/Data/DataSubmission/SouthernCaliforniaRegionalDataCenter.aspx>) using the templates provided on the CEDEN website.

- (d) Pollutants or conditions of emerging concern that may impact beneficial uses in the receiving waters within the San Diego Region.
- (2) The Regional Monitoring and Assessment Report must include recommendations for improving the implementation and assessment of the Water Quality Improvement Plans and jurisdictional runoff management programs.
- (3) Each Copermittee must provide any data or documentation utilized in developing the Regional Monitoring and Assessment Report upon request by the San Diego Water Board. Any Copermittee monitoring and assessment data utilized in developing the Regional Monitoring and Assessment Report must be available for access on the Regional Clearinghouse required pursuant to Provision F.4.

4. Regional Clearinghouse

The Copermittees must develop, update, and maintain an internet-based Regional Clearinghouse that is made available to the public no later than 18 months after the effective date of this Order.³¹

- a. The Copermittees, through the Regional Clearinghouse, must make the following documents and data available for access, and organized by Watershed Management Area. The documents and data may be linked to other internet-based data portals and databases where the original documents are stored:
- (1) Water Quality Improvement Plan for the Watershed Management Area, and all updated versions with date of update;
 - (2) Annual Reports for the Watershed Management Area;
 - (3) Jurisdictional Runoff Management Program document for each Copermittee within the Watershed Management Area, and all updated versions with date of update;
 - (4) BMP Design Manual for each Copermittee within the Watershed Management Area, and all updated versions with date of update;
 - (5) Reports from special studies (e.g. source identification, BMP effectiveness assessment) conducted in the Watershed Management Area;

³¹ The Copermittees may develop, update and maintain the clearinghouse(s) of other Copermittees or agencies.

- (6) Monitoring data collected pursuant to Provision D for each Watershed Management Area must be uploaded to CEDEN,³² with links to the uploaded data; and
 - (7) Available GIS data, layers, and/or shapefiles used to develop the maps generated and maintained by the Copermittees for the Water Quality Improvement Plans, Annual Reports, and jurisdictional runoff management program documents.
- b.** The Copermittees, through the Regional Clearinghouse, must make the following information and documents available for access:
- (1) Contact information (point of contact, phone number, email address, and mailing address) for each Copermittee;
 - (2) Public hotline number for reporting non-storm water and illicit discharges for each Copermittee;
 - (3) Email address for reporting non-storm water and illicit discharges for each Copermittee;
 - (4) Link to each Copermittee's website, if available, where the public may find additional information about the Copermittee's storm water management program and for requesting records for the implementation of its program;
 - (5) Information about opportunities for the public to participate in programs and/or activities that can result in the prevention or elimination of non-storm water discharges to the MS4, reduction of pollutants in storm water discharges from the MS4, and/or protection of the quality of receiving waters; and
 - (6) Reports from regional monitoring programs in which the Copermittees participate (e.g. Southern California Monitoring Coalition, Southern California Coastal Water Research Project Bight Monitoring);
 - (7) Regional Monitoring and Assessment Reports; and
 - (8) Any other information, data, and documents the Copermittees determine as appropriate for making available to the public.

³² Data must be uploaded to CEDEN Southern California Regional Data Center (<http://www.sccwrp.org/Data/DataSubmission/SouthernCaliforniaRegionalDataCenter.aspx>) using the templates provided on the CEDEN website.

5. Report of Waste Discharge

- a. The ~~Orange County Copermittees and the~~ Riverside County Copermittees are required to submit a complete Report of Waste Discharge pursuant to the requirements of their current Orders. The San Diego Water Board will review and consider the Reports of Waste Discharge to determine whether modification to this Order, pursuant to the requirements of Provision H, will be required prior to the ~~Orange County Copermittees and/or~~ Riverside County Copermittees obtaining coverage under this Order. The current Order_s for ~~the Orange County Copermittees and~~ Riverside County Copermittees ~~is~~ are rescinded upon the date of effective coverage under this Order except for enforcement purposes.
- b. The Copermittees subject to the requirements of this Order must submit to the San Diego Water Board a complete Report of Waste Discharge as an application for the re-issuance of this Order and NPDES permit. The Report of Waste Discharge must be submitted no later than 180 days in advance of the expiration date of this Order. The Report of Waste Discharge must contain the following minimum information:
 - (1) Names and addresses of the Copermittees;
 - (2) Names and titles of the primary contacts of the Copermittees;
 - (3) Proposed changes to the Copermittees' Water Quality Improvement Plans and the supporting justification;
 - (4) Proposed changes to the Copermittees' jurisdictional runoff management programs and the supporting justification;
 - (5) Any other information necessary for the re-issuance of this Order;
 - (6) Any information to be included as part of the Report of Waste Discharge pursuant to the requirements of this Order; and
 - (7) Any other information required by federal regulations for NPDES permit reissuance.

6. Application for Early Coverage

- a. The ~~Orange County Copermittees, collectively, or~~ Riverside County Copermittees, ~~collectively,~~ may apply for early coverage under this Order by submitting a Report of Waste Discharge Form 200, with a written request for early coverage under this Order.
- b. The San Diego Water Board will review the application for early coverage. A notification of coverage under this Order will be issued to the Copermittees in the

respective county by the San Diego Water Board upon completion of the early coverage application requirements. The effective coverage date will be specified in the notification of coverage. The Copermittees in the respective county are authorized to have MS4 discharges pursuant to the requirements of this Order starting on the effective coverage date specified in the notification of coverage. The existing Order for the respective county is rescinded upon the effective coverage date specified in the notification of coverage except for enforcement purposes.

7. Reporting Provisions

Each Copermittee must comply with all the reporting and recordkeeping provisions of the Standard Permit Provisions and General Provisions contained in Attachment B to this Order.

G. PRINCIPAL WATERSHED COPERMITTEE RESPONSIBILITIES

1. The Copermittees within each Watershed Management Area must designate a Principal Watershed Copermittee and notify the San Diego Water Board of the name of the Principal Watershed Copermittee. An individual Copermittee should not be designated a Principal Watershed Copermittee for more than two Watershed Management Areas. The notification may be submitted with the Water Quality Improvement Plan required pursuant to Provision F.1 of this Order.
2. The Principal Watershed Copermittee is responsible for, at a minimum, the following:
 - a. Serving as liaison between the Copermittees in the Watershed Management Area and the San Diego Water Board on general permit issues, and when necessary and appropriate, representing the Copermittees in the Watershed Management Area before the San Diego Water Board;
 - b. Facilitating the development of the Water Quality Improvement Plan in accordance with the requirements of Provision B of this Order;
 - c. Coordinating the submittal of the deliverables required by Provisions F.1, F.2, F.3.a, and F.3.b of this Order; and
 - d. Coordinating and developing, with the other Principal Watershed Copermittees, the requirements of Provisions F.3.c, F.4, and F.5.b of this Order.
3. The Principal Watershed Copermittee is not responsible for ensuring that the other Copermittees within the Watershed Management Area are in compliance with the requirements of this Order. Each Copermittee within the Watershed Management Area is responsible for complying with the requirements of this Order.

H. MODIFICATION OF ORDER

1. Modifications of the Order may be initiated by the San Diego Water Board or by the Copermittees. Requests by Copermittees must be made to the San Diego Water Board.
2. Minor modifications to the Order may be made by the San Diego Water Board where the proposed modification complies with all the prohibitions and limitations, and other requirements of this Order.
3. This Order may also be re-opened and modified, revoked and, reissued or terminated in accordance with the provisions of 40 CFR 122.44, 122.62 to 122.64, and 124.5. Causes for taking such actions include, but are not limited to, failure to comply with any condition of this Order and permit, and endangerment to human health or the environment resulting from the permitted activity.
4. This Order may be re-opened for modification for cause including but not limited to the following:
 - a. The State Water Board determines that revisions are warranted, and the San Diego Water Board concurs that revisions are necessary to those provisions of the Order addressing compliance with water quality standards in the receiving water and/or those provisions of the Order establishing an iterative process for implementation of management practices to assure compliance with water quality standards in the receiving water;
 - b. An application for early coverage under this Order is received pursuant to Provision F.6;
 - c. Any of the TMDLs in Attachment E to this Order are amended in the Basin Plan by San Diego Water Board, and the amendment is approved by the State Water Board, Office of Administrative Law, and the USEPA;
 - d. The Basin Plan is amended by the San Diego Water Board to incorporate a new TMDL, and the amendment is approved by the State Water Board, Office of Administrative Law, and the USEPA; or
 - e. Updating or revising the monitoring and reporting requirements is determined to be necessary, at the discretion of the San Diego Water Board. Such modification(s) may include, but is (are) not limited to, revision(s) to: (i) implement recommendations from Southern California Coastal Water Research Project (SCCWRP), (ii) develop, refine, implement, and/or coordinate a regional monitoring program, (iii) develop and implement improved monitoring and assessment programs in keeping with San Diego Water Board Resolution No. R9-2012-0069, Resolution in Support of a Regional Monitoring Framework, and/or (iv) add provisions to require the Copermittees to evaluate and provide information on cost and values of the monitoring and reporting program.

5. The San Diego Water Board, after opportunity for public comment and a public hearing, will re-open and consider modifications to this Order when the ~~Orange County Copermittees or the~~ Riverside County Copermittees submit a complete Report of Waste Discharge pursuant to the requirements of their current Orders.

I. STANDARD PERMIT PROVISIONS AND GENERAL PROVISIONS

Each Copermittee must comply with all the Standard Permit Provisions and General Provisions contained in Attachment B to this Order.

ATTACHMENT A

DISCHARGE PROHIBITIONS AND SPECIAL PROTECTIONS

1. Basin Plan Waste Discharge Prohibitions

California Water Code Section 13243 provides that a Regional Water Board, in a water quality control plan, may specify certain conditions or areas where the discharge of waste or certain types of waste is not permitted. The following waste discharge prohibitions in the Water Quality Control Plan for the San Diego Basin (Basin Plan) are applicable to any person, as defined by Section 13050(c) of the California Water Code, who is a citizen, domiciliary, or political agency or entity of California whose activities in California could affect the quality of waters of the state within the boundaries of the San Diego Region.

1. The discharge of waste to waters of the state in a manner causing, or threatening to cause a condition of pollution, contamination or nuisance as defined in California Water Code Section 13050, is prohibited.
2. The discharge of waste to land, except as authorized by waste discharge requirements or the terms described in California Water Code Section 13264 is prohibited.
3. The discharge of pollutants or dredged or fill material to waters of the United States except as authorized by a National Pollutant Discharge Elimination System (NPDES) permit or a dredged or fill material permit (subject to the exemption described in California Water Code Section 13376) is prohibited.
4. Discharges of recycled water to lakes or reservoirs used for municipal water supply or to inland surface water tributaries thereto are prohibited, unless this San Diego Water Board issues a NPDES permit authorizing such a discharge; the proposed discharge has been approved by the State Department of Health Services (DHS) and the operating agency of the impacted reservoir; and the discharger has an approved fail-safe long-term disposal alternative.
5. The discharge of waste to inland surface waters, except in cases where the quality of the discharge complies with applicable receiving water quality objectives, is prohibited. Allowances for dilution may be made at the discretion of the San Diego Water Board. Consideration would include streamflow data, the degree of treatment provided and safety measures to ensure reliability of facility performance. As an example, discharge of secondary effluent would probably be permitted if streamflow provided 100:1 dilution capability.
6. The discharge of waste in a manner causing flow, ponding, or surfacing on lands not owned or under the control of the discharger is prohibited, unless the discharge is authorized by the San Diego Water Board.

7. The dumping, deposition, or discharge of waste directly into waters of the state, or adjacent to such waters in any manner which may permit its being transported into the waters, is prohibited unless authorized by the San Diego Water Board.
8. Any discharge to a storm water conveyance system that is not composed entirely of "*storm water*" is prohibited unless authorized by the San Diego Water Board. [The federal regulations, 40 CFR 122.26(b)(13), define storm water as storm water runoff, snow melt runoff, and surface runoff and drainage. 40 CFR 122.26(b)(2) defines an illicit discharge as any discharge to a storm water conveyance system that is not composed entirely of storm water except discharges pursuant to a NPDES permit and discharges resulting from firefighting activities.] [§122.26 amended at 56 FR 56553, November 5, 1991; 57 FR 11412, April 2, 1992].
9. The unauthorized discharge of treated or untreated sewage to waters of the state or to a storm water conveyance system is prohibited.
10. The discharge of industrial wastes to conventional septic tank/subsurface disposal systems, except as authorized by the terms described in California Water Code Section 13264, is prohibited.
11. The discharge of radioactive wastes amenable to alternative methods of disposal into the waters of the state is prohibited.
12. The discharge of any radiological, chemical, or biological warfare agent into waters of the state is prohibited.
13. The discharge of waste into a natural or excavated site below historic water levels is prohibited unless the discharge is authorized by the San Diego Water Board.
14. The discharge of sand, silt, clay, or other earthen materials from any activity, including land grading and construction, in quantities which cause deleterious bottom deposits, turbidity or discoloration in waters of the state or which unreasonably affect, or threaten to affect, beneficial uses of such waters is prohibited.
15. The discharge of treated or untreated sewage from vessels to Mission Bay, Oceanside Harbor, Dana Point Harbor, or other small boat harbors is prohibited.
16. The discharge of untreated sewage from vessels to San Diego Bay is prohibited.
17. The discharge of treated sewage from vessels to portions of San Diego Bay that are less than 30 feet deep at mean lower low water (MLLW) is prohibited.
18. The discharge of treated sewage from vessels, which do not have a properly functioning US Coast Guard certified Type I or Type II marine sanitation device, to portions of San Diego Bay that are greater than 30 feet deep at mean lower low water (MLLW) is prohibited.

2. Attachment B to State Water Board Resolution 2012-0012, as amended by State Water Board Resolution No. 2012-0031.

Special Protections for Areas of Special Biological Significance (ASBS), Governing Point Source Discharges of Storm Water and Nonpoint Source Waste Discharges

I. PROVISIONS FOR POINT SOURCE DISCHARGES OF STORM WATER AND NONPOINT SOURCE WASTE DISCHARGES

The following terms, prohibitions, and special conditions (hereafter collectively referred to as special conditions) are established as limitations on point source storm water and nonpoint source discharges. These special conditions provide Special Protections for marine aquatic life and natural water quality in Areas of Special Biological Significance (ASBS), as required for State Water Quality Protection Areas pursuant to California Public Resources Code Sections 36700(f) and 36710(f). These Special Protections are adopted by the State Water Board as part of the California Ocean Plan (Ocean Plan) General Exception.

The special conditions are organized by category of discharge. The State Water Resources Control Board (State Water Board) and Regional Water Quality Control Boards (Regional Water Boards) will determine categories and the means of regulation for those categories [e.g., Point Source Storm Water National Pollutant Discharge Elimination System (NPDES) or Nonpoint Source].

A. PERMITTED POINT SOURCE DISCHARGES OF STORM WATER

1. General Provisions for Permitted Point Source Discharges of Storm Water

a. Existing storm water discharges into an ASBS are allowed only under the following conditions:

(1) The discharges are authorized by an NPDES permit issued by the State Water Board or Regional Water Board;

(2) The discharges comply with all of the applicable terms, prohibitions, and special conditions contained in these Special Protections; and

(3) The discharges:

(i) Are essential for flood control or slope stability, including roof, landscape, road, and parking lot drainage;

(ii) Are designed to prevent soil erosion;

(iii) Occur only during wet weather;

(iv) Are composed of only storm water runoff.

b. Discharges composed of storm water runoff shall not alter natural ocean water quality in an ASBS.

c. The discharge of trash is prohibited.

d. Only discharges from existing storm water outfalls are allowed. Any proposed or new storm water runoff discharge shall be routed to existing storm water discharge outfalls and shall not result in any new contribution of waste to an ASBS (i.e., no additional pollutant loading). "Existing storm water outfalls" are those that were constructed or under construction prior to January 1, 2005. "New contribution of waste" is defined as any addition of waste beyond what would have occurred as of January 1, 2005. A change to an existing storm water outfall, in terms of re-location or alteration, in order to comply with these special conditions, is allowed and does not constitute a new discharge.

e. Non-storm water discharges are prohibited except as provided below:

(1) The term "non-storm water discharges" means any waste discharges from a municipal separate storm sewer system (MS4) or other NPDES permitted storm drain system to an ASBS that are not composed entirely of storm water.

(2) (i) The following non-storm water discharges are allowed, provided that the discharges are essential for emergency response purposes, structural stability, slope stability or occur naturally:

(a) Discharges associated with emergency fire fighting operations.

(b) Foundation and footing drains.

(c) Water from crawl space or basement pumps.

(d) Hillside dewatering.

(e) Naturally occurring groundwater seepage via a storm drain.

(f) Non-anthropogenic flows from a naturally occurring stream via a culvert or storm drain, as long as there are no contributions of anthropogenic runoff.

(ii) An NPDES permitting authority may authorize non-storm water discharges to an MS4 with a direct discharge to an ASBS only to the extent the NPDES permitting authority finds that the discharge does not alter natural ocean water quality in the ASBS.

(3) Authorized non-storm water discharges shall not cause or contribute to a violation of the water quality objectives in Chapter II of the Ocean Plan nor alter natural ocean water quality in an ASBS.

2. Compliance Plans for Inclusion in Storm Water Management Plans (SWMP) and Storm Water Pollution Prevention Plans (SWPPP).

The discharger shall specifically address the prohibition of non-storm water runoff and the requirement to maintain natural water quality for storm water discharges to an ASBS in an ASBS Compliance Plan to be included in its SWMP or a SWPPP, as appropriate to permit

ATTACHMENT A: DISCHARGE PROHIBITIONS AND SPECIAL PROTECTIONS

2. Attachment B to State Water Board Resolution No. 2012-001231

type. If a statewide permit includes a SWMP, then the discharger shall prepare a stand-alone compliance plan for ASBS discharges. The ASBS Compliance Plan is subject to approval by the Executive Director of the State Water Board (statewide permits) or Executive Officer of the Regional Water Board (for permits issued by Regional Water Boards).

a. The Compliance Plan shall include a map of surface drainage of storm water runoff, showing areas of sheet runoff, prioritize discharges, and describe any structural Best Management Practices (BMPs) already employed and/or BMPs to be employed in the future. Priority discharges are those that pose the greatest water quality threat and which are identified to require installation of structural BMPs. The map shall also show the storm water conveyances in relation to other features such as service areas, sewage conveyances and treatment facilities, landslides, areas prone to erosion, and waste and hazardous material storage areas, if applicable. The SWMP or SWPPP shall also include a procedure for updating the map and plan when changes are made to the storm water conveyance facilities.

b. The ASBS Compliance Plan shall describe the measures by which all non-authorized non-storm water runoff (e.g., dry weather flows) has been eliminated, how these measures will be maintained over time, and how these measures are monitored and documented.

c. For Municipal Separate Storm Sewer System (MS4s), the ASBS Compliance Plan shall require minimum inspection frequencies as follows:

(1) The minimum inspection frequency for construction sites shall be weekly during rainy season;

(2) The minimum inspection frequency for industrial facilities shall be monthly during the rainy season;

(3) The minimum inspection frequency for commercial facilities (e.g., restaurants) shall be twice during the rainy season; and

(4) Storm water outfall drains equal to or greater than 18 inches (457 mm) in diameter or width shall be inspected once prior to the beginning of the rainy season and once during the rainy season and maintained to remove trash and other anthropogenic debris.

d. The ASBS Compliance Plan shall address storm water discharges (wet weather flows) and, in particular, describe how pollutant reductions in storm water runoff, that are necessary to comply with these special conditions, will be achieved through BMPs. Structural BMPs need not be installed if the discharger can document to the satisfaction of the State Water Board Executive Director (statewide permits) or Regional Water Board Executive Officer (Regional Water Board permits) that such installation would pose a threat to health or safety. BMPs to control storm water runoff discharges (at the end-of-pipe) during a design storm shall be designed to achieve on average the following target levels:

(1) Table B Instantaneous Maximum Water Quality Objectives in Chapter II of the Ocean Plan; or

(2) A 90% reduction in pollutant loading during storm events, for the applicant's total discharges.

The baseline for these determinations is the effective date of the Exception, except for those structural BMPs installed between January 1, 2005 and adoption of these Special Protections, and the reductions must be achieved and documented within six (6) years of the effective date.

- e. The ASBS Compliance Plan shall address erosion control and the prevention of anthropogenic sedimentation in ASBS. The natural habitat conditions in the ASBS shall not be altered as a result of anthropogenic sedimentation.
- f. The ASBS Compliance Plan shall describe the non-structural BMPs currently employed and planned in the future (including those for construction activities), and include an implementation schedule. The ASBS Compliance Plan shall include non-structural BMPs that address public education and outreach. Education and outreach efforts must adequately inform the public that direct discharges of pollutants from private property not entering an MS4 are prohibited. The ASBS Compliance Plan shall also describe the structural BMPs, including any low impact development (LID) measures, currently employed and planned for higher threat discharges and include an implementation schedule. To control storm water runoff discharges (at the end-of-pipe) during a design storm, permittees must first consider, and use where feasible, LID practices to infiltrate, use, or evapotranspire storm water runoff on-site, if LID practices would be the most effective at reducing pollutants from entering the ASBS.
- g. The BMPs and implementation schedule shall be designed to ensure that natural water quality conditions in the receiving water are achieved and maintained by either reducing flows from impervious surfaces or reducing pollutant loading, or some combination thereof.
- h. If the results of the receiving water monitoring described in IV.B. of these special conditions indicate that the storm water runoff is causing or contributing to an alteration of natural ocean water quality in the ASBS, the discharger shall submit a report to the State Water Board and Regional Water Board within 30 days of receiving the results.
- (1) The report shall identify the constituents in storm water runoff that alter natural ocean water quality and the sources of these constituents.
- (2) The report shall describe BMPs that are currently being implemented, BMPs that are identified in the SWMP or SWPPP for future implementation, and any additional BMPs that may be added to the SWMP or SWPPP to address the alteration of natural water quality. The report shall include a new or modified implementation schedule for the BMPs.
- (3) Within 30 days of the approval of the report by the State Water Board Executive Director (statewide permits) or Regional Water Board Executive Officer (Regional Water Board permits), the discharger shall revise its ASBS Compliance Plan to incorporate any new or modified BMPs that have been or will be implemented, the implementation schedule, and any additional monitoring required.

(4) As long as the discharger has complied with the procedures described above and is implementing the revised SWMP or SWPPP, the discharger does not have to repeat the same procedure for continuing or recurring exceedances of natural ocean water quality conditions due to the same constituent.

(5) The requirements of this section are in addition to the terms, prohibitions, and conditions contained in these Special Protections.

3. Compliance Schedule

a. On the effective date of the Exception, all non-authorized non-storm water discharges (e.g., dry weather flow) are effectively prohibited.

b. Within eighteen (18) months from the effective date of the Exception, the discharger shall submit a draft written ASBS Compliance Plan to the State Water Board Executive Director (statewide permits) or Regional Water Board Executive Officer (Regional Water Board permits) that describes its strategy to comply with these special conditions, including the requirement to maintain natural water quality in the affected ASBS. The ASBS Compliance Plan shall include a description of appropriate non-structural controls and a time schedule to implement structural controls (implementation schedule) to comply with these special conditions for inclusion in the discharger's SWMP or SWPPP, as appropriate to permit type. The final ASBS Compliance Plan, including a description and final schedule for structural controls based on the results of runoff and receiving water monitoring, must be submitted within thirty (30) months from the effective date of the Exception.

c. Within 18 months of the effective date of the Exception, any non-structural controls that are necessary to comply with these special conditions shall be implemented.

d. Within six (6) years of the effective date of the Exception, any structural controls identified in the ASBS Compliance Plan that are necessary to comply with these special conditions shall be operational.

e. Within six (6) years of the effective date of the Exception, all dischargers must comply with the requirement that their discharges into the affected ASBS maintain natural ocean water quality. If the initial results of post-storm receiving water quality testing indicate levels higher than the 85th percentile threshold of reference water quality data and the pre-storm receiving water levels, then the discharger must re-sample the receiving water, pre- and post-storm. If after re-sampling the post-storm levels are still higher than the 85th percentile threshold of reference water quality data, and the pre-storm receiving water levels, for any constituent, then natural ocean water quality is exceeded. See attached Flowchart.

f. The Executive Director of the State Water Board (statewide permits) or Executive Officer of the Regional Water Board (Regional Water Board permits) may only authorize additional time to comply with the special conditions d. and e., above if good cause exists to do so. Good cause means a physical impossibility or lack of funding.

If a discharger claims physical impossibility, it shall notify the Board in writing within thirty (30) days of the date that the discharger first knew of the event or circumstance that caused or would cause it to fail to meet the deadline in d. or e. The notice shall describe

the reason for the noncompliance or anticipated noncompliance and specifically refer to this Section of this Exception. It shall describe the anticipated length of time the delay in compliance may persist, the cause or causes of the delay as well as measures to minimize the impact of the delay on water quality, the measures taken or to be taken by the discharger to prevent or minimize the delay, the schedule by which the measures will be implemented, and the anticipated date of compliance. The discharger shall adopt all reasonable measures to avoid and minimize such delays and their impact on water quality.

The discharger may request an extension of time for compliance based on lack of funding. The request for an extension shall require:

1. for municipalities, a demonstration of significant hardship to discharger ratepayers, by showing the relationship of storm water fees to annual household income for residents within the discharger's jurisdictional area, and the discharger has made timely and complete applications for all available bond and grant funding, and either no bond or grant funding is available, or bond and/or grant funding is inadequate; or
2. for other governmental agencies, a demonstration and documentation of a good faith effort to acquire funding through that agency's budgetary process, and a demonstration that funding was unavailable or inadequate.

B. NONPOINT SOURCE DISCHARGES

1. General Provisions for Nonpoint Sources

a. Existing nonpoint source waste discharges are allowed into an ASBS only under the following conditions:

(1) The discharges are authorized under waste discharge requirements, a conditional waiver of waste discharge requirements, or a conditional prohibition issued by the State Water Board or a Regional Water Board.

(2) The discharges are in compliance with the applicable terms, prohibitions, and special conditions contained in these Special Protections.

(3) The discharges:

(i) Are essential for flood control or slope stability, including roof, landscape, road, and parking lot drainage;

(ii) Are designed to prevent soil erosion;

(iii) Occur only during wet weather;

(iv) Are composed of only storm water runoff.

b. Discharges composed of storm water runoff shall not alter natural ocean water quality in an ASBS.

c. The discharge of trash is prohibited.

- d. Only existing nonpoint source waste discharges are allowed. "Existing nonpoint source waste discharges" are discharges that were ongoing prior to January 1, 2005. "New nonpoint source discharges" are defined as those that commenced on or after January 1, 2005. A change to an existing nonpoint source discharge, in terms of relocation or alteration, in order to comply with these special conditions, is allowed and does not constitute a new discharge.
- e. Non-storm water discharges from nonpoint sources (those not subject to an NPDES Permit) are prohibited except as provided below:
- (1) The term "non-storm water discharges" means any waste discharges that are not composed entirely of storm water.
- (2) The following non-storm water discharges are allowed, provided that the discharges are essential for emergency response purposes, structural stability, slope stability, or occur naturally:
- (i) Discharges associated with emergency fire fighting operations.
- (ii) Foundation and footing drains.
- (iii) Water from crawl space or basement pumps.
- (iv) Hillside dewatering.
- (v) Naturally occurring groundwater seepage via a storm drain.
- (vi) Non-anthropogenic flows from a naturally occurring stream via a culvert or storm drain, as long as there are no contributions of anthropogenic runoff.
- (3) Authorized non-storm water discharges shall not cause or contribute to a violation of the water quality objectives in Chapter II of the Ocean Plan nor alter natural ocean water quality in an ASBS.
- f. At the San Clemente Island ASBS, discharges incidental to military training and research, development, test, and evaluation operations are allowed. Discharges incidental to underwater demolition and other in-water explosions are not allowed in the two military closure areas in the vicinity of Wilson Cove and Castle Rock. Discharges must not result in a violation of the water quality objectives, including the protection of the marine aquatic life beneficial use, anywhere in the ASBS.
- g. At the San Nicolas Island and Begg Rock ASBS, discharges incidental to military research, development, testing, and evaluation of, and training with, guided missile and other weapons systems, fleet training exercises, small-scale amphibious warfare training, and special warfare training are allowed. Discharges incidental to underwater demolition and other in-water explosions are not allowed. Discharges must not result in a violation of the water quality objectives, including the protection of the marine aquatic life beneficial use, anywhere in the ASBS.
- h. All other nonpoint source discharges not specifically authorized above are prohibited.

2. Planning and Reporting

a. The nonpoint source discharger shall develop an ASBS Pollution Prevention Plan, including an implementation schedule, to address storm water runoff and any other nonpoint source discharges from its facilities. The ASBS Pollution Prevention Plan must be equivalent in contents to an ASBS Compliance Plan as described in I (A)(2) in this document. The ASBS Pollution Prevention Plan is subject to approval by the Executive Director of the State Water Board (statewide waivers or waste discharge requirements) or Executive Officer of the Regional Water Board (Regional Water Board waivers or waste discharge requirements).

b. The ASBS Pollution Prevention Plan shall address storm water discharges (wet weather flows) and, in particular, describe how pollutant reductions in storm water runoff that are necessary to comply with these special conditions, will be achieved through Management Measures and associated Management Practices (Management Measures/Practices). Structural BMPs need not be installed if the discharger can document to the satisfaction of the State Water Board Executive Director or Regional Water Board Executive Officer that such installation would pose a threat to health or safety. Management Measures to control storm water runoff during a design storm shall achieve on average the following target levels:

(1) Table B Instantaneous Maximum Water Quality Objectives in Chapter II of the Ocean Plan; or

(2) A 90% reduction in pollutant loading during storm events, for the applicant's total discharges.

The baseline for these determinations is the effective date of the Exception, except for those structural BMPs installed between January 1, 2005 and adoption of these Special Protections, and the reductions must be achieved and documented within six (6) years of the effective date.

c. If the results of the receiving water monitoring described in IV.B. of these special conditions indicate that the storm water runoff or other nonpoint source pollution is causing or contributing to an alteration of natural ocean water quality in the ASBS, the discharger shall submit a report to the State Water Board and the Regional Water Board within 30 days of receiving the results.

(1) The report shall identify the constituents that alter natural water quality and the sources of these constituents.

(2) The report shall describe Management Measures/Practices that are currently being implemented, Management Measures/Practices that are identified in the ASBS Pollution Prevention Plan for future implementation, and any additional Management Measures/Practices that may be added to the Pollution Prevention Plan to address the alteration of natural water quality. The report shall include a new or modified implementation schedule for the Management Measures/Practices.

(3) Within 30 days of the approval of the report by the State Water Board Executive Director (statewide waivers or waste discharge requirements) or Executive Officer of

the Regional Water Board (Regional Water Board waivers or waste discharge requirements), the discharger shall revise its ASBS Pollution Prevention Plan to incorporate any new or modified Management Measures/Practices that have been or will be implemented, the implementation schedule, and any additional monitoring required.

(4) As long as the discharger has complied with the procedures described above and is implementing the revised ASBS Pollution Prevention Plan, the discharger does not have to repeat the same procedure for continuing or recurring exceedances of natural water quality conditions due to the same constituent.

(5) The requirements of this section are in addition to the terms, prohibitions, and conditions contained in these Special Protections.

3. Compliance Schedule

a. On the effective date of the Exception, all non-authorized non-storm water discharges (e.g., dry weather flow) are effectively prohibited.

b. Within eighteen (18) months from the effective date of the Exception, the dischargers shall submit a draft written ASBS Pollution Prevention Plan to the State Water Board Executive Director (statewide waivers or waste discharge requirements) or Executive Officer of the Regional Water Board (Regional Water Board waivers or waste discharge requirements) that describes its strategy to comply with these special conditions, including the requirement to maintain natural ocean water quality in the affected ASBS. The Pollution Prevention Plan shall include a description of appropriate non-structural controls and a time schedule to implement structural controls to comply with these special conditions for inclusion in the discharger's Pollution Prevention Plan. The final ASBS Pollution Prevention Plan, including a description and final schedule for structural controls based on the results of runoff and receiving water monitoring, must be submitted within thirty (30) months from the effective date of the Exception.

c. Within 18 months of the effective date of the Exception, any non-structural controls that are necessary to comply with these Special Protections shall be implemented.

d. Within six (6) years of the effective date of the Exception, any structural controls identified in the ASBS Pollution Prevention Plan that are necessary to comply with these special conditions shall be operational.

e. Within six (6) years of the effective date of the Exception, all dischargers must comply with the requirement that their discharges into the affected ASBS maintain natural ocean water quality. If the initial results of post-storm receiving water quality testing indicate levels higher than the 85th percentile threshold of reference water quality data and the pre-storm receiving water levels, then the discharger must re-sample the receiving water pre- and post-storm. If after re-sampling the post-storm levels are still higher than the 85th percentile threshold of reference water quality data and the pre-storm receiving water levels, for any constituent, then natural ocean water quality is exceeded. See attached Flowchart.

f. The Executive Director of the State Water Board (statewide waivers or waste discharge requirements) or Executive Officer of the Regional Water Board (Regional Water Board

waivers or waste discharge requirements) may only authorize additional time to comply with the special conditions d. and e., above if good cause exists to do so. Good cause means a physical impossibility or lack of funding.

If a discharger claims physical impossibility, it shall notify the Board in writing within thirty (30) days of the date that the discharger first knew of the event or circumstance that caused or would cause it to fail to meet the deadline in d. or e. The notice shall describe the reason for the noncompliance or anticipated noncompliance and specifically refer to this Section of this Exception. It shall describe the anticipated length of time the delay in compliance may persist, the cause or causes of the delay as well as measures to minimize the impact of the delay on water quality, the measures taken or to be taken by the discharger to prevent or minimize the delay, the schedule by which the measures will be implemented, and the anticipated date of compliance. The discharger shall adopt all reasonable measures to avoid and minimize such delays and their impact on water quality.

The discharger may request an extension of time for compliance based on lack of funding. The request for an extension shall require:

1. a demonstration that the discharger has made timely and complete applications for all available bond and grant funding, and either no bond or grant funding is available, or bond and/or grant funding is inadequate; or
2. for governmental agencies, a demonstration and documentation of a good faith effort to acquire funding through that agency's budgetary process, and a demonstration that funding was unavailable or inadequate.

II. ADDITIONAL REQUIREMENTS FOR PARKS AND RECREATION FACILITIES

In addition to the provisions in Section I (A) or I (B), respectively, a discharger with parks and recreation facilities shall comply with the following:

A. The discharger shall include a section in an ASBS Compliance Plan (for NPDES dischargers) or an ASBS Pollution Prevention Plan (for nonpoint source dischargers) to address storm water runoff from parks and recreation facilities.

1. The plan shall identify all pollutant sources, including sediment sources, which may result in waste entering storm water runoff. Pollutant sources include, but are not limited to, roadside rest areas and vistas, picnic areas, campgrounds, trash receptacles, maintenance facilities, park personnel housing, portable toilets, leach fields, fuel tanks, roads, piers, and boat launch facilities.
2. The plan shall describe BMPs or Management Measures/Practices that will be implemented to control soil erosion (both temporary and permanent erosion controls) and reduce or eliminate pollutants in storm water runoff in order to achieve and maintain natural water quality conditions in the affected ASBS. The plan shall include BMPs or Management Measures/Practices to ensure that trails and culverts are maintained to prevent erosion and minimize waste discharges to ASBS.

3. The plan shall include BMPs or Management Measures/Practices to prevent the discharge of pesticides or other chemicals, including agricultural chemicals, in storm water runoff to the affected ASBS.
 4. The plan shall include BMPs or Management Measures/Practices that address public education and outreach. The goal of these BMPs or Management Measures/Practices is to ensure that the public is adequately informed that waste discharges to the affected ASBS are prohibited or limited by special conditions in these Special Protections. The BMPs or Management Measures/Practices shall include signage at camping, picnicking, beach and roadside parking areas, and visitor centers, or other appropriate measures, which notify the public of any applicable requirements of these Special Protections and identify the ASBS boundaries.
 5. The plan shall include BMPs or Management Measures/Practices that address the prohibition against the discharge of trash to ASBS. The BMPs or Management Measures/Practices shall include measures to ensure that adequate trash receptacles are available for public use at visitor facilities, including parking areas, and that the receptacles are adequately maintained to prevent trash discharges into the ASBS. Appropriate measures include covering trash receptacles to prevent trash from being wind blown and periodically emptying the receptacles to prevent overflows.
 6. The plan shall include BMPs or Management Measures/Practices to address runoff from parking areas and other developed features to ensure that the runoff does not alter natural water quality in the affected ASBS. BMPs or Management Measures/Practices shall include measures to reduce pollutant loading in runoff to the ASBS through installation of natural area buffers (LID), treatment, or other appropriate measures.
- B. Maintenance and repair of park and recreation facilities must not result in waste discharges to the ASBS. The practice of road oiling must be minimized or eliminated, and must not result in waste discharges to the ASBS.

III. ADDITIONAL REQUIREMENTS – WATERFRONT AND MARINE OPERATIONS

In addition to the provisions in Section I (A) or I (B), respectively, a discharger with waterfront and marine operations shall comply with the following:

- A. For discharges related to waterfront and marine operations, the discharger shall develop a Waterfront and Marine Operations Management Plan (Waterfront Plan). This plan shall contain appropriate Management Measures/Practices to address nonpoint source pollutant discharges to the affected ASBS.
 1. The Waterfront Plan shall contain appropriate Management Measures/Practices for any waste discharges associated with the operation and maintenance of vessels, moorings, piers, launch ramps, and cleaning stations in order to ensure that beneficial uses are protected and natural water quality is maintained in the affected ASBS.
 2. For discharges from marinas and recreational boating activities, the Waterfront Plan shall include appropriate Management Measures, described in The Plan for California's Nonpoint Source Pollution Control Program, for marinas and recreational boating, or equivalent practices, to ensure that nonpoint source pollutant discharges do not alter natural water quality in the affected ASBS.

3. [The Waterfront Plan shall include Management Practices to address public education and outreach to ensure that the public is adequately informed that waste discharges to the affected ASBS are prohibited or limited by special conditions in these Special Protections. The management practices shall include appropriate signage, or similar measures, to inform the public of the ASBS restrictions and to identify the ASBS boundaries.](#)
 4. [The Waterfront Plan shall include Management Practices to address the prohibition against trash discharges to ASBS. The Management Practices shall include the provision of adequate trash receptacles for marine recreation areas, including parking areas, launch ramps, and docks. The plan shall also include appropriate Management Practices to ensure that the receptacles are adequately maintained and secured in order to prevent trash discharges into the ASBS. Appropriate Management Practices include covering the trash receptacles to prevent trash from being windblown, staking or securing the trash receptacles so they don't tip over, and periodically emptying the receptacles to prevent overflow.](#)
 5. [The discharger shall submit its Waterfront Plan to the by the State Water Board Executive Director \(statewide waivers or waste discharge requirements\) or Executive Officer of the Regional Water Board \(Regional Water Board waivers or waste discharge requirements\) within six months of the effective date of these special conditions. The Waterfront Plan is subject to approval by the State Water Board Executive Director or the Regional Water Board Executive Officer, as appropriate. The plan must be fully implemented within 18 months of the effective date of the Exception.](#)
- [B. The discharge of chlorine, soaps, petroleum, other chemical contaminants, trash, fish offal, or human sewage to ASBS is prohibited. Sinks and fish cleaning stations are point source discharges of wastes and are prohibited from discharging into ASBS. Anthropogenic accumulations of discarded fouling organisms on the sea floor must be minimized.](#)
- [C. Limited-term activities, such as the repair, renovation, or maintenance of waterfront facilities, including, but not limited to, piers, docks, moorings, and breakwaters, are authorized only in accordance with Chapter III.E.2 of the Ocean Plan.](#)
- [D. If the discharger anticipates that the discharger will fail to fully implement the approved Waterfront Plan within the 18 month deadline, the discharger shall submit a technical report as soon as practicable to the State Water Board Executive Director or the Regional Water Board Executive Officer, as appropriate. The technical report shall contain reasons for failing to meet the deadline and propose a revised schedule to fully implement the plan.](#)
- [E. The State Water Board or the Regional Water Board may, for good cause, authorize additional time to comply with the Waterfront Plan. Good cause means a physical impossibility or lack of funding.](#)

[If a discharger claims physical impossibility, it shall notify the Board in writing within thirty \(30\) days of the date that the discharger first knew of the event or circumstance that](#)

caused or would cause it to fail to meet the deadline in Section III.A.5. The notice shall describe the reason for the noncompliance or anticipated noncompliance and specifically refer to this Section of this Exception. It shall describe the anticipated length of time the delay in compliance may persist, the cause or causes of the delay as well as measures to minimize the impact of the delay on water quality, the measures taken or to be taken by the discharger to prevent or minimize the delay, the schedule by which the measures will be implemented, and the anticipated date of compliance. The discharger shall adopt all reasonable measures to avoid and minimize such delays and their impact on water quality. The discharger may request an extension of time for compliance based on lack of funding. The request for an extension shall require:

1. a demonstration of significant hardship by showing that the discharger has made timely and complete applications for all available bond and grant funding, and either no bond or grant funding is available, or bond and/or grant funding is inadequate.
2. for governmental agencies, a demonstration and documentation of a good faith effort to acquire funding through that agency's budgetary process, and a demonstration that funding was unavailable or inadequate.

IV. MONITORING REQUIREMENTS

Monitoring is mandatory for all dischargers to assure compliance with the Ocean Plan. Monitoring requirements include both: (A) core discharge monitoring, and (B) ocean receiving water monitoring. The State and Regional Water Boards must approve sampling site locations and any adjustments to the monitoring programs. All ocean receiving water and reference area monitoring must be comparable with the Water Boards' Surface Water Ambient Monitoring Program (SWAMP).

Safety concerns: Sample locations and sampling periods must be determined considering safety issues. Sampling may be postponed upon notification to the State and Regional Water Boards if hazardous conditions prevail.

Analytical Chemistry Methods: All constituents must be analyzed using the lowest minimum detection limits comparable to the Ocean Plan water quality objectives. For metal analysis, all samples, including storm water effluent, reference samples, and ocean receiving water samples, must be analyzed by the approved analytical method with the lowest minimum detection limits (currently Inductively Coupled Plasma/Mass Spectrometry) described in the Ocean Plan.

A. CORE DISCHARGE MONITORING PROGRAM

1. General sampling requirements for timing and storm size:

Runoff must be collected during a storm event that is greater than 0.1 inch and generates runoff, and at least 72 hours from the previously measurable storm event. Runoff samples shall be collected during the same storm and at approximately the same time when post-storm receiving water is sampled, and analyzed for the same constituents as receiving water and reference site samples (see section IV B) as described below.

2. Runoff flow measurements

- a. For municipal/industrial storm water outfalls in existence as of December 31, 2007, 18 inches (457mm) or greater in diameter/width (including multiple outfall pipes in combination having a width of 18 inches, runoff flows must be measured or calculated, using a method acceptable to and approved by the State and Regional Water Boards.
- b. This will be reported annually for each precipitation season to the State and Regional Water Boards.

3. Runoff samples – storm events

- a. For outfalls equal to or greater than 18 inches (0.46m) in diameter or width:
 - (1) samples of storm water runoff shall be collected during the same storm as receiving water samples and analyzed for oil and grease, total suspended solids, and, within the range of the southern sea otter indicator bacteria or some other measure of fecal contamination; and
 - (2) samples of storm water runoff shall be collected and analyzed for critical life stage chronic toxicity (one invertebrate or algal species) at least once during each storm season when receiving water is sampled in the ASBS.
 - (3) If an applicant has no outfall greater than 36 inches, then storm water runoff from the applicant's largest outfall shall be further collected during the same storm as receiving water samples and analyzed for Ocean Plan Table B metals for protection of marine life, Ocean Plan polynuclear aromatic hydrocarbons (PAHs), current use pesticides (pyrethroids and OP pesticides), and nutrients (ammonia, nitrate and phosphates).
- b. For outfalls equal to or greater than 36 inches (0.91m) in diameter or width:
 - (1) samples of storm water runoff shall be collected during the same storm as receiving water samples and analyzed for oil and grease, total suspended solids, and, within the range of the southern sea otter indicator bacteria or some other measure of fecal contamination; and
 - (2) samples of storm water runoff shall be further collected during the same storm as receiving water samples and analyzed for Ocean Plan Table B metals for protection of marine life, Ocean Plan polynuclear aromatic hydrocarbons (PAHs), current use pesticides (pyrethroids and OP pesticides), and nutrients (ammonia, nitrate and phosphates); and
 - (3) samples of storm water runoff shall be collected and analyzed for critical life stage chronic toxicity (one invertebrate or algal species) at least once during each storm season when receiving water is sampled in the ASBS.
- c. For an applicant not participating in a regional monitoring program [see below in Section IV (B)] in addition to (a.) and (b.) above, a minimum of the two largest outfalls or 20 percent of the larger outfalls, whichever is greater, shall be sampled (flow weighted composite samples) at least three times annually during wet weather (storm event)

and analyzed for all Ocean Plan Table A constituents, Table B constituents for marine aquatic life protection (except for toxicity, only chronic toxicity for three species shall be required), DDT, PCBs, Ocean Plan PAHs, OP pesticides, pyrethroids, nitrates, phosphates, and Ocean Plan indicator bacteria. For parties discharging to ASBS in more than one Regional Water Board region, at a minimum, one (the largest) such discharge shall be sampled annually in each Region.

4. The Executive Director of the State Water Board (statewide permits) or Executive Officer of the Regional Water Board (Regional Water Board permits) may reduce or suspend core monitoring once the storm runoff is fully characterized. This determination may be made at any point after the discharge is fully characterized, but is best made after the monitoring results from the first permit cycle are assessed.

B. Ocean Receiving Water and Reference Area Monitoring Program

In addition to performing the Core Discharge Monitoring Program in Section II.A above, all applicants having authorized discharges must perform ocean receiving water monitoring. In order to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within their ASBS, dischargers may choose either (1) an individual monitoring program, or (2) participation in a regional integrated monitoring program.

1. Individual Monitoring Program: The requirements listed below are for those dischargers who elect to perform an individual monitoring program to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within the affected ASBS. In addition to Core Discharge Monitoring, the following additional monitoring requirements shall be met:

- a. Three times annually, during wet weather (storm events), the receiving water at the point of discharge from the outfalls described in section (IV)(A)(3)(c) above shall be sampled and analyzed for Ocean Plan Table A constituents, Table B constituents for marine aquatic life, DDT, PCBs, Ocean Plan PAHs, OP pesticides, pyrethroids, nitrates, phosphates, salinity, chronic toxicity (three species), and Ocean Plan indicator bacteria.

The sample location for the ocean receiving water shall be in the surf zone at the point of discharges; this must be at the same location where storm water runoff is sampled. Receiving water shall be sampled prior to (pre-storm) and during (or immediately after) the same storm (post storm). Post storm sampling shall be during the same storm and at approximately the same time as when the runoff is sampled. Reference water quality shall also be sampled three times annually and analyzed for the same constituents pre-storm and post-storm, during the same storm seasons when receiving water is sampled. Reference stations will be determined by the State Water Board's Division of Water Quality and the applicable Regional Water Board(s).

- b. Sediment sampling shall occur at least three times during every five (5) year period. The subtidal sediment (sand or finer, if present) at the discharge shall be sampled and analyzed for Ocean Plan Table B constituents for marine aquatic life, DDT, PCBs, PAHs, pyrethroids, and OP pesticides. For sediment toxicity testing, only an acute toxicity test using the amphipod *Eohaustorius estuarius* must be performed.

- c. A quantitative survey of intertidal benthic marine life shall be performed at the discharge and at a reference site. The survey shall be performed at least once every five (5) year period. The survey design is subject to approval by the Regional Water Board and the State Water Board's Division of Water Quality. The results of the survey shall be completed and submitted to the State Water Board and Regional Water Board at least six months prior to the end of the permit cycle.
- d. Once during each five (5) year period, a bioaccumulation study shall be conducted to determine the concentrations of metals and synthetic organic pollutants at representative discharge sites and at representative reference sites. The study design is subject to approval by the Regional Water Board and the State Water Board's Division of Water Quality. The bioaccumulation study may include California mussels (*Mytilus californianus*) and/or sand crabs (*Emerita analoga* or *Blepharipoda occidentalis*). Based on the study results, the Regional Water Board and the State Water Board's Division of Water Quality, may adjust the study design in subsequent permits, or add or modify additional test organisms (such as shore crabs or fish), or modify the study design appropriate for the area and best available sensitive measures of contaminant exposure.
- e. Marine Debris: Representative quantitative observations for trash by type and source shall be performed along the coast of the ASBS within the influence of the discharger's outfalls. The design, including locations and frequency, of the marine debris observations is subject to approval by the Regional Water Board and State Water Board's Division of Water Quality.
- f. The monitoring requirements of the Individual Monitoring Program in this section are minimum requirements. After a minimum of one (1) year of continuous water quality monitoring of the discharges and ocean receiving waters, the Executive Director of the State Water Board (statewide permits) or Executive Officer of the Regional Water Board (Regional Water Board permits) may require additional monitoring, or adjust, reduce or suspend receiving water and reference station monitoring. This determination may be made at any point after the discharge and receiving water is fully characterized, but is best made after the monitoring results from the first permit cycle are assessed.
2. Regional Integrated Monitoring Program: Dischargers may elect to participate in a regional integrated monitoring program, in lieu of an individual monitoring program, to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within their ASBS. This regional approach shall characterize natural water quality, pre- and post-storm, in ocean reference areas near the mouths of identified open space watersheds and the effects of the discharges on natural water quality (physical, chemical, and toxicity) in the ASBS receiving waters, and should include benthic marine aquatic life and bioaccumulation components. The design of the ASBS stratum of a regional integrated monitoring program may deviate from the otherwise prescribed individual monitoring approach (in Section IV.B.1) if approved by the State Water Board's Division of Water Quality and the Regional Water Boards.
- a. Ocean reference areas shall be located at the drainages of flowing watersheds with minimal development (in no instance more than 10% development), and shall not be located in CWA Section 303(d) listed waterbodies or have tributaries that are 303(d) listed. Reference areas shall be free of wastewater discharges and anthropogenic non- storm water runoff. A minimum of low threat storm runoff discharges (e.g.

stream highway overpasses and campgrounds) may be allowed on a case-by-case basis. Reference areas shall be located in the same region as the ASBS receiving water monitoring occurs. The reference areas for each Region are subject to approval by the participants in the regional monitoring program and the State Water Board's Division of Water Quality and the applicable Regional Water Board(s). A minimum of three ocean reference water samples must be collected from each station, each from a separate storm during the same storm season that receiving water is sampled. A minimum of one reference location shall be sampled for each ASBS receiving water site sampled per responsible party. For parties discharging to ASBS in more than one Regional Water Board region, at a minimum, one reference station and one receiving water station shall be sampled in each region.

b. ASBS ocean receiving water must be sampled in the surf zone at the location where the runoff makes contact with ocean water (i.e. at "point zero"). Ocean receiving water stations must be representative of worst-case discharge conditions (i.e. co-located at a large drain greater than 36 inches, or if drains greater than 36 inches are not present in the ASBS then the largest drain greater than 18 inches.) Ocean receiving water stations are subject to approval by the participants in the regional monitoring program and the State Water Board's Division of Water Quality and the applicable Regional Water Board(s). A minimum of three ocean receiving water samples must be collected during each storm season from each station, each from a separate storm. A minimum of one receiving water location shall be sampled in each ASBS per responsible party in that ASBS. For parties discharging to ASBS in more than one Regional Water Board region, at a minimum, one reference station and one receiving water station shall be sampled in each region.

c. Reference and receiving water sampling shall commence during the first full storm season following the adoption of these special conditions, and post-storm samples shall be collected during the same storm event when storm water runoff is sampled. Sampling shall occur in a minimum of two storm seasons. For those ASBS dischargers that have already participated in the Southern California Bight 2008 ASBS regional monitoring effort, sampling may be limited to only one storm season.

d. Receiving water and reference samples shall be analyzed for the same constituents as storm water runoff samples. At a minimum, constituents to be sampled and analyzed in reference and discharge receiving waters must include oil and grease, total suspended solids, Ocean Plan Table B metals for protection of marine life, Ocean Plan PAHs, pyrethroids, OP pesticides, ammonia, nitrate, phosphates, and critical life stage chronic toxicity for three species. In addition, within the range of the southern sea otter, indicator bacteria or some other measure of fecal contamination shall be analyzed.

3. Waterfront and Marine Operations: In addition to the above requirements for ocean receiving water monitoring, additional monitoring must be performed for marinas and boat launch and pier facilities:

a. For all marina or mooring field operators, in mooring fields with 10 or more occupied moorings, the ocean receiving water must be sampled for Ocean Plan indicator bacteria, residual chlorine, copper, zinc, grease and oil, methylene blue active substances (MBAS), and ammonia nitrogen.

(1) For mooring field operators opting for an individual monitoring program (Section IV.B.1 above), this sampling must occur weekly (on the weekend) from May through October.

(2) For mooring field operators opting to participate in a regional integrated monitoring program (Section IV.B.2 above), this sampling must occur monthly from May through October on a high use weekend in each month. The Water Boards may allow a reduction in the frequency of sampling, through the regional monitoring program, after the first year of monitoring.

b. For all mooring field operators, the subtidal sediment (sand or finer, if present) within mooring fields and below piers shall be sampled and analyzed for Ocean Plan Table B metals (for marine aquatic life beneficial use), acute toxicity, PAHs, and tributyltin. For sediment toxicity testing, only an acute toxicity test using the amphipod *Eohaustorius estuarius* must be performed. This sampling shall occur at least three times during a five (5) year period. For mooring field operators opting to participate in a regional integrated monitoring program, the Water Boards may allow a reduction in the frequency of sampling after the first sampling effort's results are assessed.

Glossary

At the point of discharge(s) – Means in the surf zone immediately where runoff from an outfall meets the ocean water (a.k.a., at point zero).

Areas of Special Biological Significance (ASBS) – Those areas designated by the State Water Board as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable. All Areas of Special Biological Significance are also classified as a subset of State Water Quality Protection Areas.

Design storm – For purposes of these Special Protections, a design storm is defined as the volume of runoff produced from one inch of precipitation per day or, if this definition is inconsistent with the discharger's applicable storm water permit, then the design storm shall be the definition included in the discharger's applicable storm water permit.

Development – Relevant to reference monitoring sites, means urban, industrial, agricultural, grazing, mining, and timber harvesting land uses.

Higher threat discharges - Permitted storm drains discharging equal to or greater than 18 inches, industrial storm drains, agricultural runoff discharged through an MS4, discharges associated with waterfront and marina operations (e.g., piers, launch ramps, mooring fields, and associated vessel support activities, except for passive discharges defined below), and direct discharges associated with commercial or industrial activities to ASBS.

Low Impact Development (LID) – A sustainable practice that benefits water supply and contributes to water quality protection. Unlike traditional storm water management, which entails collecting and conveying storm water runoff through storm drains, pipes, or other conveyances to a centralized storm water facility, LID focuses on using site design and storm water management to maintain the site's pre-development runoff rates and volumes. The goal of LID is to mimic a site's predevelopment hydrology by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to the source of rainfall.

Marine Operations – Marinas or mooring fields that contain slips or mooring locations for 10 or more vessels.

Management Measure (MM) - Economically achievable measures for the control of the addition of pollutants from various classes of nonpoint sources of pollution, which reflect the greatest degree of pollutant reduction achievable through the application of the best available nonpoint pollution control practices, technologies, processes, siting criteria, operating methods, or other alternatives. For example, in the "marinas and recreational boating" land- use category specified in the Plan for California's Nonpoint Source Pollution Control Program (NPS Program Plan) (SWRCB, 1999), "boat cleaning and maintenance" is considered a MM or the source of a specific class or type of NPS pollution.

Management Practice (MP) - The practices (e.g., structural, non-structural, operational, or other alternatives) that can be used either individually or in combination to address a specific MM class or classes of NPS pollution. For example, for the “boat cleaning and maintenance” MM, specific MPs can include, but are not limited to, methods for the selection of environmentally sensitive hull paints or methods for cleaning/removal of hull copper anti-fouling paints.

Municipal Separate Storm Sewer System (MS4) – A municipally-owned storm sewer system regulated under the Phase I or Phase II storm water program implemented in compliance with Clean Water Act section 402(p). Note that an MS4 program’s boundaries are not necessarily congruent with the permittee’s political boundaries.

Natural Ocean Water Quality - The water quality (based on selected physical, chemical and biological characteristics) that is required to sustain marine ecosystems, and which is without apparent human influence, i.e., an absence of significant amounts of: (a) man-made constituents (e.g., DDT); (b) other chemical (e.g., trace metals), physical (temperature/thermal pollution, sediment burial), and biological (e.g., bacteria) constituents at concentrations that have been elevated due to man’s activities above those resulting from the naturally occurring processes that affect the area in question; and (c) non-indigenous biota (e.g., invasive algal bloom species) that have been introduced either deliberately or accidentally by man. Discharges “shall not alter natural ocean water quality” as determined by a comparison to the range of constituent concentrations in reference areas agreed upon via the regional monitoring program(s). If monitoring information indicates that natural ocean water quality is not maintained, but there is sufficient evidence that a discharge is not contributing to the alteration of natural water quality, then the Regional Water Board may make that determination. In this case, sufficient information must include runoff sample data that has equal or lower concentrations for the range of constituents at the applicable reference area(s).

Nonpoint source – Nonpoint pollution sources generally are sources that do not meet the definition of a point source. Nonpoint source pollution typically results from land runoff, precipitation, atmospheric deposition, agricultural drainage, marine/boating operations or hydrologic modification. Nonpoint sources, for purposes of these Special Protections, include discharges that are not required to be regulated under an NPDES permit.

Non-storm water discharge – Any runoff that is not the result of a precipitation event. This is often referred to as “dry weather flow.”

Non-structural control – A Best Management Practice that involves operational, maintenance, regulatory (e.g., ordinances) or educational activities designed to reduce or eliminate pollutants in runoff, and that are not structural controls (i.e. there are no physical structures involved).

Physical impossibility - Means any act of God, war, fire, earthquake, windstorm, flood or natural catastrophe; unexpected and unintended accidents not caused by discharger or its employees’ negligence; civil disturbance, vandalism, sabotage or terrorism; restraint by court order or public authority or agency; or action or non-action by, or inability to

obtain the necessary authorizations or approvals from any governmental agency other than the permittee.

Representative sites and monitoring procedures – Are to be proposed by the discharger, with appropriate rationale, and subject to approval by Water Board staff.

Sheet-flow – Runoff that flows across land surfaces at a shallow depth relative to the cross-sectional width of the flow. These types of flow may or may not enter a storm drain system before discharge to receiving waters.

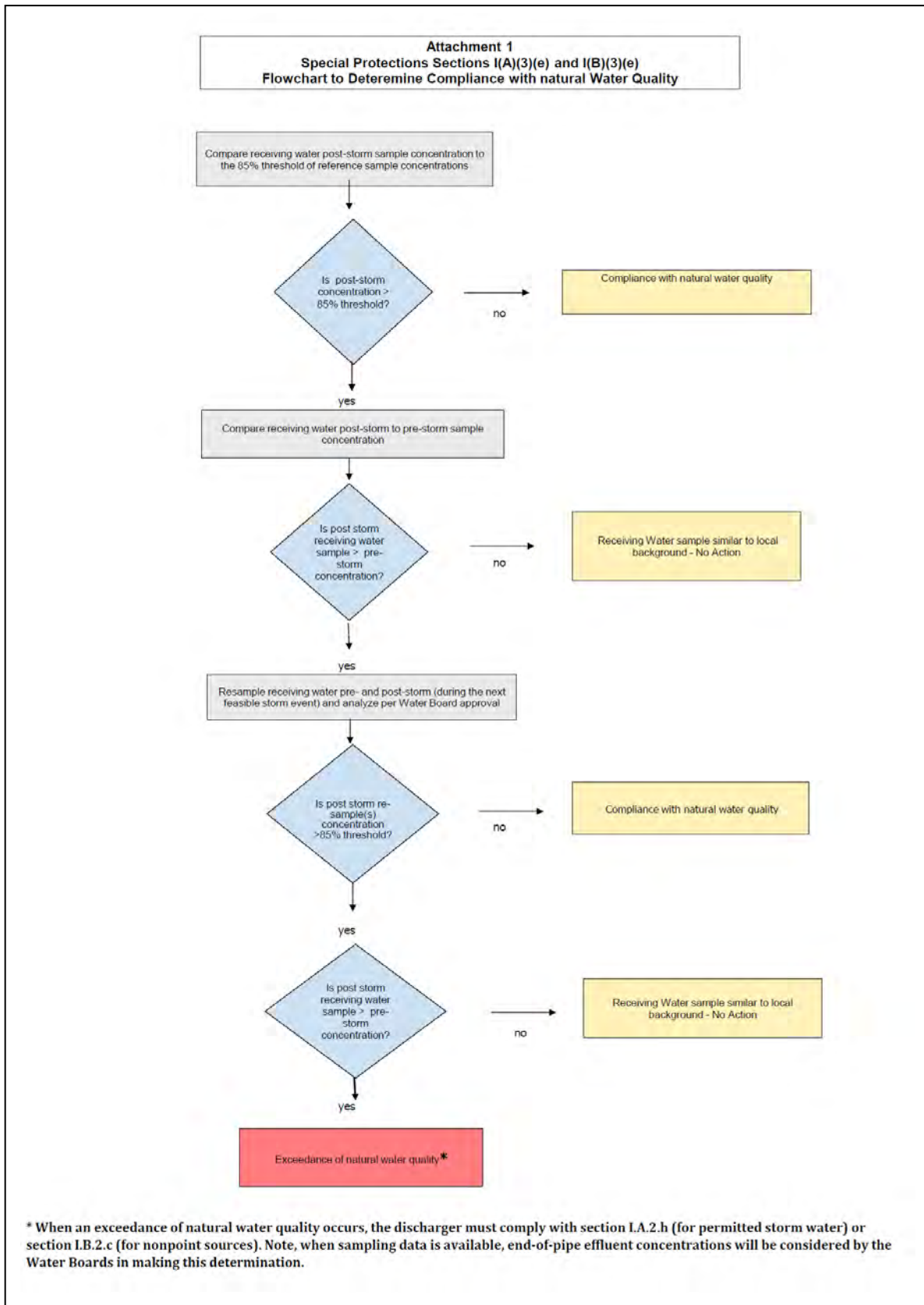
Storm Season – Also referred to as rainy season, means the months of the year from the onset of rainfall during autumn until the cessation of rainfall in the spring.

Structural control – A Best Management Practice that involves the installation of engineering solutions to the physical treatment or infiltration of runoff.

Surf Zone - The surf zone is defined as the submerged area between the breaking waves and the shoreline at any one time.

Surface Water Ambient Monitoring Program (SWAMP) comparable – Means that the monitoring program must 1) meet or exceed 2008 SWAMP Quality Assurance Program Management Plan (QAPP) Measurement Quality Objectives, or 2) have a Quality Assurance Project Plan that has been approved by SWAMP; in addition data must be formatted to match the database requirements of the SWAMP Information Management System. Adherence to the measurement quality objectives in the Southern California Bight 2008 ASBS Regional Monitoring Program QAPP and data base management comprises being SWAMP comparable.

Waterfront Operations - Piers, launch ramps, and cleaning stations in the water or on the adjacent shoreline.



ATTACHMENT B

STANDARD PERMIT PROVISIONS AND GENERAL PROVISIONS

1. Standard Permit Provisions

Code of Federal Regulations Title 40 Section 122.41 (40 CFR 122.41) includes conditions, or provisions, that apply to all National Pollutant Discharge Elimination System (NPDES) permits. Additional provisions applicable to NPDES permits are in 40 CFR 122.42. All applicable provisions in 40 CFR 122.41 and 40 CFR 122.42 must be incorporated into this Order and NPDES permit. The applicable 40 CFR 122.41 and 40 CFR 122.42 provisions are as follows:

a. DUTY TO COMPLY [40 CFR 122.41(a)]

The Copermittee must comply with all of the provisions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act (CWA) and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

- (1) The Copermittee must comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement. [40 CFR 122.41(a)(1)]
- (2) The CWA provides that any person who violates Section 301, 302, 306, 307, 308, 318 or 405 of the CWA, or any permit condition or limitation implementing any such sections in a permit issued under Section 402, or any requirement imposed in a pretreatment program approved under Section 402(a)(3) or 402(b)(8) of the CWA, is subject to a civil penalty not to exceed \$25,000 per day for each violation. The CWA provides that any person who *negligently* violates Section 301, 302, 306, 307, 308, 318, or 405 of the CWA, or any condition or limitation implementing any of such sections in a permit issued under Section 402 of the CWA, or any requirement imposed in a pretreatment program approved under Section 402(a)(3) or 402(b)(8) of the CWA, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than 2 years, or both. Any person who *knowingly* violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than 6 years, or both. Any person who knowingly violates Section 301, 302, 303, 306, 307, 308, 318 or 405 of the CWA, or any permit condition or limitation implementing any of such sections in a permit issued under Section 402 of the CWA, and who knows at that time that he thereby places another person in imminent

danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in Section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.

[40 CFR 122.41(a)(2)]

- (3) Any person may be assessed an administrative penalty by the San Diego Regional Water Quality Control Board (San Diego Water Board), State Water Resources Control Board (State Water Board), or United States Environmental Protection Agency (USEPA) for violating Section 301, 302, 306, 307, 308, 318 or 405 of the CWA, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000.

[40 CFR 122.41(a)(3)]

b. DUTY TO REAPPLY [40 CFR 122.41(b)]

If a Copermittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the Copermittee must apply for and obtain a new permit.

c. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE [40 CFR 122.41(c)]

It shall not be a defense for a Copermittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

d. DUTY TO MITIGATE [40 CFR 122.41(d)]

The Copermittee must take all reasonable steps to minimize or prevent any discharge or prevent any discharge or sludge use or disposal in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

e. PROPER OPERATION AND MAINTENANCE [40 CFR 122.41(e)]

The Copermittee must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Copermittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by a Copermittee only when the operation is necessary to achieve compliance with the conditions of this permit.

f. PERMIT ACTIONS [40 CFR 122.41(f)]

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Copermittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

g. PROPERTY RIGHTS [40 CFR 122.41(g)]

This permit does not convey any property rights of any sort, or any exclusive privilege.

h. DUTY TO PROVIDE INFORMATION [40 CFR 122.41(h)]

The Copermittee must furnish to the San Diego Water Board, State Water Board, or USEPA within a reasonable time, any information which the San Diego Water Board, State Water Board, or USPEA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Copermittee must also furnish to the San Diego Water Board, State Water Board, or USPEA upon request, copies of records required to be kept by this permit.

i. INSPECTION AND ENTRY [40 CFR 122.41(i)]

The Copermittee must allow the San Diego Water Board, State Water Board, USEPA, and/or their authorized representative (including an authorized contractor acting as their representative), upon presentation of credentials and other documents as may be required by law, to:

- (1) Enter upon the Copermittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit; [40 CFR 122.41(i)(1)]
- (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit; [40 CFR 122.41(i)(2)]
- (3) Inspect and photograph at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; [40 CFR 122.41(i)(3)] and
- (4) Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the CWA, any substances or parameters at any location. [40 CFR 122.41(i)(4)]

j. MONITORING AND RECORDS [40 CFR 122.41(j)]

- (1) Samples and measurements taken for the purpose of monitoring must be representative of the monitored activity. [40 CFR 122.41(j)(1)]
- (2) Except for records of monitoring information required by this permit related to the Copermittee's sewage sludge use and disposal activities, which shall be retained for

a period of at least five (5) years (or longer as required by 40 CFR Part 503), the Copermittee must retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the San Diego Water Board at any time. [40 CFR 122.41(j)(2)]

- (3) Records for monitoring information must include: [40 CFR 122.41(j)(3)]
- (a) The date, exact place, and time of sampling or measurements; [40 CFR 122.41(j)(3)(i)]
 - (b) The individual(s) who performed the sampling or measurements; [40 CFR 122.41(j)(3)(ii)]
 - (c) The date(s) analyses were performed; [40 CFR 122.41(j)(3)(iii)]
 - (d) The individual(s) who performed the analyses; [40 CFR 122.41(j)(3)(iv)]
 - (e) The analytical techniques or methods used; [40 CFR 122.41(j)(3)(v)] and
 - (f) The results of such analyses. [40 CFR 122.41(j)(3)(vi)]
- (4) Monitoring must be conducted according to test procedures under 40 CFR Part 136 unless another method is required under 40 CFR Subchapters N or O. [40 CFR 122.41(j)(4)]

In the case of pollutants for which there are no approved methods under 40 CFR Part 136 or otherwise required under 40 CFR Subchapters N and O, monitoring must be conducted according to a test procedure specified in the permit for such pollutants. [40 CFR 122.44(i)(1)(iv)]

- (5) The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both. [40 CFR 122.41(j)(5)]

k. SIGNATORY REQUIREMENT [40 CFR 122.41(k)]

- (1) All applications, reports, or information submitted to the San Diego Water Board, State Water Board, or USEPA must be signed and certified. (See 40 CFR 122.22) [40 CFR 122.41(k)(1)]
- (a) *For a municipality, State, Federal, or other public agency.* [All applications must be signed] by either a principal executive officer or ranking elected official. [40 CFR 122.22(a)(3)]
 - (b) All reports required by permits, and other information requested by the San Diego Water Board, State Water Board, or USEPA must be signed by a person described in paragraph (a) of this section, or by a duly authorized

representative of that person. A person is a duly authorized representative only if: [40 CFR 122.22(b)]

- (i) The authorization is made in writing by a person described in paragraph (a) of this section; [40 CFR 122.22(b)(1)]
- (ii) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company, (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) [40 CFR 122.22(b)(2)] and,
- (iii) The written authorization is submitted to the San Diego Water Board and State Water Board. [40 CFR 122.22(b)(3)]

(c) *Changes to authorization.* If an authorization under paragraph (b) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (b) of this section must be submitted to the San Diego Water Board prior to or together with any reports, information, or applications to be signed by an authorized representative. [40 CFR 122.22(c)]

(d) *Certification.* Any person signing a document under paragraph (a) or (b) of this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." [40 CFR 122.22(d)]

(2) The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both. [40 CFR 122.41(k)(2)]

I. REPORTING REQUIREMENTS [40 CFR 122.41(l)]

(1) *Planned changes.* The Copermitttee must give notice to the San Diego Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when: [40 CFR 122.41(l)(1)]

- (a) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); [40 CFR 122.41(l)(1)(i)] or

- (b) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1).
[40 CFR 122.41(l)(1)(ii)]
 - (c) The alteration or addition results in a significant change in the Copermittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. [40 CFR 122.41(l)(1)(iii)]
- (2) *Anticipated noncompliance.* The Copermittee must give advance notice to the San Diego Water Board or State Water Board of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
[40 CFR 122.41(l)(2)]
- (3) *Transfers.* This permit is not transferable to any person except after notice to the San Diego Water Board. The San Diego Water Board may require modification or revocation and reissuance of the permit to change the name of the Copermittee and incorporate such other requirements as may be necessary under the CWA.
[40 CFR 122.41(l)(3)]
- (4) *Monitoring reports.* Monitoring results must be reported at the intervals specified elsewhere in this permit. [40 CFR 122.41(l)(4)]
- (a) Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the San Diego Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. [40 CFR 122.41(l)(4)(i)]
 - (b) If the Copermittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR Part 136 or another method required for an industry-specific waste stream under 40 CFR Subchapters N or O, the results of this monitoring must be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the San Diego Water Board or State Water Board.
[40 CFR 122.41(l)(4)(ii)]
 - (c) Calculations for all limitations which require averaging of measurements must utilize an arithmetic mean unless otherwise specified in the permit.
[40 CFR 122.41(l)(4)(iii)]
- (5) *Compliance schedules.* Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit must be submitted no later than 14 days following each schedule date. [40 CFR 122.41(l)(5)]

(6) *Twenty-four hour reporting.*

- (a) The Copermittee must report any noncompliance that may endanger health or the environment. Any information must be provided orally within 24 hours from the time the Copermittee becomes aware of the circumstances. A written submission must also be provided within five (5) days of the time the Copermittee becomes aware of the circumstances. The written submission must contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6)(i)]
- (b) The following must be included as information which must be reported within 24 hours under this paragraph: [40 CFR 122.41(l)(6)(ii)]
 - (i) Any unanticipated bypass that exceeds any effluent limitation in the permit (See 40 CFR 122.41(g)). [40 CFR 122.41(l)(6)(ii)(A)]
 - (ii) Any upset which exceeds any effluent limitation in the permit. [40 CFR 122.41(l)(6)(ii)(B)] and,
 - (iii) Violation of a maximum daily discharge limitation for any of the pollutants listed by the San Diego Water Board in the permit to be reported within 24 hours. (See 40 CFR 122.44(g)) [40 CFR 122.41(l)(6)(ii)(C)]
- (c) The San Diego Water Board may waive the above-required written report on a case-by-case basis if the oral report has been received within 24 hours. [40 CFR 122.41(l)(6)(iii)]

(7) *Other noncompliance.* The Copermittee must report all instances of noncompliance not reported in accordance with the standard provisions required under 40 CFR 122.41(l)(4), (5), and (6), at the time monitoring reports are submitted. The reports must contain the information listed in the standard provisions required under 40 CFR 122.41(l)(6). [40 CFR 122.41(l)(7)]

(8) *Other information.* When the Copermittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the San Diego Water Board, State Water Board, or USEPA, the Copermittee must promptly submit such facts or information. [40 CFR 122.41(l)(8)]

m. BYPASS [40 CFR 122.41(m)]

(1) *Definitions.*

- (a) "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. [40 CFR 122.41(m)(1)(i)] or
- (b) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or

substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

[40 CFR 122.41(m)(1)(ii)]

- (2) *Bypass not exceeding limitations.* The Copermittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the standard provisions required under 40 CFR 122.41(m)(3) and (4).

[40 CFR 122.41(m)(2)]

- (3) *Notice.*

- (a) *Anticipated bypass.* If the Copermittee knows in advance of the need for a bypass, it must submit a notice, if possible at least ten days before the date of the bypass. [40 CFR 122.41(m)(3)(i)] or

- (b) *Unanticipated bypass.* The Copermittee must submit notice of an unanticipated bypass in accordance with the standard provisions required under 40 CFR 122.41(l)(6) (24-hour notice).

[40 CFR 122.41(m)(3)(ii)]

- (4) *Prohibition of Bypass.*

- (a) Bypass is prohibited, and the San Diego Water Board may take enforcement action against a Copermittee for bypass, unless:

[40 CFR 122.41(m)(4)(i)]

- (i) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; [40 CFR 122.41(m)(4)(i)(A)]

- (ii) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance;

[40 CFR 122.41(m)(4)(i)(B)] and,

- (iii) The Copermittee submitted notice in accordance with the standard provisions required under 40 CFR 122.41(m)(3).

[40 CFR 122.41(m)(4)(i)(C)]

- (b) The San Diego Water Board may approve an anticipated bypass, after considering its adverse effects, if the San Diego Water Board determines that it will meet the three conditions listed above.

[40 CFR 122.41(m)(4)(ii)]

n. UPSET [40 CFR 122.41(n)]

- (1) *Definition.* "Upset" means an exceptional incident in which there is unintentional and

temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Copermitttee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. [40 CFR 122.41(n)(1)]

- (2) *Effect of an upset.* An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the standard provisions required under 40 CFR 122.41(n)(3) are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. [40 CFR 122.41(n)(2)]
- (3) *Conditions necessary for a demonstration of upset.* A Copermitttee who wishes to establish the affirmative defense of upset must demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
[40 CFR 122.41(n)(3)]
 - (a) An upset occurred and that the Copermitttee can identify the cause(s) of the upset; [40 CFR 122.41(n)(3)(i)]
 - (b) The permitted facility was at the time being properly operated;
[40 CFR 122.41(n)(3)(ii)] and
 - (c) The Copermitttee submitted notice of the upset in accordance with the standard provisions required under 40 CFR 122.41(l)(6)(ii)(B) (24-hour notice).
[40 CFR 122.41(n)(3)(iii)]
 - (d) The Copermitttee complied with any remedial measures pursuant to the standard provisions required under 40 CFR 122.41(d).
[40 CFR 122.41(n)(3)(iii)]
- (4) *Burden of proof.* In any enforcement proceeding, the Copermitttee seeking to establish the occurrence of an upset has the burden of proof.
[40 CFR 122.41(n)(4)]

o. STANDARD PERMIT PROVISIONS FOR MUNICIPAL SEPARATE STORM SEWER SYSTEMS
[40 CFR 122.42(c)]

The operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer that has been designated by the San Diego Water Board or State Water Board under 40 CFR 122.26(a)(1)(v) must submit an annual report by the anniversary of the date of the issuance of the permit for such system. The report must include:

- (1) The status of implementing the components of the storm water management program that are established as permit conditions; [40 CFR 122.42(c)(1)]
- (2) Proposed changes to the storm water management programs that are established as permit conditions. Such proposed changes must be consistent with 40 CFR 122.26(d)(2)(iii); [40 CFR 122.42(c)(2)] and
- (3) Revisions, if necessary, to the assessment of controls and the fiscal analysis

- reported in the permit application under 40 CFR 122.26(d)(2)(iv) and (v); [40 CFR 122.42(c)(3)]
- (4) A summary of data, including monitoring data, that is accumulated throughout the reporting year; [40 CFR 122.42(c)(4)]
- (5) Annual expenditures and budget for year following each annual report; [40 CFR 122.42(c)(5)]
- (6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; [40 CFR 122.42(c)(6)]
- (7) Identification of water quality improvements or degradation. [40 CFR 122.42(c)(7)]

p. STANDARD PERMIT PROVISIONS FOR STORM WATER DISCHARGES [40 CFR 122.42(d)]

The initial permits for discharges composed entirely of storm water issued pursuant to 40 CFR 122.26(e)(7) must require compliance with the conditions of the permit as expeditiously as practicable, but in no event later than three years after the date of issuance of the permit.

2. General Provisions

In addition to the standard provisions required to be incorporated into the Order and NPDES permit pursuant to 40 CFR 122.41 and 40 CFR 122.42, several other general provisions apply to this Order. The general provisions applicable to this Order and NPDES permit are as follows:

a. DISCHARGE OF WASTE IS A PRIVILEGE

No discharge of waste into the waters of the State, whether or not such discharge is made pursuant to waste discharge requirements, shall create a vested right to continue such discharge. All discharges of waste into waters of the State are privileges, not rights. [CWC Section 13263(g)]

b. DURATION OF ORDER AND NPDES PERMIT

- (1) *Effective date.* ~~This Order and NPDES permit becomes effective on the 50th day after its adoption provided the USEPA has no objection. If the USEPA objects to its issuance, this Order shall not become effective until such objection is withdrawn.~~ This Order supersedes Order No. R9-2007-0001 for the San Diego County Copermittees listed in Table 2.a and became effective on June 27, 2013 for those Copermittees. ~~upon the effective date of this Order.~~ This Order as amended by Order R9-2015-0001, and supersedes Order Nos. R9-2009-0002 and becomes effective fifty (50) days April 1, 2015, following after the date Order No. R9-2015-0001 is adopted. This Order supersedes Order No. R9-2010-0016 upon their expiration further amendment or earlier notice of coverage.

- (2) *Expiration.* This Order and NPDES permit expires five years after its effective date.

ATTACHMENT B: STANDARD PERMIT PROVISIONS AND GENERAL PROVISIONS

1. Standard Permit Provisions
2. General Provisions

[40 CFR 122.46(a)]

- (3) *Continuation of expired order.* After this Order and NPDES permit expires, the terms and conditions of this Order and NPDES permit are automatically continued pending issuance of a new permit if all requirements of the federal NPDES regulations on the continuation of expired permits (40 CFR 122.6) are complied with.

c. AVAILABILITY

A copy of this Order must be kept at a readily accessible location and must be available to on-site personnel at all times.

d. CONFIDENTIALITY OF INFORMATION

Except as provided for in 40 CFR 122.7, no information or documents submitted in accordance with or in application for this Order will be considered confidential, and all such information and documents shall be available for review by the public at the San Diego Water Board office.

Claims of confidentiality for the following information will be denied:
[40 CFR 122.7(b)]

- (1) The name and address of any permit applicant or Copermittee;
[40 CFR 122.7(b)(1)] and
- (2) Permit applications and attachments, permits, and effluent data.
[40 CFR 122.7(b)(2)]

e. EFFLUENT LIMITATIONS

- (1) *Interim effluent limitations.* The Copermittee must comply with any interim effluent limitations as established by addendum, enforcement action, or revised waste discharge requirements which have been, or may be, adopted by the San Diego Water Board.
- (2) *Other effluent limitations and standards.* If any applicable toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the CWA for a toxic pollutant and that standard or prohibition is more stringent than any limitation on the pollutant in the permit, the San Diego Water Board shall institute proceedings under these regulations to modify or revoke and reissue the permit to conform to the toxic effluent standard or prohibition. [40 CFR 122.44(b)(1)]

f. DUTY TO MINIMIZE OR CORRECT ADVERSE IMPACTS

The Copermittee must take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncompliance.

g. PERMIT ACTIONS

The filing of a request by the Copermittee for modification, revocation and reissuance, or termination of this Order, or a notification of planned change in or anticipated noncompliance with this Order does not stay any condition of this Order. (See 40 CFR 122.41(f)) In addition, the following provisions apply to this Order:

- (1) Upon application by any affected person, or on its own motion, the San Diego Water Board may review and revise the requirements in this Order. All requirements must be reviewed periodically. [CWC Section 13263(e)]
- (2) This Order may be terminated or modified for cause, including, but not limited to, all of the following: [CWC Section 13381]
 - (a) Violation of any condition contained in the requirements of this Order. [CWC Section 13381(a)]
 - (b) Obtaining the requirements in this Order by misrepresentation, or failure to disclose fully all relevant facts. [CWC Section 13381(b)]
 - (c) A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge. [CWC Section 13381(c)]
- (3) When this Order is transferred to a new owner or operator, such requirements as may be necessary under the CWC may be incorporated into this Order.

h. NPDES PERMITTED NON-STORM WATER DISCHARGES

The San Diego Water Board has, in prior years, issued a limited number of individual NPDES permits for non-storm water discharges to MS4s. The San Diego Water Board or State Water Board may in the future, upon prior notice to the Copermittee(s), issue an NPDES permit for any non-storm water discharge (or class of non-storm water discharges) to an MS4.

i. MONITORING

In addition to the standard provisions required under 40 CFR 122.41(j) and (l)(4), the following general monitoring provisions apply to this Order:

- (1) Where procedures are not otherwise specified in Order, sampling, analysis and quality assurance/quality control must be conducted in accordance with the Quality Assurance Management Plan (QAMP) for the State of California's Surface Water Ambient Monitoring Program (SWAMP), adopted by the State Water Resources Control Board (State Water Board).
- (2) Pursuant to 40 CFR 122.41(j)(2) and CWC Section 13383(a), each Copermittee must retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring

- instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least five (5) years from the date of the sample, measurement, report or application. This period may be extended by request of the San Diego Water Board at any time.
- (3) All chemical, bacteriological, and toxicity analyses must be conducted at a laboratory certified for such analyses by the California Department of Public Health or a laboratory approved by the San Diego Water Board.
 - (4) For priority toxic pollutants that are identified in the California Toxics Rule (CTR) (65 Fed. Reg. 31682), the Copermittees must instruct their laboratories to establish calibration standards that are equivalent to or lower than the Minimum Levels (MLs) published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP). If a Copermittee can demonstrate that a particular ML is not attainable, in accordance with procedures set forth in 40 CFR Part 136, the lowest quantifiable concentration of the lowest calibration standard analyzed by a specific analytical procedure (assuming that all the method specified sample weights, volumes, and processing steps have been followed) may be used instead of the ML listed in Appendix 4 of the SIP. The Copermittee must submit documentation from the laboratory to the San Diego Water Board for approval prior to raising the ML for any priority toxic pollutant.

j. ENFORCEMENT

- (1) The San Diego Water Board is authorized to enforce the terms of this Order under several provisions of the CWC, including, but not limited to, CWC Sections 13385, 13386, and 13387.
- (2) Nothing in this Order shall be construed to protect the Copermittee from its liabilities under federal, state, or local laws.
- (3) The CWC provides for civil and criminal penalties comparable to, and in some cases greater than, those provided for under the CWA.
- (4) Except as provided in the standard conditions required under 40 CFR 122.41(m) and (n), nothing in this Order shall be construed to relieve the Copermittee from civil or criminal penalties for noncompliance.
- (5) Nothing in this Order shall be construed to preclude the institution of any legal action or relieve the Copermittee from any responsibilities, liabilities, or penalties to which the Copermittee is or may be subject to under Section 311 of the CWA.
- (6) Nothing in this Order shall be construed to preclude institution of any legal action or relieve the Copermittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authoring preserved by Section 510 of the CWA.

k. SEVERABILITY

The provisions of this Order are severable, and if any provision of this Order, or the

application of any provisions of this Order to any circumstance, is held invalid, the application of such provision to other circumstances and the remainder of this Order shall not be affected thereby.

I. APPLICATIONS

Any application submitted by a Copermittee for reissuance or modification of this Order must satisfy all applicable requirements specified in federal regulations as well as any additional requirements for submittal of a Report of Waste Discharge specified in the CWC and the California Code of Regulations.

m. IMPLEMENTATION

All plans, reports and subsequent amendments submitted in compliance with this Order must be implemented immediately (or as otherwise specified). All submittals by Copermittees must be adequate to implement the requirements of this Order.

n. REPORT SUBMITTALS

- (1) All report submittals must include an executive summary, introduction, conclusion, recommendations, and signed certified statement.
- (2) Each Copermittee must submit a signed certified statement covering its responsibilities for each applicable submittal.
- (3) The Principal Watershed Copermittee(s) must submit a signed certified statement covering its responsibilities for each applicable submittal and the sections of the submittals for which it is responsible.
- (4) Unless otherwise directed, the Copermittees must submit one hard copy and one electronic copy of each report required under this Order to the San Diego Water Board, and one electronic copy to the USEPA.
- (5) The Copermittees must submit reports and provide notifications as required by this Order to the following:

EXECUTIVE OFFICER
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION
2375 NORTHSIDE DRIVE~~9174 SKY PARK COURT~~, SUITE 100
SAN DIEGO CA 9210823-4340
Telephone: ~~(858) 467-2952~~(619) 516-1990 Fax: ~~(858) 571-6972~~(619) 516-1994

EUGENE BROMLEY
US ENVIRONMENTAL PROTECTION AGENCY
REGION IX
PERMITS ISSUANCE SECTION (W-5-1)
75 HAWTHORNE STREET
SAN FRANCISCO CA 94105

ATTACHMENT C**ACRONYMS AND ABBREVIATIONS**

AMAL	Average Monthly Action Level
ASBS	Area(s) of Special Biological Significance
BMP	Best Management Practice
Basin Plan	Water Quality Control Plan for the San Diego Basin
CEQA	California Environmental Quality Act
CCR	California Code of Regulations
CFR	Code of Federal Regulations
CWA	Clean Water Act
CWC	California Water Code
CZARA	Coastal Zone Act Reauthorization Amendments of 1990
ESAs	Environmentally Sensitive Areas
GIS	Geographic Information System
IBI	Index of Biological Integrity
LID	Low Impact Development
MDAL	Maximum Daily Action Level
MEP	Maximum Extent Practicable
MS4	Municipal Separate Storm Sewer System
NAL	Non-Storm Water Action Level
NAICS	North American Industry Classification System
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
ROWD	Report of Waste Discharge (application for NPDES reissuance)
SAL	Storm Water Action Level
San Diego Water Board	California Regional Water Quality Control Board, San Diego Region
SIC	Standard Industrial Classification Code
State Water Board	State Water Resources Control Board
TMDL	Total Maximum Daily Load
USEPA	United States Environmental Protection Agency
WDID	Waste Discharge Identification Number
WLA	Waste Load Allocation
WQBEL	Water Quality Based Effluent Limitation

DEFINITIONS

Active/Passive Sediment Treatment - Using mechanical, electrical or chemical means to flocculate or coagulate suspended sediment for removal from runoff from construction sites prior to discharge.

Anthropogenic Litter – Trash generated from human activities, not including sediment.

Average Monthly Action Level – The highest allowable average of daily discharges over a calendar month.

Beneficial Uses - The uses of water necessary for the survival or wellbeing of man, plants, and wildlife. These uses of water serve to promote tangible and intangible economic, social, and environmental goals. “Beneficial Uses” of the waters of the State that may be protected include, but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves. Existing beneficial uses are uses that were attained in the surface or ground water on or after November 28, 1975; and potential beneficial uses are uses that would probably develop in future years through the implementation of various control measures. “Beneficial Uses” are equivalent to “Designated Uses” under federal law. [California Water Code Section 13050(f)].

Best Management Practices (BMPs) - Defined in 40 CFR 122.2 as schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Bioassessment - The use of biological community information to evaluate the biological integrity of a water body and its watershed. With respect to aquatic ecosystems, bioassessment is the collection and analysis of samples of the benthic macroinvertebrate community together with physical/habitat quality measurements associated with the sampling site and the watershed to evaluate the biological condition (i.e. biotic integrity) of a water body.

Biofiltration - Practices that use vegetation and amended soils to detain and treat runoff from impervious areas. Treatment is through filtration, infiltration, adsorption, ion exchange, and biological uptake of pollutants.

Biological Integrity - Defined in Karr J.R. and D.R. Dudley. 1981. Ecological perspective on water quality goals. *Environmental Management* 5:55-68 as: “A balanced, integrated, adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of natural habitat of the region.” Also referred to as ecosystem health.

BMP Design Manual – A plan developed to eliminate, reduce, or mitigate the impacts of runoff from development projects, including Priority Development Projects.

Chronic Toxicity – A measurement of sublethal effect (e.g. reduced growth, reproduction) to experimental test organisms exposed to an effluent or receiving waters compared to that of the

control organisms.

Clean Water Act Section 303(d) Water Body - An impaired water body in which water quality does not meet applicable water quality standards and/or is not expected to meet water quality standards, even after the application of technology based pollution controls required by the CWA. The discharge of runoff to these water bodies by the Copermitees is significant because these discharges can cause or contribute to violations of applicable water quality standards.

Construction Site – Any project, including projects requiring coverage under the Construction General Permit, that involves soil disturbing activities including, but not limited to, clearing, grading, disturbances to ground such as stockpiling, and excavation.

Contamination - As defined in the Porter-Cologne Water Quality Control Act, contamination is “an impairment of the quality of waters of the State by waste to a degree which creates a hazard to the public health through poisoning or through the spread of disease. ‘Contamination’ includes any equivalent effect resulting from the disposal of waste whether or not waters of the State are affected.”

Copermittee – A permittee to a NPDES permit that is only responsible for permit conditions relating to the discharge for which it is operator [40 CFR 122.26(b)(1)]. For the purposes of this Order, a Copermittee is one of the individual permittees identified in Tables 1a-1c of this Order.

Copermittees – All of the individual Copermittees, collectively.

Critical Channel Flow (Qc) – The channel flow that produces the critical shear stress that initiates bed movement or that erodes the toe of channel banks. When measuring Qc, it should be based on the weakest boundary material – either bed or bank.

Daily Discharge – Defined as either: (1) the total mass of the constituent discharged over the calendar day or any 24 hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g. concentration.)

The Daily Discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day, or other 24 hour period other than a day), or by the arithmetic mean of analytical results from one or more grab samples taken over the course of a day.

Development Projects - Construction, rehabilitation, redevelopment, or reconstruction of any public or private projects.

Dry Season – May 1 to September 30.

Dry Weather – Weather is considered dry if the preceding 72 hours has been without measurable precipitation (>0.1 inch).

Enclosed Bays – Enclosed bays are indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost bay works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays do not include

inland surface waters or ocean waters.

Erosion – When land is diminished or worn away due to wind, water, or glacial ice. Often the eroded debris (silt or sediment) becomes a pollutant via storm water runoff. Erosion occurs naturally but can be intensified by land clearing activities such as farming, development, road building, and timber harvesting.

Environmentally Sensitive Areas (ESAs) - Areas that include but are not limited to all Clean Water Act Section 303(d) impaired water bodies; areas designated as Areas of Special Biological Significance by the State Water Board and San Diego Water Board; State Water Quality Protected Areas; water bodies designated with the RARE beneficial use by the State Water Board and San Diego Water Board; areas designated as preserves or their equivalent under the Natural Communities Conservation Program within the Cities and County of Orange; and any other equivalent environmentally sensitive areas which have been identified by the Copermitees.

Estuaries – Waters, including coastal lagoons, located at the mouth of streams that serve as areas of mixing fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and ocean water. Estuaries do not include inland surface waters or ocean waters.

Existing Development – Any area that has been developed and exists for municipal, commercial, industrial, or residential purposes, uses, or activities. May include areas that are not actively used for its originally developed purpose, but may be re-purposed or redeveloped for another use or activity.

Flow Duration – The long-term period of time that flows occur above a threshold that causes significant sediment transport and may cause excessive erosion damage to creeks and streams (not a single storm event duration). The simplest way to visualize this is to consider a histogram of pre- and post-project flows using long-term records of hourly data. To maintain pre-development flow duration means that the total number of hours (counts) within each range of flows in a flow-duration histogram cannot increase between the pre- and post-development condition. Flow duration within the range of geomorphologically significant flows is important for managing erosion.

Grading - The cutting and/or filling of the land surface to a desired slope or elevation.

Groundwater – Subsurface water that occurs beneath the water table in soils and geologic formations that are fully saturated.

Hazardous Material – Any substance that poses a threat to human health or the environment due to its toxicity, corrosiveness, ignitability, explosive nature or chemical reactivity. These also include materials named by the USEPA in 40 CFR 116 to be reported if a designated quantity of the material is spilled into the waters of the U.S. or emitted into the environment.

Hazardous Waste - Hazardous waste is defined as “any waste which, under Section 600 of Title 22 of this code, is required to be managed according to Chapter 30 of Division 4.5 of Title 22 of this code” [CCR Title 22, Division 4.5, Chapter 11, Article 1].

Household Hazardous Waste – Paints, cleaning products, and other hazardous wastes generated during home improvement or maintenance activities.

Hydromodification – The change in the natural watershed hydrologic processes and runoff characteristics (i.e., interception, infiltration, overland flow, and groundwater flow) caused by urbanization or other land use changes that result in increased stream flows and sediment transport. In addition, alteration of stream and river channels, such as stream channelization, concrete lining, installation of dams and water impoundments, and excessive streambank and shoreline erosion are also considered hydromodification, due to their disruption of natural watershed hydrologic processes.

Illicit Connection – Any man-made conveyance or drainage system through which a non-storm water discharge to the storm water drainage system occurs or may occur. Any connection to the MS4 that conveys an illicit discharge.

Illicit Discharge - Any discharge to the MS4 that is not composed entirely of storm water except discharges pursuant to a NPDES permit and discharges resulting from firefighting activities [40 CFR 122.26(b)(2)].

Inactive Areas – Areas of construction activity that are not active and those that have been active and are not scheduled to be re-disturbed for at least 14 days.

Infiltration – In the context of low impact development, infiltration is defined as the percolation of water into the ground. Infiltration is often expressed as a rate (inches per hour), which is determined through an infiltration test. In the context of non-storm water, infiltration is water other than wastewater that enters a sewer system (including sewer service connections and foundation drains) from the ground through such means as defective pipes, pipe joints, connections, or manholes. Infiltration does not include, and is distinguished from, inflow [40 CFR 35.2005(20)].

Inland Surface Waters – Includes all surface waters of the State that do not include the ocean, enclosed bays, or estuaries.

Jurisdictional Runoff Management Program Document – A written description of the specific jurisdictional runoff management measures and programs that each Copermittee will implement to comply with this Order and ensure that storm water pollutant discharges in runoff are reduced to the MEP and do not cause or contribute to a violation of water quality standards.

Low Impact Development (LID) – A storm water management and land development strategy that emphasizes conservation and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely reflect pre-development hydrologic functions.

Low Impact Development Best Management Practices (LID BMPs) – LID BMPs include schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States through storm water management and land development strategies that emphasize conservation and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely reflect pre-development hydrologic functions. LID BMPs include retention

practices that do not allow runoff, such as infiltration, rain water harvesting and reuse, and evapotranspiration. LID BMPs also include flow-through practices such as biofiltration that may have some discharge of storm water following pollutant reduction.

Major Outfall – As defined in the Code of Federal Regulations, a major outfall is a MS4 outfall that discharges from a single pipe with an inside diameter of 36 inches or more or its equivalent (i.e. discharge from a single conveyance other than a circular pipe which is associated with a drainage area of more than 50 acres); or, for MS4s that receive storm water from lands zoned for industrial activity (based on comprehensive zoning plans or equivalent), a MS4 outfall that discharges from a single pipe with an inside diameter of 12 inches or more or from its equivalent (i.e. discharge from other than a circular pipe associated with a drainage area of 2 acres or more).

Maximum Daily Action Level (MDAL) –The highest allowable daily discharge of a pollutant, over a calendar day (or 24 hour period). For pollutants with action levels expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with action levels expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Maximum Extent Practicable (MEP) – The technology-based standard established by Congress in CWA section 402(p)(3)(B)(iii) for storm water that operators of MS4s must meet. Technology-based standards establish the level of pollutant reductions that dischargers must achieve, typically by treatment or by a combination of source control and treatment control BMPs. MEP generally emphasizes pollution prevention and source control BMPs primarily (as the first line of defense) in combination with treatment methods serving as a backup (additional line of defense). MEP considers economics and is generally, but not necessarily, less stringent than BAT. A definition for MEP is not provided either in the statute or in the regulations. Instead the definition of MEP is dynamic and will be defined by the following process over time: municipalities propose their definition of MEP by way of their runoff management programs. Their total collective and individual activities conducted pursuant to the runoff management programs becomes their proposal for MEP as it applies both to their overall effort, as well as to specific activities (e.g., MEP for street sweeping, or MEP for MS4 maintenance). In the absence of a proposal acceptable to the San Diego Water Board, the San Diego Water Board defines MEP.

In a memo dated February 11, 1993, entitled "Definition of Maximum Extent Practicable," Elizabeth Jennings, Senior Staff Counsel, SWRCB addressed the achievement of the MEP standard as follows:

“To achieve the MEP standard, municipalities must employ whatever Best Management Practices (BMPs) are technically feasible (i.e., are likely to be effective) and are not cost prohibitive. The major emphasis is on technical feasibility. Reducing pollutants to the MEP means choosing effective BMPs, and rejecting applicable BMPs only where other effective BMPs will serve the same purpose, or the BMPs would not be technically feasible, or the cost would be prohibitive. In selecting BMPs to achieve the MEP standard, the following factors may be useful to consider:

- a. Effectiveness: Will the BMPs address a pollutant (or pollutant source) of concern?*
- b. Regulatory Compliance: Is the BMP in compliance with storm water regulations as well as other environmental regulations?*
- c. Public Acceptance: Does the BMP have public support?*

- d. *Cost: Will the cost of implementing the BMP have a reasonable relationship to the pollution control benefits to be achieved?*
- e. *Technical Feasibility: Is the BMP technically feasible considering soils, geography, water resources, etc.?*

The final determination regarding whether a municipality has reduced pollutants to the maximum extent practicable can only be made by the Regional or State Water Boards, and not by the municipal discharger. If a municipality reviews a lengthy menu of BMPs and chooses to select only a few of the least expensive, it is likely that MEP has not been met. On the other hand, if a municipal discharger employs all applicable BMPs except those where it can show that they are not technically feasible in the locality, or whose cost would exceed any benefit derived, it would have met the standard. Where a choice may be made between two BMPs that should provide generally comparable effectiveness, the discharger may choose the least expensive alternative and exclude the more expensive BMP. However, it would not be acceptable either to reject all BMPs that would address a pollutant source, or to pick a BMP based solely on cost, which would be clearly less effective. In selecting BMPs the municipality must make a serious attempt to comply and practical solutions may not be lightly rejected. In any case, the burden would be on the municipal discharger to show compliance with its permit. After selecting a menu of BMPs, it is the responsibility of the discharger to ensure that all BMPs are implemented.”

Monitoring Year – October 1 to September 30

Municipal Separate Storm Sewer System (MS4) – A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or designated and approved management agency under section 208 of the CWA that discharges to waters of the United States; (ii) Designated or used for collecting or conveying storm water; (iii) Which is not a combined sewer; (iv) Which is not part of the Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.26.

National Pollutant Discharge Elimination System (NPDES) - The national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of the CWA.

Non-Storm Water - All discharges to and from a MS4 that do not originate from precipitation events (i.e., all discharges from a MS4 other than storm water). Non-storm water includes illicit discharges and NPDES permitted discharges.

Nuisance - As defined in the Porter-Cologne Water Quality Control Act, a nuisance is “anything which meets all of the following requirements: 1) Is injurious to health, or is indecent, or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property. 2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or

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May 8, 2013

[As amended by Order No. R9-2015-0001](#)[Amended February 11, 2015](#)

damage inflicted upon individuals may be unequal. 3) Occurs during, or as a result of, the treatment or disposal of wastes.”

Ocean Waters – The territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. Discharges to ocean waters are regulated in accordance with the State Board’s California Ocean Plan.

Order – Unless otherwise specified, refers to this Order, Order No. R9-2013-0001 (NPDES No. CAS0109266)

Outfall - Outfall means a point source as defined by 40 CFR 122.2 at the point where a municipal separate storm sewer discharges to waters of the US and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the US and are used to convey waters of the US.

Persistent Flow - Persistent flow is defined as the presence of flowing, pooled, or ponded water more than 72 hours after a measureable rainfall event of 0.1 inch or greater during three consecutive monitoring and/or inspection events. All other flowing, pooled, or ponded water is considered transient.

Person - A person is defined as an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof [40 CFR 122.2].

Point Source - Any discernible, confined, and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operations, landfill leachate collection systems, vessel, or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

Pollutant - Any agent that may cause or contribute to the degradation of water quality such that a condition of pollution or contamination is created or aggravated.

Pollution - As defined in the Porter-Cologne Water Quality Control Act, pollution is “the alteration of the quality of the waters of the State by waste, to a degree which unreasonably affects either of the following: 1) The waters for beneficial uses; or 2) Facilities that serve these beneficial uses.” Pollution may include contamination.

Pollution Prevention - Pollution prevention is defined as practices and processes that reduce or eliminate the generation of pollutants, in contrast to source control BMPs, treatment control BMPs, or disposal.

Pre-Development Runoff Conditions – Approximate flow rates and durations that exist or existed onsite before land development occurs. For new development projects, this equates to runoff conditions immediately before project construction. For redevelopment projects, this equates to runoff conditions from the project footprint assuming infiltration characteristics of the underlying soil, and existing grade. Runoff coefficients of concrete or asphalt must not be used. A redevelopment Priority Development Project must use available information pertaining to existing underlying soil type and onsite existing grade to estimate pre-development runoff conditions.

Priority Development Projects - New development and redevelopment projects defined under Provision [E.3.b](#) of Order No. R9-2013-0001.

Rainy Season (aka Wet Season) –October 1 to April 30

Receiving Waters – Waters of the United States.

Receiving Water Limitations - Waste discharge requirements issued by the San Diego Water Board typically include both: (1) “Effluent Limitations” (or “Discharge Limitations”) that specify the technology-based or water-quality-based effluent limitations; and (2) “Receiving Water Limitations” that specify the water quality objectives in the Basin Plan as well as any other limitations necessary to attain those objectives. In summary, the “Receiving Water Limitations” provision is the provision used to implement the requirements of CWA section 402(p)(3)(B).

Redevelopment - The creation and/or replacement of impervious surface on an already developed site. Examples include the expansion of a building footprint, road widening, the addition to or replacement of a structure, and creation or addition of impervious surfaces. Replacement of impervious surfaces includes any activity that is not part of a routine maintenance activity where impervious material(s) are removed, exposing underlying soil during construction. Redevelopment does not include trenching and resurfacing associated with utility work; resurfacing existing roadways; new sidewalk construction, pedestrian ramps, or bike lane on existing roads; and routine replacement of damaged pavement, such as pothole repair.

Regional Clearinghouse – A central location for the collection and distribution of information developed and maintained by the Copermittees including, but not limited to, plans, reports, manuals, data, contact information, and/or links to such documents and information.

Rehabilitation - Remedial measures or activities for the purpose of improving or restoring the beneficial uses of streams, channels or river systems. Techniques may vary from in-stream restoration techniques to off-line storm water management practices installed in the system corridor or upland areas, or a combination of in-stream and out of stream techniques. Rehabilitation techniques may include, but are not limited to the following: riparian zone restoration, constructed wetlands, channel modifications that improve habitat and stability, and daylighting of drainage systems.

Reporting Period – The period of information that is reported in the Water Quality Improvement Plan Annual Report. The reporting period consists of two components: 1) July 1 to June 30, consistent with the fiscal year, for the implementation of the jurisdictional runoff management programs, and 2) October 1 to September 30, consistent with the monitoring year for the monitoring and assessment programs. Together, these two time periods constitute the reporting year for the Water Quality Improvement Plan Annual Report due January 31 following the end of the monitoring year.

Retain – Keep or hold in a particular place, condition, or position without discharge to surface waters.

Retrofitting – Storm water management practice put into place after development has occurred in watersheds where the practices previously did not exist or are ineffective. Retrofitting of developed areas is intended to improve water quality, protect downstream channels, reduce

flooding, or meet other specific objectives. Retrofitting developed areas may include, but is not limited to replacing roofs with green roofs, disconnecting downspouts or impervious surfaces to drain to pervious surfaces, replacing impervious surfaces with pervious surfaces, installing rain barrels, installing rain gardens, and trash area enclosures.

Runoff - All flows in a storm water conveyance system that consists of the following components: (1) storm water (wet weather flows) and (2) non-storm water including dry weather flows.

San Diego Water Board – As used in this document the term "San Diego Water Board" is synonymous with the term "Regional Board" as defined in Water Code section 13050(b) and is intended to refer to the California Regional Water Quality Control Board for the San Diego Region as specified in Water Code Section 13200.

Sediment - Soil, sand, and minerals washed from land into water. Sediment resulting from anthropogenic sources (i.e. human induced land disturbance activities) is considered a pollutant. This Order regulates only the discharges of sediment from anthropogenic sources and does not regulate naturally occurring sources of sediment. Sediment can destroy fish-nesting areas, clog animal habitats, and cloud waters so that sunlight does not reach aquatic plants.

Source Control BMP – Land use or site planning practices, or structural or nonstructural measures that aim to prevent runoff pollution by reducing the potential for contamination at the source of pollution. Source control BMPs minimize the contact between pollutants and runoff.

Storm Water – Per 40 CFR 122.26(b)(13), means storm water runoff, snowmelt runoff and surface runoff and drainage. Surface runoff and drainage pertains to runoff and drainage resulting from precipitation events.

Structural BMPs - A subset of BMPs which detains, retains, filters, removes, or prevents the release of pollutants to surface waters from development projects in perpetuity, after construction of a project is completed.

Test of Significant Toxicity (TST) - A statistical approach used to analyze toxicity test data. The TST incorporates a restated null hypothesis, Welch's t-test, and biological effect thresholds for chronic and acute toxicity.

Total Maximum Daily Load (TMDL) - The maximum amount of a pollutant that can be discharged into a water body from all sources (point and non-point) and still maintain water quality standards. Under CWA section 303(d), TMDLs must be developed for all water bodies that do not meet water quality standards after application of technology-based controls.

Toxicity - Adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies. The water quality objectives for toxicity provided in the Basin Plan, state in part... "All waters shall be free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life.... The survival of aquatic life in surface waters subjected to a waste discharge or other controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge."

Toxicity Identification Evaluation (TIE) - A set of procedures for identifying the specific

chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.

Toxicity Reduction Evaluation (TRE) - A study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate.

Treatment Control BMP – Any engineered system designed to remove pollutants by simple gravity settling of particulate pollutants, filtration, biological uptake, media absorption or any other physical, biological, or chemical process.

Unpaved Road – Any long, narrow stretch without pavement used for traveling by motor passenger vehicles between two or more points. Unpaved roads are generally constructed of dirt, gravel, aggregate or macadam and may be improved or unimproved.

Waste - As defined in CWC Section 13050(d), “waste includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal.”

Article 2 of CCR Title 23, Chapter 15 (Chapter 15) contains a waste classification system that applies to solid and semi-solid waste, which cannot be discharged directly or indirectly to water of the state and which therefore must be discharged to land for treatment, storage, or disposal in accordance with Chapter 15. There are four classifications of waste (listed in order of highest to lowest threat to water quality): hazardous waste, designated waste, non-hazardous solid waste, and inert waste.

Water Quality Objective - Numerical or narrative limits on constituents or characteristics of water designated to protect designated beneficial uses of the water. [California Water Code Section 13050 (h)]. California’s water quality objectives are established by the State and Regional Water Boards in the Water Quality Control Plans. Numeric or narrative limits for pollutants or characteristics of water designed to protect the beneficial uses of the water. In other words, a water quality objective is the maximum concentration of a pollutant that can exist in a receiving water and still generally ensure that the beneficial uses of the receiving water remain protected (i.e., not impaired). Since water quality objectives are designed specifically to protect the beneficial uses, when the objectives are violated the beneficial uses are, by definition, no longer protected and become impaired. This is a fundamental concept under the Porter Cologne Act. Equally fundamental is Porter Cologne’s definition of pollution. A condition of pollution exists when the water quality needed to support designated beneficial uses has become unreasonably affected or impaired; in other words, when the water quality objectives have been violated. These underlying definitions (regarding beneficial use protection) are the reason why all waste discharge requirements implementing the federal NPDES regulations require compliance with water quality objectives. (Water quality objectives are also called water quality criteria in the CWA.)

Water Quality Standards - Water quality standards, as defined in Clean Water Act section 303(c) consist of the beneficial uses (e.g., swimming, fishing, municipal drinking water supply, etc.) of a water body and criteria (referred to as water quality objectives in the California Water Code) necessary to protect those uses. Under the Water Code, the water boards establish beneficial uses and water quality objectives in water quality control or basin plans. Together with an anti-degradation policy, these beneficial uses and water quality objectives serve as water quality standards under the Clean Water Act. In Clean Water Act parlance, state beneficial uses are called “designated uses” and state water quality objectives are called “criteria.” Throughout this Order, the relevant term is used depending on the statutory scheme.

Waters of the State - Any water, surface or underground, including saline waters within the boundaries of the State [CWC section 13050 (e)]. The definition of the Waters of the State is broader than that for the Waters of the United States in that all water in the State is considered to be a Waters of the State regardless of circumstances or condition.

Waters of the United States - As defined in the 40 CFR 122.2, the Waters of the U.S. are defined as: “(a) All waters, which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; (b) All interstate waters, including interstate “wetlands;” (c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, “wetlands,” sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation or destruction of which would affect or could affect interstate or foreign commerce including any such waters: (1) Which are or could be used by interstate or foreign travelers for recreational or other purposes; (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (3) Which are used or could be used for industrial purposes by industries in interstate commerce; (d) All impoundments of waters otherwise defined as waters of the United States under this definition; (e) Tributaries of waters identified in paragraphs (a) through (d) of this definition; (f) The territorial seas; and (g) “Wetlands” adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition. Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area’s status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the EPA.”

Watershed - That geographical area which drains to a specified point on a water course, usually a confluence of streams or rivers (also known as drainage area, catchment, or river basin).

Wet Season (aka Rainy Season) – October 1 to April 30

Wet Weather – Weather is considered wet up to 72 hours after a storm event of 0.1 inches and greater, unless otherwise defined by another regulatory mechanism (e.g. a TMDL).

**JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM
ANNUAL REPORT FORM**

ATTACHMENT D

**JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM
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**JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM
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I. COPERMITTEE INFORMATION	
Copermittee Name:	
Copermittee Primary Contact Name:	
Copermittee Primary Contact Information:	
Address:	
City:	County:
State:	Zip:
Telephone:	Fax:
	Email:
II. LEGAL AUTHORITY	
Has the Copermittee established adequate legal authority within its jurisdiction to control pollutant discharges into and from its MS4 that complies with Order No. R9-2013-0001?	YES <input type="checkbox"/> NO <input type="checkbox"/>
A Principal Executive Officer, Ranking Elected Official, or Duly Authorized Representative has certified that the Copermittee obtained and maintains adequate legal authority?	YES <input type="checkbox"/> NO <input type="checkbox"/>
III. JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM DOCUMENT UPDATE	
Was an update of the jurisdictional runoff management program document required or recommended by the San Diego Water Board?	YES <input type="checkbox"/> NO <input type="checkbox"/>
If YES to the question above, did the Copermittee update its jurisdictional runoff management program document and make it available on the Regional Clearinghouse?	YES <input type="checkbox"/> NO <input type="checkbox"/>
IV. ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM	
Has the Copermittee implemented a program to actively detect and eliminate illicit discharges and connections to its MS4 that complies with Order No. R9-2013-0001?	YES <input type="checkbox"/> NO <input type="checkbox"/>
Number of non-storm water discharges reported by the public	
Number of non-storm water discharges detected by Copermittee staff or contractors	
Number of non-storm water discharges investigated by the Copermittee	
Number of sources of non-storm water discharges identified	
Number of non-storm water discharges eliminated	
Number of sources of illicit discharges or connections identified	
Number of illicit discharges or connections eliminated	
Number of enforcement actions issued	
Number of escalated enforcement actions issued	
V. DEVELOPMENT PLANNING PROGRAM	
Has the Copermittee implemented a development planning program that complies with Order No. R9-2013-0001?	YES <input type="checkbox"/> NO <input type="checkbox"/>
Was an update to the BMP Design Manual required or recommended by the San Diego Water Board?	YES <input type="checkbox"/> NO <input type="checkbox"/>
If YES to the question above, did the Copermittee update its BMP Design Manual and make it available on the Regional Clearinghouse?	YES <input type="checkbox"/> NO <input type="checkbox"/>
Number of proposed development projects in review	
Number of Priority Development Projects in review	
Number of Priority Development Projects approved	
Number of approved Priority Development Projects exempt from any BMP requirements	
Number of approved Priority Development Projects allowed alternative compliance	
Number of Priority Development Projects granted occupancy	
Number of completed Priority Development Projects in inventory	
Number of high priority Priority Development Project structural BMP inspections	
Number of Priority Development Project structural BMP violations	
Number of enforcement actions issued	
Number of escalated enforcement actions issued	

**JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM
ANNUAL REPORT FORM**

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VI. CONSTRUCTION MANAGEMENT PROGRAM

Has the Copermittee implemented a construction management program that complies with Order No. R9-2013-0001? YES
NO

Number of construction sites in inventory	
Number of active construction sites in inventory	
Number of inactive construction sites in inventory	
Number of construction sites closed/completed during reporting period	
Number of construction site inspections	
Number of construction site violations	
Number of enforcement actions issued	
Number of escalated enforcement actions issued	

VII. EXISTING DEVELOPMENT MANAGEMENT PROGRAM

Has the Copermittee implemented an existing development management program that complies with Order No. R9-2013-0001? YES
NO

	Municipal	Commercial	Industrial	Residential
Number of facilities or areas in inventory				
Number of existing development inspections				
Number of follow-up inspections				
Number of violations				
Number of enforcement actions issued				
Number of escalated enforcement actions issued				

VIII. PUBLIC EDUCATION AND PARTICIPATION

Has the Copermittee implemented a public education program component that complies with Order No. R9-2013-0001? YES
NO

Has the Copermittee implemented a public participation program component that complies with Order No. R9-2013-0001? YES
NO

IX. FISCAL ANALYSIS

Has the Copermittee attached to this form a summary of its fiscal analysis that complies with Order No. R9-2013-0001? YES
NO

X. CERTIFICATION

I Principal Executive Officer Ranking Elected Official Duly Authorized Representative] certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature

Date

Print Name

Title

Telephone Number

Email

ATTACHMENT E**SPECIFIC PROVISIONS FOR TOTAL MAXIMUM DAILY LOADS
APPLICABLE TO ORDER NO. R9-2013-0001**

These provisions implement load allocations (LAs) and wasteload allocations (WLAs) of the Total Maximum Daily Loads (TMDLs) ~~adopted~~ [established](#) by the San Diego Water Board ~~or and approved by~~ USEPA under Clean Water Act section 303(c), applicable to discharges regulated under this Order. The provisions and schedules for implementation of the TMDLs described below must be incorporated into the Water Quality Improvement Plans, required pursuant to Provision B of this Order, for the specified Watershed Management Areas.

1. [Total Maximum Daily Load for Diazinon in Chollas Creek Watershed](#)
2. [Total Maximum Daily Loads for Dissolved Copper in Shelter Island Yacht Basin](#)
3. [Total Maximum Daily Loads for Total Nitrogen and Total Phosphorus in Rainbow Creek Watershed](#)
4. [Total Maximum Daily Loads for Dissolved Copper, Lead, and Zinc in Chollas Creek](#)
5. [Total Maximum Daily Loads for Indicator Bacteria, Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay](#)
6. [Revised Total Maximum Daily Loads for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region \(Including Tecolote Creek\)](#)
7. [Total Maximum Daily Load for Sediment in Los Peñasquitos Lagoon](#)

1. Total Maximum Daily Load for Diazinon in Chollas Creek Watershed

a. APPLICABILITY

- (1) TMDL Basin Plan Amendment: Resolution No. R9-2002-0123
- (2) TMDL Adoption and Approval Dates:
 - San Diego Water Board Adoption Date: August 14, 2002
 - State Water Board Approval Date: July 16, 2003
 - Office of Administrative Law Approval Date: September 11, 2003
 - US EPA Approval Date: November 3, 2003
- (3) TMDL Effective Date: September 11, 2003
- (4) Watershed Management Area: San Diego Bay
- (5) Water Body: Chollas Creek
- (6) Responsible Copermittees: City of La Mesa, City of Lemon Grove, City of San Diego, County of San Diego, San Diego Unified Port District

b. FINAL TMDL COMPLIANCE REQUIREMENTS

The final diazinon TMDL compliance requirements for Chollas Creek consist of the following:

(1) Final TMDL Compliance Date

The Responsible Copermittees must be in compliance with the final TMDL compliance requirements as of December 31, 2010.

(2) Final Water Quality Based Effluent Limitations

(a) Final Receiving Water Limitations

Discharges from the MS4s must not cause or contribute to the exceedance of the following receiving water limitations:

Table 1.1
Final Receiving Water Limitations Expressed as Concentrations in Chollas Creek

Constituent	Exposure Duration	Receiving Water Limitation	Averaging Period
Diazinon	Acute	0.08 µg/L	1 hour
	Chronic	0.05 µg/L	4 days

(b) Final Effluent Limitations

Discharges from the MS4s containing concentrations that do not exceed the following effluent limitations will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 1.b.(2)(a):

Table 1.2

Final Effluent Limitations Expressed as Concentrations in MS4 Discharges to Chollas Creek

Constituent	Exposure Duration	Effluent Limitation	Averaging Period
Diazinon	Acute	0.072 µg/L	1 hour
	Chronic	0.045 µg/L	4 days

(c) Best Management Practices

The following BMPs for Chollas Creek must be incorporated into the Water Quality Improvement Plan for the San Diego Bay Watershed Management Area and implemented by the Responsible Copermittees:

- (i) The Responsible Copermittees must implement BMPs to achieve the receiving water limitations under Specific Provision 1.b.(2)(a) and/or the effluent limitations under Specific Provision 1.b.(2)(b) for Chollas Creek.
- (ii) The Responsible Copermittees must implement the Diazinon Toxicity Control Plan and Diazinon Public Outreach/Education Program as described in the report titled, *Technical Report for Total Maximum Daily Load for Diazinon in Chollas Creek Watershed, San Diego County*, dated August 14, 2002, including subsequent modifications, in order to achieve the receiving water limitations under Specific Provision 1.b.(2)(a) and/or the effluent limitations under Specific Provision 1.b.(2)(b).
- (iii) The Responsible Copermittees should coordinate any BMPs implemented to address this TMDL with Caltrans as possible.

(3) Final TMDL Compliance Determination

Compliance with the final WQBELs, on or after the final TMDL compliance date, may be demonstrated via one of the following methods:

- (a) There is no direct or indirect discharge from the Responsible Copermittee's MS4s to the receiving water; OR
- (b) There are no exceedances of the final receiving water limitations under Specific Provision 1.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee's MS4 outfalls; OR

- (c) There are no exceedances of the final effluent limitations under Specific Provision 1.b.(2)(b) at the Responsible Copermittee's MS4 outfalls; OR
- (d) The Responsible Copermittees develop and implement the Water Quality Improvement Plan as follows:
 - (i) Incorporate the BMPs required under Specific Provision 1.b.(2)(c) as part of the Water Quality Improvement Plan,
 - (ii) Include an analysis in the Water Quality Improvement Plan, utilizing a watershed model or other watershed analytical tools, to demonstrate that the implementation of the BMPs required under Provision 1.b.(2)(c) achieves compliance with Specific Provisions 1.b.(3)(a), 1.b.(3)(b) and/or 1.b.(3)(c),
 - (iii) The results of the analysis must be accepted by the San Diego Water Board as part of the Water Quality Improvement Plan,
 - (iv) The Responsible Copermittees continue to implement the BMPs required under Specific Provision 1.b.(2)(c), AND
 - (v) The Responsible Copermittees continue to perform the specific monitoring and assessments specified in Specific Provision 1.d, to demonstrate compliance with Specific Provisions 1.b.(3)(a), 1.b.(3)(b) and/or 1.b.(3)(c).

c. INTERIM TMDL COMPLIANCE REQUIREMENTS

The Responsible Copermittees must be in compliance with the final diazinon TMDL compliance requirements as of December 31, 2010.

d. SPECIFIC MONITORING AND ASSESSMENT REQUIREMENTS

- (1) The Responsible Copermittees must implement the monitoring and assessment requirements issued under Investigation Order No. R9-2004-0277, *California Department of Transportation and San Diego Municipal Separate Storm Sewer System Copermittees Responsible for the Discharge of Diazinon into the Chollas Creek Watershed*. The monitoring reports required under Investigation Order No. R9-2004-0277 must be submitted as part of the Transitional Monitoring and Assessment Program and Water Quality Improvement Plan Annual Reports required under Provision F.3.b of this Order.
- (2) The Responsible Copermittees must monitor the effluent of the MS4 outfalls for diazinon within the Chollas Creek watershed, and calculate or estimate the annual diazinon loads, in accordance with the requirements of Provisions D.2, D.4.b.(1), and D.4.b.(2) of this Order. The monitoring and assessment results must be submitted as part of the Transitional Monitoring and Assessment

Program and Water Quality Improvement Plan Annual Reports required under Provision F.3.b of this Order.

- (3) For assessing and determining compliance with the concentration-based effluent limitations under Specific Provision 1.b.(2)(b), dry and wet weather discharge concentrations may be calculated based on a flow-weighted average across all major MS4 outfalls along a water body segment or within a jurisdiction if samples are collected within a similar time period.

2. Total Maximum Daily Loads for Dissolved Copper in Shelter Island Yacht Basin

a. APPLICABILITY

(1) TMDL Basin Plan Amendment: Resolution No. R9-2005-0019

(2) TMDL Adoption and Approval Dates:

San Diego Water Board Adoption Date:	February 9, 2005
State Water Board Approval Date:	September 22, 2005
Office of Administrative Law Approval Date:	December 2, 2005
US EPA Approval Date:	February 8, 2006

(3) TMDL Effective Date: December 2, 2005

(4) Watershed Management Area: San Diego Bay

(5) Water Body: Shelter Island Yacht Basin

(6) Responsible Copermittee: **City of San Diego**

b. FINAL TMDL COMPLIANCE REQUIREMENTS

The final dissolved copper TMDL compliance requirements for Shelter Island Yacht Basin consist of the following:

(1) Final TMDL Compliance Date

The Responsible Copermittee must be in compliance with the final TMDL compliance requirements as of December 2, 2005.

(2) Final Water Quality Based Effluent Water Limitations

(a) Final Receiving Water Limitations

Discharges from the MS4s must not cause or contribute to the exceedance of the following receiving water limitations:

Table 2.1

Final Receiving Water Limitations Expressed as Concentrations in Shelter Island Yacht Basin

Constituent	Exposure Duration	Receiving Water Limitation	Averaging Period
Dissolved Copper	Acute	4.8 µg/L x WER*	1 hour
	Chronic	3.1 µg/L x WER*	4 days

Notes:

* The Water Effect Ratio (WER) is assumed to be 1.0 unless there is a site-specific and chemical-specific WER provided in the Basin Plan.

(b) Final Effluent Limitations

Discharges from the MS4s containing pollutant loads that do not exceed the following effluent limitations will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 2.b.(3)(a):

Table 2.2

Final Effluent Limitations as Expressed as Annual Loads in MS4 Discharges to Shelter Island Yacht Basin

Constituent	Effluent Limitation
Dissolved Copper	30 kg/yr*

* If the water quality objectives for dissolved copper in Shelter Island Yacht Basin are changed in the future, then the margin of safety (MOS), TMDL and allocations will be recalculated using the *Method for Recalculation of the Total Maximum Daily Load for Dissolved Copper in the Shelter Island Yacht Basin, San Diego Bay* in the Basin Plan (p. 7-14).

(c) Best Management Practices

The Responsible Copermittee must implement BMPs to achieve the receiving water limitations under Specific Provision 2.b.(2)(a) and/or the effluent limitations under Specific Provision 2.b.(2)(b) for Shelter Island Yacht Basin. The BMPs must be incorporated into the Water Quality Improvement Plan for the San Diego Bay Watershed Management Area.

(3) Final TMDL Compliance Determination

Compliance with the final WQBELs, on or after the final TMDL compliance date, may be demonstrated via one of the following methods:

- (a) There is no direct or indirect discharge from the Responsible Copermittee's MS4s to the receiving water; OR
- (b) There are no exceedances of the final receiving water limitations under Specific Provision 2.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee's MS4 outfalls; OR
- (c) There are no exceedances of the final effluent limitations under Specific Provision 2.b.(2)(b) at the Responsible Copermittee's MS4 outfalls; OR
- (d) The Responsible Copermittee develops and implements the Water Quality Improvement Plan as follows:
 - (i) Incorporate the BMPs required under Specific Provision 2.b.(2)(c) as part of the Water Quality Improvement Plan,

- (ii) Include an analysis in the Water Quality Improvement Plan, utilizing a watershed model or other watershed analytical tools, to demonstrate that the implementation of the BMPs required under Provision 2.b.(2)(c) achieves compliance with Specific Provisions 2.b.(3)(a), 2.b.(3)(b) and/or 2.b.(3)(c),
- (iii) The results of the analysis must be accepted by the San Diego Water Board as part of the Water Quality Improvement Plan,
- (iv) The Responsible Copermittees continue to implement the BMPs required under Specific Provision 2.b.(2)(c), AND
- (v) The Responsible Copermittees continue to perform the specific monitoring and assessments specified in Specific Provision 2.d, to demonstrate compliance with Specific Provisions 2.b.(3)(a), 2.b.(3)(b) and/or 2.b.(3)(c).

c. INTERIM TMDL COMPLIANCE REQUIREMENTS

The Responsible Copermittees must be in compliance with the final dissolved copper TMDL compliance requirements as of December 2, 2005.

d. SPECIFIC MONITORING AND ASSESSMENT REQUIREMENTS

The Responsible Copermittee must monitor the effluent of its MS4 outfalls for dissolved copper, and calculate or estimate the monthly and annual dissolved copper loads, in accordance with the requirements of Provisions D.2, D.4.b.(1), and D.4.(b)(2) of this Order. The monitoring and assessment results must be submitted as part of the Transitional Monitoring and Assessment Program and Water Quality Improvement Plan Annual Reports required under Provision F.3.b of this Order.

3. Total Maximum Daily Loads for Total Nitrogen and Total Phosphorus in Rainbow Creek Watershed

a. APPLICABILITY

(1) TMDL Basin Plan Amendment: Resolution No. R9-2005-0036

(2) TMDL Adoption and Approval Dates:

San Diego Water Board Adoption Date:	February 9, 2005
State Water Board Approval Date:	November 16, 2005
Office of Administrative Law Approval Date:	February 1, 2006
US EPA Approval Date:	March 22, 2006

(3) TMDL Effective Date: February 1, 2006

(4) Watershed Management Area: Santa Margarita River

(5) Water Body: Rainbow Creek

(6) Responsible Copermittee: **County of San Diego**

b. FINAL TMDL COMPLIANCE REQUIREMENTS

The final total nitrogen and total phosphorus TMDL compliance requirements for Rainbow Creek consist of the following

(1) Final TMDL Compliance Date

The Responsible Copermittee must comply with final TMDL compliance requirements by December 31, 2021.

(2) Final Water Quality Based Effluent Water Limitations

(a) Final Receiving Water Limitations

Discharges from the MS4s must not cause or contribute to the exceedance of the following receiving water limitations by the compliance date under Specific Provision 3.b.(1):

Table 3.1
Final Receiving Water Limitations Expressed as Concentrations in Rainbow Creek

Constituent	Receiving Water Limitation
Nitrate (as N)	10 mg/L
Total Nitrogen	1 mg/L
Total Phosphorus	0.1 mg/L

(b) Final Effluent Limitations

- (i) Discharges from the MS4s containing concentrations that do not exceed the following effluent limitations by the compliance date under Specific Provision 3.b.(1) will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 3.b.(2)(a):

Table 3.2

Final Effluent Limitations Expressed as Concentrations in MS4 Discharges to Rainbow Creek

Constituent	Effluent Limitation
Nitrate (as N)	10 mg/L
Total Nitrogen	1 mg/L
Total Phosphorus	0.1 mg/L

- (ii) Annual pollutant loads from given land uses discharging to and from the MS4s that do not exceed the following annual loads by the compliance date under Specific Provision 3.b.(1) will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 3.b.(2)(a):

Table 3.3

Final Effluent Limitations Expressed as Annual Loads in MS4 Discharges to Rainbow Creek

Land Use	Total N	Total P
Commercial nurseries	116 kg/yr	3 kg/yr
Park	3 kg/yr	0.1 kg/yr
Residential areas	149 kg/yr	12 kg/yr
Urban areas	27 kg/yr	6 kg/yr

(c) Best Management Practices

- (i) The Responsible Copermittee must implement BMPs to achieve the receiving water limitations under Specific Provision 3.b.(2)(a) and/or the effluent limitations under Specific Provision 3.b.(2)(b) for Rainbow Creek.
- (ii) The Responsible Copermittee should coordinate any BMPs implemented to address this TMDL with Caltrans and other sources as possible.

(3) Final TMDL Compliance Determination

Compliance with the final WQBELs, on or after the final TMDL compliance date, may be demonstrated via one of the following methods:

- (a) There is no direct or indirect discharge from the Responsible Copermittee's MS4s to the receiving water; OR
- (b) There are no exceedances of the final receiving water limitations under

Specific Provision 3.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee's MS4 outfalls; OR

- (c) There are no exceedances of the final effluent limitations under Specific Provision 3.b.(2)(b)(i) at the Responsible Copermittee's MS4 outfalls; OR
- (d) The annual pollutant loads from given land uses discharging to and from the MS4s do not exceed the final effluent limitations under Specific Provision 3.b.(2)(b)(ii); OR
- (e) The Responsible Copermittee develops and implements the Water Quality Improvement Plan as follows:
 - (i) Incorporate the BMPs required under Specific Provision 3.b.(2)(c) as part of the Water Quality Improvement Plan,
 - (ii) Include an analysis in the Water Quality Improvement Plan, utilizing a watershed model or other watershed analytical tools, to demonstrate that the implementation of the BMPs required under Specific Provision 3.b.(2)(c) achieves compliance with Specific Provisions 3.b.(3)(a), 3.b.(3)(b), 3.b.(3)(c) and/or 3.b.(3)(d),
 - (iii) The results of the analysis must be accepted by the San Diego Water Board as part of the Water Quality Improvement Plan,
 - (iv) The Responsible Copermittees continue to implement the BMPs required under Specific Provision 3.b.(2)(c), AND
 - (v) The Responsible Copermittees continue to perform the specific monitoring and assessments specified in Specific Provision 3.d, to demonstrate compliance with Specific Provisions 3.b.(3)(a), 3.b.(3)(b), 3.b.(3)(c) and/or 3.b.(3)(d).

c. INTERIM TMDL COMPLIANCE REQUIREMENTS

The interim total nitrogen and total phosphorus TMDL compliance requirements for Rainbow Creek consist of the following:

(1) Interim Compliance Dates and WQBELs

The Responsible Copermittee must comply with the interim WQBELs, expressed as annual loads, by December 31 of the interim compliance year given in Table 3.4.

Table 3.4

Interim Water Quality Based Effluent Limitations Expressed as Annual Loads in MS4 Discharges from Specific Land Uses to Rainbow Creek

Land Use	Total N Interim Effluent Limitations (kg/yr)			Total P Interim Effluent Limitations (kg/yr)		
	Interim Compliance Date			Interim Compliance Date		
	2009	2013	2017	2009	2013	2017
Commercial nurseries	390	299	196	20	16	10
Park	5	3	3	0.15	0.10	0.10
Residential areas	507	390	260	99	74	47
Urban areas	40	27	27	9	6	6

(2) Interim TMDL Compliance Determination

Compliance with interim WQBELs, on or after the interim TMDL compliance dates, may be demonstrated via one of the following methods:

- (a) There is no direct or indirect discharge from the Responsible Copermittee's MS4s to the receiving water; OR
- (b) There are no exceedances of the final receiving water limitations under Specific Provision 3.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee's MS4 outfalls; OR
- (c) There are no exceedances of the final effluent limitations under Specific Provision 3.b.(2)(b)(i) at the Responsible Copermittee's MS4 outfalls; OR
- (d) The annual pollutant loads from given land uses discharging to and from the MS4s do not exceed the final effluent limitations under Specific Provision 3.b.(2)(b)(ii); OR
- (e) The annual pollutant loads from given land uses discharging to and from the MS4s do not exceed the interim effluent limitations under Specific Provision 3.c.(1); OR
- (f) The Responsible Copermittee has submitted and is fully implementing a Water Quality Improvement Plan, accepted by the San Diego Water Board, which provides reasonable assurance that the interim TMDL compliance requirements will be achieved by the interim compliance dates.

d. SPECIFIC MONITORING AND ASSESSMENT REQUIREMENTS

- (1) The Responsible Copermittee must incorporate into the Water Quality Improvement Plan and implement the Sampling and Analysis Plan for Rainbow Creek Nutrient Reduction TMDL Implementation Water Quality Monitoring, dated January 2010.

- (2) The results of any monitoring conducted during the reporting period, and assessment of whether the interim and final TMDL compliance requirements have been achieved must be submitted as part of the Transitional Monitoring and Assessment Program and Water Quality Improvement Plan Annual Reports required under Provision F.3.b of this Order.
- (3) For assessing and determining compliance with the concentration-based effluent limitations under Specific Provision 3.b.(2)(b)(i), dry and wet weather discharge concentrations may be calculated based on a flow-weighted average across all major MS4 outfalls along a water body segment or within a jurisdiction if samples are collected within a similar time period.

4. Total Maximum Daily Loads for Dissolved Copper, Lead, and Zinc in Chollas Creek

a. APPLICABILITY

(1) TMDL Basin Plan Amendment: Resolution No. R9-2007-0043

(2) TMDL Adoption and Approval Dates:

San Diego Water Board Adoption Date:	June 13, 2007
State Water Board Approval Date:	July 15, 2008
Office of Administrative Law Approval Date:	October 22, 2008
US EPA Approval Date:	December 18, 2008

(3) TMDL Effective Date: October 22, 2008

(4) Watershed Management Area: San Diego Bay

(5) Water Body: Chollas Creek

(6) Responsible Copermittees: City of La Mesa, City of Lemon Grove, City of San Diego, County of San Diego, San Diego Unified Port District

b. FINAL TMDL COMPLIANCE REQUIREMENTS

The final dissolved copper, lead, and zinc TMDL compliance requirements for Chollas Creek consist of the following:

(1) Final TMDL Compliance Date

The Responsible Copermittees must comply with the final TMDL compliance requirements by October 22, 2028.

(2) Final Water Quality Based Effluent Limitations

(a) Final Receiving Water Limitations

Discharges from the MS4s must not cause or contribute to the exceedance of the following receiving water limitations by the compliance date under Specific Provision 4.b.(1):

Table 4.1*Final Receiving Water Limitations Expressed as Concentrations in Chollas Creek*

Constituent	Exposure Duration	Receiving Water Limitation (µg/L)	Averaging Period
Dissolved Copper	Acute	$(0.96) \times e^{[0.9422 \times \ln(\text{hardness}) - 1.700]} \times \text{WER}^*$	1 hour
	Chronic	$(0.96) \times e^{[0.8545 \times \ln(\text{hardness}) - 1.702]} \times \text{WER}^*$	4 days
Dissolved Lead	Acute	$[1.46203 - 0.145712 \times \ln(\text{hardness})] \times e^{[1.273 \times \ln(\text{hardness}) - 1.460]} \times \text{WER}^*$	1 hour
	Chronic	$[1.46203 - 0.145712 \times \ln(\text{hardness})] \times e^{[1.273 \times \ln(\text{hardness}) - 4.705]} \times \text{WER}^*$	4 days
Dissolved Zinc	Acute	$(0.978) \times e^{[0.8473 \times \ln(\text{hardness}) + 0.884]} \times \text{WER}^*$	1 hour
	Chronic	$(0.986) \times e^{[0.8473 \times \ln(\text{hardness}) + 0.884]} \times \text{WER}^*$	4 days

Notes:

* The Water Effect Ratio (WER) is assumed to be 1.0 unless there is a site-specific and chemical-specific WER provided in the Basin Plan.

(b) Final Effluent Limitations

Discharges from the MS4s containing pollutant loads that do not exceed the following effluent limitations by the compliance date under Specific Provision 4.b.(1) will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 4.b.(2)(a):

Table 4.2*Final Effluent Limitations as Expressed Concentrations in MS4 Discharges to Chollas Creek*

Constituent	Exposure Duration	Effluent Limitation (µg/L)	Averaging Period
Dissolved Copper	Acute	$90\% \times (0.96) \times e^{[0.9422 \times \ln(\text{hardness}) - 1.700]} \times \text{WER}^*$	1 hour
	Chronic	$90\% \times (0.96) \times e^{[0.8545 \times \ln(\text{hardness}) - 1.702]} \times \text{WER}^*$	4 days
Dissolved Lead	Acute	$90\% \times [1.46203 - 0.145712 \times \ln(\text{hardness})] \times e^{[1.273 \times \ln(\text{hardness}) - 1.460]} \times \text{WER}^*$	1 hour
	Chronic	$90\% \times [1.46203 - 0.145712 \times \ln(\text{hardness})] \times e^{[1.273 \times \ln(\text{hardness}) - 4.705]} \times \text{WER}^*$	4 days
Dissolved Zinc	Acute	$90\% \times (0.978) \times e^{[0.8473 \times \ln(\text{hardness}) + 0.884]} \times \text{WER}^*$	1 hour
	Chronic	$90\% \times (0.986) \times e^{[0.8473 \times \ln(\text{hardness}) + 0.884]} \times \text{WER}^*$	4 days

Notes:

* The Water Effect Ratio (WER) is assumed to be 1.0 unless there is a site-specific and chemical-specific WER provided in the Basin Plan.

(c) Best Management Practices

- (i) The Responsible Copermittees must implement BMPs to achieve the receiving water limitations under Specific Provision 4.b.(2)(a) and/or the effluent limitations under Specific Provision 4.b.(2)(b) for Chollas Creek.
- (ii) The Responsible Copermittees should coordinate any BMPs implemented to address this TMDL with Caltrans and the U.S. Navy as possible.

(3) Final TMDL Compliance Determination

Compliance with the final WQBELs, on or after the final TMDL compliance date, may be demonstrated via one of the following methods:

- (a) There is no direct or indirect discharge from the Responsible Copermittee's MS4s to the receiving water; OR
- (b) There are no exceedances of the final receiving water limitations under Specific Provision 4.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee's MS4 outfalls; OR
- (c) There are no exceedances of the final effluent limitations under Specific Provision 4.b.(2)(b) at the Responsible Copermittee's MS4 outfalls; OR
- (d) The Responsible Copermittees develop and implement the Water Quality Improvement Plan as follows:
 - (i) Incorporate the BMPs required under Specific Provision 4.b.(2)(c) as part of the Water Quality Improvement Plan,
 - (ii) Include an analysis in the Water Quality Improvement Plan, utilizing a watershed model or other watershed analytical tools, to demonstrate that the implementation of the BMPs required under Provision 4.b.(2)(c) achieves compliance with Specific Provisions 4.b.(3)(a), 4.b.(3)(b) and/or 4.b.(3)(c),
 - (iii) The results of the analysis must be accepted by the San Diego Water Board as part of the Water Quality Improvement Plan,
 - (iv) The Responsible Copermittees continue to implement the BMPs required under Specific Provision 4.b.(2)(c), AND
 - (v) The Responsible Copermittees continue to perform the specific monitoring and assessments specified in Specific Provision 4.d, to demonstrate compliance with Specific Provisions 4.b.(3)(a), 4.b.(3)(b) and/or 4.b.(3)(c).

c. INTERIM TMDL COMPLIANCE REQUIREMENTS

The interim dissolved copper, lead, and zinc TMDL compliance requirements for Chollas Creek consist of the following:

(1) Interim Compliance Date and WQBELs

The Responsible Copermittee must comply with the interim WQBELs, expressed as concentrations, by the interim compliance date given in Table 4.3:

Table 4.3
Interim Water Quality Based Effluent Limitations Expressed as Concentrations in MS4 Discharges to Chollas Creek

Interim Compliance Date	Constituent	Exposure Duration	Effluent Limitation (µg/L)	Averaging Period
October 22, 2018	Dissolved Copper	Acute	$1.2 \times 90\% \times (0.96) \times e^{[0.9422 \times \ln(\text{hardness}) - 1.700]} \times \text{WER}^*$	1 hour
		Chronic	$1.2 \times 90\% \times (0.96) \times e^{[0.8545 \times \ln(\text{hardness}) - 1.702]} \times \text{WER}^*$	4 days
	Dissolved Lead	Acute	$1.2 \times 90\% \times [1.46203 - 0.145712 \times \ln(\text{hardness})] \times e^{[1.273 \times \ln(\text{hardness}) - 1.460]} \times \text{WER}^*$	1 hour
		Chronic	$1.2 \times 90\% \times [1.46203 - 0.145712 \times \ln(\text{hardness})] \times e^{[1.273 \times \ln(\text{hardness}) - 4.705]} \times \text{WER}^*$	4 days
	Dissolved Zinc	Acute	$1.2 \times 90\% \times (0.978) \times e^{[0.8473 \times \ln(\text{hardness}) + 0.884]} \times \text{WER}^*$	1 hour
		Chronic	$1.2 \times 90\% \times (0.986) \times e^{[0.8473 \times \ln(\text{hardness}) + 0.884]} \times \text{WER}^*$	4 days

Notes:
 * The Water Effect Ratio (WER) is assumed to be 1.0 unless there is a site-specific and chemical-specific WER provided in the Basin Plan.

(2) Interim TMDL Compliance Determination

Compliance with interim WQBELs, on or after the interim TMDL compliance date, may be demonstrated via one of the following methods:

- (a) There is no direct or indirect discharge from the Responsible Copermittee’s MS4s to the receiving water; OR
- (b) There are no exceedances of the applicable receiving water limitations under Specific Provision 4.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee’s MS4 outfalls; OR
- (c) There are no exceedances of the final effluent limitations under Specific Provision 4.b.(2)(b) at the Responsible Copermittee’s MS4 outfalls; OR
- (d) There are no exceedances of the interim effluent limitations under Specific

Provision 4.c.(1) at the Responsible Copermittee's MS4 outfalls; OR

- (e) The Responsible Copermittees have submitted and is fully implementing a Water Quality Improvement Plan, accepted by the San Diego Water Board, which provides reasonable assurance that the interim TMDL compliance requirements will be achieved by the interim compliance date.

d. SPECIFIC MONITORING AND ASSESSMENT REQUIREMENTS

- (1) The Responsible Copermittees must implement the monitoring and assessment requirements issued under Investigation Order No. R9-2004-0277, *California Department of Transportation and San Diego Municipal Separate Storm Sewer System Copermittees Responsible for the Discharge of Diazinon into the Chollas Creek Watershed*, when it is amended to include monitoring requirements for the Total Maximum Daily Loads for Dissolved Copper, Lead, and Zinc in Chollas Creek. The monitoring reports required under Investigation Order No. R9-2004-0277 must be submitted as part of the Transitional Monitoring and Assessment Program and Water Quality Improvement Plan Annual Reports required under Provision F.3.b of this Order.
- (2) The Responsible Copermittees must monitor the effluent of the MS4 outfalls discharging to Chollas Creek for dissolved copper, lead, and zinc, and calculate or estimate the monthly and annual dissolved copper, lead, and zinc loads, in accordance with the requirements of Provisions D.2, D.4.b.(1), and D.4.b.(2) of this Order. The monitoring and assessment results must be submitted as part of the Transitional Monitoring and Assessment Program and Water Quality Improvement Plan Annual Reports required under Provision F.3.b of this Order.
- (3) For assessing and determining compliance with the concentration-based effluent limitations under Specific Provision 4.b.(2)(b) or 4.c.(1), dry and wet weather discharge concentrations may be calculated based on a flow-weighted average across all major MS4 outfalls along a water body segment or within a jurisdiction if samples are collected within a similar time period.

5. Total Maximum Daily Loads for Indicator Bacteria, Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay

a. APPLICABILITY

(1) TMDL Basin Plan Amendment: Resolution No. R9-2008-0027

(2) TMDL Adoption and Approval Dates:

San Diego Water Board Adoption Date:	June 11, 2008
State Water Board Approval Date:	June 16, 2009
Office of Administrative Law Approval Date:	September 15, 2009
US EPA Approval Date:	October 26, 2009

(3) TMDL Effective Date: September 15, 2009

(4) Watershed Management Areas: See Table 5.0

(5) Water Bodies: See Table 5.0

(6) Responsible Copermittees: See Table 5.0

Table 5.0

*Applicability of Total Maximum Daily Loads for Indicator Bacteria
Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay*

Watershed Management Area	Water Body	Segment or Area	Responsible Copermittees
South Orange County	Dana Point Harbor	Baby Beach	-City of Dana Point -County of Orange
San Diego Bay	San Diego Bay	Shelter Island Shoreline Park	- San Diego Unified Port District

b. FINAL TMDL COMPLIANCE REQUIREMENTS

The final indicator bacteria TMDL compliance requirements for segments or areas of the water bodies listed in Table 5.0 consist of the following:

(1) Final TMDL Compliance Dates

(a) Baby Beach in Dana Point Harbor

The Responsible Copermittees for MS4 discharges to Baby Beach must be in compliance with the final TMDL compliance requirements according to the following compliance dates:

Table 5.1

Compliance Dates to Achieve Final TMDL Compliance Requirements For Baby Beach in Dana Point Harbor

Constituent	Dry Weather WLA Compliance Date	Wet Weather WLA Compliance Date
Total Coliform	September 15, 2014	September 15, 2009
Fecal Coliform		September 15, 2009
<i>Enterococcus</i>		September 15, 2019

(b) Shelter Island Shoreline Park in San Diego Bay

The Responsible Copermittee for MS4 discharges to Shelter Island Shoreline Park must be in compliance with the final TMDL compliance requirements as of December 31, 2012.

(2) Final Water Quality Based Effluent Water Limitations

(a) Final Receiving Water Limitations

Discharges from the MS4s must not cause or contribute to the exceedance of the following receiving water limitations by the compliance dates under Specific Provision 5.b.(1):

Table 5.2

Final Receiving Water Limitations Expressed as Bacteria Densities in the Water Body

Constituent	Receiving Water Limitations	
	Single Sample Maximum ^{1,2}	30-Day Geometric Mean ²
Total Coliform	10,000 MPN/100mL	1,000 MPN/100mL
Fecal Coliform	400 MPN/100mL	200 MPN/100mL
<i>Enterococcus</i>	104 MPN/100mL	35 MPN/100mL

Notes:

1. During wet weather days, only the single sample maximum receiving water limitations are required to be achieved.
2. During dry weather days, the single sample maximum and 30-day geometric mean receiving water limitations are required to be achieved.

(b) Final Effluent Limitations

- (i) Discharges from the MS4s containing indicator bacteria densities that do not exceed the following effluent limitations by the compliance dates under Specific Provision 5.b.(1) will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 5.b.(2)(a):

Table 5.3a

Final Effluent Limitations as Expressed as Bacteria Densities in MS4 Discharges to the Water Body

Effluent Limitations		
Constituent	Single Sample Maximum ^{1,2}	30-Day Geometric Mean ²
Total Coliform	10,000 MPN/100mL	1,000 MPN/100mL
Fecal Coliform	400 MPN/100mL	200 MPN/100mL
<i>Enterococcus</i>	104 MPN/100mL	35 MPN/100mL

Notes:

1. During wet weather days, only the single sample maximum effluent limitations are required to be achieved.
2. During dry weather days, the single sample maximum and 30-day geometric mean effluent limitations are required to be achieved.

- (ii) Discharges from the MS4s containing indicator bacteria loads that do not exceed the following effluent limitations by the compliance dates under Specific Provision 5.b.(1) will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 5.b.(2)(a):

Table 5.4a

Final Effluent Limitations Expressed as Bacteria Loads in MS4 Discharges to the Baby Beach in Dana Point Harbor

Constituent	Dry Weather	Wet Weather
	Final Effluent Limitation	Final Effluent Limitation
Total Coliform	0.86×10^9 MPN/day	$3,254 \times 10^9$ MPN/30days
Fecal Coliform	0.17×10^9 MPN/day	112×10^9 MPN/30days
<i>Enterococcus</i>	0.03×10^9 MPN/day	114×10^9 MPN/30days

Table 5.4b

Final Effluent Limitations Expressed as Bacteria Loads in MS4 Discharges to the Shelter Island Shoreline Park in San Diego Bay

Constituent	Dry Weather	Wet Weather
	Final Effluent Limitation	Final Effluent Limitation
Total Coliform	0 MPN/day	198×10^9 MPN/30days
Fecal Coliform	0 MPN/day	8×10^9 MPN/30days
<i>Enterococcus</i>	0 MPN/day	26×10^9 MPN/30days

- (iii) Indicator bacteria percent load reductions from the Responsible Copermitees' MS4s that are greater than or equal to the following effluent limitations by the compliance dates under Specific Provision 5.b.(1) will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 5.b.(2)(a):

Table 5.5a

Final Effluent Limitations Expressed as Percent Load Reductions in MS4 Discharges to Baby Beach in Dana Point Harbor*

Constituent	Dry Weather	Wet Weather
	Final Effluent Limitation	Final Effluent Limitation
Total Coliform	90.4%	0%
Fecal Coliform	82.7%	0%
<i>Enterococcus</i>	96.2%	62.2%

Notes:

* The percent load reductions are relative to data collected between 1996-2002. For pollutant load reductions of 0%, pollutant loads discharged from the Responsible Copermitees' MS4s must not exceed the loads in Table 5.4a, unless an updated model or analysis, accepted by the San Diego Water Board, identifies a different allowable pollutant load that can be discharged from the Responsible Copermitee's MS4s to the water body.

Table 5.5b

*Final Effluent Limitations Expressed as Percent Load Reductions** in MS4 Discharges to Shelter Island Shoreline Park in San Diego Bay*

Constituent	Dry Weather	Wet Weather
	Final Effluent Limitation	Final Effluent Limitation
Total Coliform	0%	0%
Fecal Coliform	0%	0%
<i>Enterococcus</i>	0%	0%

Notes:

* The percent load reductions are relative to data collected between 1999-2004. For pollutant load reductions of 0%, pollutant loads discharged from the Responsible Copermitee's MS4s must not exceed the loads in Table 5.4b, unless an updated model or analysis, accepted by the San Diego Water Board, identifies a different allowable pollutant load that can be discharged from the Responsible Copermitee's MS4s to the water body.

(c) Best Management Practices

- (i) The Water Quality Improvement Plans for the applicable Watershed Management Areas in Table 5.0 must incorporate the Bacteria Load Reduction Plan (BLRP) required to be developed pursuant to Resolution No. R9-2008-0027.
- (ii) The Responsible Copermitee must implement BMPs to achieve the receiving water limitations under Specific Provision 5.b.(2)(a) and/or the effluent limitations under Specific Provision 5.b.(2)(b) for the segments or areas of the water bodies listed in Table 5.0

(3) Final TMDL Compliance Determination

Compliance with the final WQBELs, on or after the final TMDL compliance dates, may be demonstrated via one of the following methods:

- (a) There is no direct or indirect discharge from the Responsible Copermittee's MS4s to the receiving water; OR
- (b) There are no exceedances of the final receiving water limitations under Specific Provision 5.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee's MS4 outfalls; OR
- (c) There are no exceedances of the final effluent limitations under Specific Provision 5.b.(2)(b)(i) at the Responsible Copermittee's MS4 outfalls; OR
- (d) The pollutant loads discharging from the Responsible Copermittees' MS4 outfalls do not exceed the final effluent limitations under Specific Provision 5.b.(2)(b)(ii); OR
- (e) The pollutant load reductions for discharges from the Responsible Copermittees' MS4 outfalls are greater than or equal to the final effluent limitations under Specific Provision 5.b.(2)(b)(iii); OR
- (f) The Responsible Copermittees can demonstrate that exceedances of the final receiving water limitations under Specific Provision 5.b.(2)(a) in the receiving water are due to loads from natural sources, AND pollutant loads from the Copermittees' MS4s are not causing or contributing to the exceedances; OR
- (g) The Responsible Copermittees develop and implement the Water Quality Improvement Plan as follows:
 - (i) Incorporate the BMPs required under Specific Provision 5.b.(2)(c) as part of the Water Quality Improvement Plan,
 - (ii) Include an analysis in the Water Quality Improvement Plan, utilizing a watershed model or other watershed analytical tools, to demonstrate that the implementation of the BMPs required under Provision 5.b.(2)(c) achieves compliance with Specific Provisions 5.b.(3)(a), 5.b.(3)(b), 5.b.(3)(c), 5.b.(3)(d), 5.b.(3)(e) and/or 5.b.(3)(f),
 - (iii) The results of the analysis must be accepted by the San Diego Water Board as part of the Water Quality Improvement Plan,
 - (iv) The Responsible Copermittees continue to implement the BMPs required under Specific Provision 5.b.(2)(c), AND

- (v) The Responsible Copermittees continue to perform the specific monitoring and assessments specified in Specific Provision 5.d, to demonstrate compliance with Specific Provisions 5.b.(3)(a), 5.b.(3)(b), 5.b.(3)(c), 5.b.(3)(d), 5.b.(3)(e) and/or 5.b.(3)(f).

c. INTERIM TMDL COMPLIANCE REQUIREMENTS

The interim indicator bacteria TMDL compliance requirements for segments or areas of the water bodies listed in Table 5.0 consist of the following:

(1) Baby Beach in Dana Point Harbor

(a) Interim TMDL Compliance Dates and WQBELS

The Responsible Copermittees for MS4 discharges to Baby Beach must comply with the following interim WQBELS by the interim compliance dates given in Tables 5.6a and/or 5.6b:

Table 5.6a

Interim Water Quality Based Effluent Limitations Expressed as Bacteria Loads in MS4 Discharges to Baby Beach in Dana Point Harbor

Constituent	Interim Compliance Dates	Dry Weather	Wet Weather
		Interim Effluent Limitation	Interim Effluent Limitation
Total Coliform	September 15, 2012	4.93x10 ⁹ MPN/day	3,254x10 ⁹ MPN/30days*
Fecal Coliform	September 15, 2012	0.59x10 ⁹ MPN/day	112x10 ⁹ MPN/30days*
<i>Enterococcus</i>	September 15, 2012	0.42x10 ⁹ MPN/day	301x10 ⁹ MPN/30days
	September 15, 2016	0.03x10 ⁹ MPN/day *	207x10 ⁹ MPN/30days

Notes:

* Same as the final effluent limitations in Table 5.4a.

Table 5.6b

Interim Water Quality Based Effluent Limitations Expressed as Percent Load Reductions in MS4 Discharges to Baby Beach in Dana Point Harbor*

Constituent	Interim Compliance Dates	Dry Weather	Wet Weather
		Interim Effluent Limitation	Interim Effluent Limitation
Total Coliform	September 15, 2012	45.2%	0%**
Fecal Coliform	September 15, 2012	41.4%	0%**
<i>Enterococcus</i>	September 15, 2012	48.1%	0%
	September 15, 2016	96.2%**	31.1%

Notes:

* The percent load reductions are relative to data collected between 1996-2002. For pollutant load reductions of 0%, pollutant loads discharged from the Responsible Copermittees' MS4s must not exceed the loads in Table 5.6a, unless an updated model or analysis, accepted by the San Diego Water Board, identifies a different allowable pollutant load that can be discharged from the Responsible Copermittee's MS4s to the waterbody.

** Same as the final effluent limitations in Table 5.4a.

(b) Interim Compliance Determination

Compliance with interim WQBELs, on or after the interim TMDL compliance dates, may be demonstrated via one of the following methods:

- (i) There is no direct or indirect discharge from the Responsible Copermittee's MS4s to the receiving water; OR
- (ii) There are no exceedances of the final receiving water limitations under Specific Provision 5.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee's MS4 outfalls; OR
- (iii) There are no exceedances of the final effluent limitations under Specific Provision 5.b.(2)(b)(i) at the Responsible Copermittee's MS4 outfalls; OR
- (iv) The pollutant loads discharging from the Responsible Copermittees' MS4 outfalls do not exceed the final effluent limitations under Specific Provision 5.b(2)(b)(ii); OR
- (v) The Responsible Copermittees can demonstrate that exceedances of the applicable receiving water limitations under Specific Provision 5.b.(2)(a) in the receiving water are due to loads from natural sources, AND pollutant loads from the Copermittees' MS4s are not causing or contributing to the exceedances; OR
- (vi) The pollutant loads discharging from the Responsible Copermittees' MS4 outfalls do not exceed the interim effluent limitations under Table 5.6a of Specific Provision 5.c.(1)(a); OR
- (vii) The pollutant load reductions for discharges from the Responsible Copermittees' MS4 outfalls are greater than or equal to the interim effluent limitations under Table 5.6b of Specific Provision 5.c.(1)(a); OR
- (viii) The Responsible Copermittees have submitted and are fully implementing a Water Quality Improvement Plan, accepted by the San Diego Water Board, which provides reasonable assurance that the interim TMDL compliance requirements will be achieved by the interim compliance dates.

(2) Shelter Island Shoreline Park in San Diego Bay

The Responsible Copermittee for MS4 discharges to Shelter Island Shoreline Park must be in compliance with the final indicator bacteria TMDL requirements as of December 31, 2012.

d. SPECIFIC MONITORING AND ASSESSMENT REQUIREMENTS**(1) Monitoring Stations**

Monitoring locations should consist of, at a minimum, the same locations used to collect data required pursuant to Order Nos. R9-2007-0001 and R9-2009-0002, and beach monitoring for Health and Safety Code section 115880.³³ If discharges of bacteria from the MS4 exceed the applicable interim or final WQBELs, additional monitoring locations and/or other source identification methods must be implemented to identify the sources causing the exceedances. The additional monitoring locations must also be used to demonstrate that the bacteria loads from the identified anthropogenic sources have been addressed and are no longer causing exceedances in the receiving waters.

(2) Monitoring Procedures

- (a) The Responsible Copermittees must collect dry weather monitoring samples from the receiving water monitoring stations at least monthly. Dry weather samples collected from additional monitoring stations established to identify sources must be collected at an appropriate frequency to demonstrate bacteria loads from the identified anthropogenic sources have been addressed and are no longer causing exceedances in the receiving waters.
- (b) The Responsible Copermittees must collect wet weather monitoring samples within the first 24 hours of a storm event³⁴ of the rainy season (i.e. October 1 through April 30). Wet weather samples collected from receiving water stations and any additional monitoring stations established to identify sources must be collected at an appropriate frequency to demonstrate bacteria loads from the identified sources have been addressed and are no longer causing exceedances in the receiving waters.
- (c) Samples must be analyzed for total coliform, fecal coliform, and *Enterococcus* indicator bacteria.

³³ Commonly referred to as AB 411 monitoring

³⁴ Wet weather days are defined by the TMDL as storm events of 0.2 inches or greater and the following 72 hours. The Responsible Copermittees may choose to limit their wet weather sampling requirements to storm events of 0.2 inches or greater, or also include storm events of 0.1 inches or greater as defined by the federal regulations [40CFR122.26(d)(2)(iii)(A)(2)].

(3) Assessment and Reporting Requirements

- (a) The Responsible Copermittees must analyze the dry weather and wet weather monitoring data to assess whether the interim and final WQBELs have been achieved.
- (b) For assessing and determining compliance with the concentration-based effluent limitations under Specific Provision 5.b.(2)(b)(i), dry and wet weather discharge bacteria densities may be calculated based on a flow-weighted average across all major MS4 outfalls along a water body segment or within a jurisdiction if samples are collected within a similar time period.
- (c) The Responsible Copermittees must analyze the dry weather and wet weather monitoring data to correlate elevated bacteria levels with known or suspected sewage spills from wastewater collection systems and treatment plants or boats.
- (d) The monitoring and assessment results must be submitted as part of the Transitional Monitoring and Assessment Program and Water Quality Improvement Plan Annual Reports required under Provision F.3.b of this Order.

6. Revised Total Maximum Daily Loads for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek)

a. APPLICABILITY

(1) TMDL Basin Plan Amendment: Resolution No. R9-2010-0001

(2) TMDL Adoption and Approval Dates:

San Diego Water Board Adoption Date: February 10, 2010
 State Water Board Approval Date: December 14, 2010
 Office of Administrative Law Approval Date: April 4, 2011
 US EPA Approval Date: June 22, 2011

(3) TMDL Effective Date: April 4, 2011

(4) Watershed Management Areas: See Table 6.0

(5) Water Bodies: See Table 6.0

(6) Responsible Copermittees: See Table 6.0

Table 6.0

*Applicability of Total Maximum Daily Loads for Indicator Bacteria
 Project I - Twenty Beaches and Creeks in the San Diego Region (including Tecolote Creek)*

Watershed Management Area and Watershed	Water Body	Segment or Area	Responsible Copermittees
South Orange County San Joaquin Hills HSA (901.11) and Laguna Beach HSA (901.12)	Pacific Ocean Shoreline	Cameo Cove at Irvine Cove Drive – Riviera Way	-City of Laguna Beach -County of Orange -Orange County Flood Control District
		at Heisler Park - North	
	Pacific Ocean Shoreline	at Main Laguna Beach	
		Laguna Beach at Ocean Avenue	-City of Aliso Viejo -City of Laguna Beach -City of Laguna Woods -County of Orange -Orange County Flood Control District
		Laguna Beach at Cleo Street	
Arch Cove at Bluebird Canyon Road			
Laguna Beach at Dumond Drive			
South Orange County Aliso HSA (901.13)	Pacific Ocean Shoreline	Laguna Beach at Lagunita Place / Blue Lagoon Place at Aliso Beach	-City of Aliso Viejo -City of Laguna Beach -City of Laguna Hills -City of Laguna Niguel -City of Laguna Woods -City of Lake Forest -City of Mission Viejo -County of Orange -Orange County Flood Control District
	Aliso Creek	Entire reach (7.2 miles) and associated tributaries: - Aliso Hills Channel - English Canyon Creek - Dairy Fork Creek - Sulfur Creek - Wood Canyon Creek	
		Aliso Creek Mouth	at mouth

Table 6.0 (Cont'd)
*Applicability of Total Maximum Daily Loads for Indicator Bacteria
 Project I - Twenty Beaches and Creeks in the San Diego Region (including Tecolote Creek)*

Watershed Management Area and Watershed	Water Body	Segment or Area	Responsible Copermittees
South Orange County Dana Point HSA (901.14)	Pacific Ocean Shoreline	Aliso Beach at West Street	-City of Dana Point -City of Laguna Beach -City of Laguna Niguel -County of Orange -Orange County Flood Control District
		Aliso Beach at Table Rock Drive	
		100 Steps Beach at Pacific Coast Hwy at hospital (9 th Avenue)	
		at Salt Creek (large outlet)	
		Salt Creek Beach at Salt Creek service road	
		Salt Creek Beach at Strand Road	
South Orange County Lower San Juan HSA (901.27)	Pacific Ocean Shoreline	at San Juan Creek	-City of Dana Point -City of Laguna Hills -City of Laguna Niguel -City of Mission Viejo -City of Rancho Santa Margarita -City of San Juan Capistrano -County of Orange -Orange County Flood Control District
	San Juan Creek	lower 1 mile	
	San Juan Creek Mouth	at mouth	
South Orange County San Clemente HA (901.30)	Pacific Ocean Shoreline	at Poche Beach	-City of Dana Point -City of San Clemente -County of Orange -Orange County Flood Control District
		Ole Hanson Beach Club Beach at Pico Drain	
		San Clemente City Beach at El Portal Street Stairs	
		San Clemente City Beach at Mariposa Street	
		San Clemente City Beach at Linda Lane	
		San Clemente City Beach at South Linda Lane	
		San Clemente City Beach at Lifeguard Headquarters	
		under San Clemente Municipal Pier	
		San Clemente City Beach at Trafalgar Canyon (Trafalgar Lane)	
		San Clemente State Beach at Riviera Beach	
		San Clemente State Beach at Cypress Shores	

Table 6.0 (Cont'd)*Applicability of Total Maximum Daily Loads for Indicator Bacteria**Project I - Twenty Beaches and Creeks in the San Diego Region (including Tecolote Creek)*

Watershed Management Area and Watershed	Water Body	Segment or Area	Responsible Copermittees
San Luis Rey River San Luis Rey HU (903.00)	Pacific Ocean Shoreline	at San Luis Rey River mouth	-City of Oceanside -City of Vista -County of San Diego
Carlsbad San Marcos HA (904.50)	Pacific Ocean Shoreline	at Moonlight State Beach	-City of Carlsbad -City of Encinitas -City of Escondido -City of San Marcos -County of San Diego
San Dieguito River San Dieguito HU (905.00)	Pacific Ocean Shoreline	at San Dieguito Lagoon mouth	-City of Del Mar -City of Escondido -City of Poway -City of San Diego -City of Solana Beach -County of San Diego
Penasquitos Miramar Reservoir HA (906.10)	Pacific Ocean Shoreline	Torrey Pines State Beach at Del Mar (Anderson Canyon)	-City of Del Mar -City of Poway -City of San Diego -County of San Diego
Mission Bay Scripps HA (906.30)	Pacific Ocean Shoreline	La Jolla Shores Beach at El Paseo Grande	-City of San Diego
		La Jolla Shores Beach at Caminito del Oro	
		La Jolla Shores Beach at Vallecitos	
		La Jolla Shores Beach at Avenida de la Playa	
		at Casa Beach, Children's Pool	
		South Casa Beach at Coast Boulevard	
		Whispering Sands Beach at Ravina Street	
		Windansea Beach at Vista de la Playa	
		Windansea Beach at Bonair Street	
		Windansea Beach at Playa del Norte	
		Windansea Beach at Palomar Avenue	
		at Tourmaline Surf Park	
Pacific Beach at Grand Avenue			
Mission Bay Tecolote HA (906.50)	Tecolote Creek	Entire reach and tributaries	

ATTACHMENT E: SPECIFIC PROVISIONS FOR TOTAL MAXIMUM DAILY LOADS

6. Revised Total Maximum Daily Loads for Indicator Bacteria, Project I –
Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek)

Table 6.0 (Cont'd)
*Applicability of Total Maximum Daily Loads for Indicator Bacteria
 Project I- Twenty Beaches and Creeks in the San Diego Region (including Tecolote Creek)*

Watershed Management Area and Watershed	Water Body	Segment or Area	Responsible Copermittees
San Diego River Mission San Diego HSA (907.11) and Santee HSA (907.12)	Forrester Creek	lower 1 mile	-City of El Cajon -City of Santee -County of San Diego
	San Diego River	lower 6 miles	-City of El Cajon -City of La Mesa
	Pacific Ocean Shoreline	at San Diego River mouth at Dog Beach	-City of San Diego -City of Santee -County of San Diego
San Diego Bay Chollas HSA (908.22)	Chollas Creek	lower 1.2 miles	-City of La Mesa -City of Lemon Grove -City of San Diego -County of San Diego - San Diego Unified Port District

b. FINAL TMDL COMPLIANCE REQUIREMENTS

The final indicator bacteria TMDL compliance requirements for the water bodies listed in Table 6.0 consist of the following:

(1) Final TMDL Compliance Dates

The Responsible Copermittees for MS4 discharges to the water bodies listed in Table 6.0 must be in compliance with the final TMDL compliance requirements according to the following compliance dates:

Table 6.1
Compliance Dates to Achieve Final TMDL Compliance Requirements

Constituent	Dry Weather TMDL Compliance Date	Wet Weather TMDL Compliance Date
Total Coliform	April 4, 2021	April 4, 2031
Fecal Coliform		
<i>Enterococcus</i>		

(2) Final Water Quality Based Effluent Limitations

(a) Final Receiving Water Limitations

Discharges from the MS4s must not cause or contribute to the exceedance of the following receiving water limitations by the compliance dates under Specific Provision 6.b.(1):

Table 6.2a

Final Receiving Water Limitations Expressed as Bacteria Densities and Allowable Exceedance Frequencies for Beaches

Constituent	Wet Weather Days		Dry Weather Days	
	Single Sample Maximum ^{a,b} (MPN/100mL)	Single Sample Maximum Allowable Exceedance Frequency ^c	30-Day Geometric Mean ^b (MPN/100mL)	30-Day Geometric Mean Allowable Exceedance Frequency
Total Coliform	10,000	22%	1,000	0%
Fecal Coliform	400	22%	200	0%
<i>Enterococcus</i>	104	22%	35	0%

Notes:

- During wet weather days, only the single sample maximum receiving water limitations are required to be achieved.
- During dry weather days, the single sample maximum and 30-day geometric mean receiving water limitations are required to be achieved.
- The 22% single sample maximum allowable exceedance frequency only applies to wet weather days. For dry weather days, the dry weather bacteria densities must be consistent with the single sample maximum REC-1 water quality objectives in the Ocean Plan.

Table 6.2b

Final Receiving Water Limitations Expressed as Bacteria Densities and Allowable Exceedance Frequencies for Creeks

Constituent	Wet Weather Days		Dry Weather Days	
	Single Sample Maximum ^{a,b} (MPN/100mL)	Single Sample Maximum Allowable Exceedance Frequency ^c	30-Day Geometric Mean ^b (MPN/100mL)	30-Day Geometric Mean Allowable Exceedance Frequency
Fecal Coliform	400	22%	200	0%
<i>Enterococcus</i>	61 (104)	22%	33	0%

Notes:

- During wet weather days, only the single sample maximum receiving water limitations are required to be achieved.
- During dry weather days, the single sample maximum and 30-day geometric mean receiving water limitations are required to be achieved.
- The 22% single sample maximum allowable exceedance frequency only applies to wet weather days. For dry weather days, the dry weather bacteria densities must be consistent with the single sample maximum REC-1 water quality objectives in the Basin Plan.
- A single sample maximum of 104 MPN/100ml for *Enterococcus* may be applied as a receiving water limitation for creeks, instead of 61 MPN/100mL, if one or more of the creeks addressed by these TMDLs (San Juan Creek, Aliso Creek, Tecolote Creek, Forrester Creek, San Diego River, and/or Chollas Creek) is designated with a "moderately to lightly used area" or less frequent usage frequency in the Basin Plan. Otherwise, the single sample maximum of 61 MPN/100mL for *Enterococcus* must be used to assess compliance with the allowable exceedance frequency.

(b) Final Effluent Limitations

- (i) Discharges from the MS4s containing indicator bacteria densities that do not exceed the following effluent limitations by the compliance dates under Specific Provision 6.c.(1) will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 6.b.(2)(a):

Table 6.2c

Final Effluent Limitations Expressed as Bacteria Densities and Allowable Exceedance Frequencies in MS4 Discharges to the Water Body

Constituent	Concentration-Based Effluent Limitations			
	Single Sample Maximum ^{a,b} (MPN/100mL)	Single Sample Maximum Allowable Exceedance Frequency ^c	30-Day Geometric Mean ^b (MPN/100mL)	30-Day Geometric Mean Allowable Exceedance Frequency
Total Coliform ^d	10,000	22%	1,000	0%
Fecal Coliform	400	22%	200	0%
<i>Enterococcus</i>	104 ^e / 61 ^f	22%	35 ^e / 33 ^f	0%

Notes:

- During wet weather days, only the single sample maximum effluent limitations are required to be achieved.
- During dry weather days, the single sample maximum and 30-day geometric mean effluent limitations are required to be achieved.
- The 22% single sample maximum allowable exceedance frequency only applies to wet weather days. For dry weather days, the dry weather bacteria densities must be consistent with the single sample maximum REC-1 water quality objectives in the Ocean Plan for discharges to beaches, and the Basin Plan for discharges to creeks and creek mouths.
- Total coliform effluent limitations only apply to MS4 outfalls that discharge to the Pacific Ocean Shorelines and creek mouths listed in Table 6.0.
- This *Enterococcus* effluent limitation applies to MS4 discharges to segments of areas of Pacific Ocean Shoreline listed in Table 6.0.
- This *Enterococcus* effluent limitation applies to MS4 discharges to segments or areas of creeks or creek mouths listed in Table 6.0.

- (ii) Indicator bacteria percent load reductions from the Responsible Copermittees' MS4s that are greater than or equal to the following effluent limitations by the compliance dates under Specific Provision 6.b.(1) will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 6.b.(2)(a):

Table 6.3

Final Effluent Limitations Expressed as Percent Load Reductions in MS4 Discharges to the Water Body*

Watershed Management Areas	Watershed and Water Bodies	Load-Based Effluent Limitations					
		Dry Weather			Wet Weather		
		Total Coliform	Fecal Coliform	Enterococcus	Total Coliform	Fecal Coliform	Enterococcus
South Orange County	San Joaquin Hills HSA (901.11) and Laguna Hills HSA (901.12) - Pacific Ocean Shoreline	91.78%	91.72%	98.28%	46.85%	52.07%	51.26%
	Aliso HSA (901.13) - Pacific Ocean Shoreline - Aliso Creek - Aliso Creek mouth	95.47%	95.58%	99.13%	25.29%	26.62%	27.52% (27.37%)**
	Dana Point HSA (901.14) - Pacific Ocean Shoreline	95.04%	95.03%	98.98%	13.15%	14.86%	15.16%
	Lower San Juan HSA (901.27) - Pacific Ocean Shoreline - San Juan Creek - San Juan Creek mouth	72.96%	74.21%	94.94%	19.21%	12.82%	27.12% (26.90%)**
	San Clemente HA (901.30) - Pacific Ocean Shoreline	94.28%	94.23%	98.83%	23.85%	24.58%	25.26%
San Luis Rey River	San Luis Rey HU (903.00) - Pacific Ocean Shoreline	38.13%	39.09%	87.38%	5.62%	3.12%	11.69%

Table 6.3 (Cont'd)

Final Effluent Limitations Expressed as Percent Load Reductions in MS4 Discharges to the Water Body*

Watershed Management Areas	Watershed and Water Bodies	Load-Based Effluent Limitations					
		Dry Weather			Wet Weather		
		Total Coliform	Fecal Coliform	Enterococcus	Total Coliform	Fecal Coliform	Enterococcus
Carlsbad	San Marcos HA (904.50) - Pacific Ocean Shoreline	82.82%	82.55%	96.03%	18.47%	18.98%	20.19%
San Dieguito River	San Dieguito HU (905.00) - Pacific Ocean Shoreline	14.39%	20.72%	83.48%	4.29%	1.46%	7.72%
Penasquitos	Miramar Reservoir HA (906.10) - Pacific Ocean Shoreline	96.50%	96.59%	99.42%	1.61%	1.99%	1.93%
Mission Bay	Scripps HA (906.30) - Pacific Ocean Shoreline	96.44%	96.42%	99.25%	16.32%	21.14%	18.82%
	Tecolote HA (906.50) - Tecolote Creek	94.51%	94.59%	98.94%	16.51%	20.47%	18.15% (18.08%)**
San Diego River	Mission San Diego HSA (907.11) and Santee HSA (907.12) - Pacific Ocean Shoreline - Forrester Creek (lower 1 mile) - San Diego River (lower 6 miles)	74.03%	69.44%	93.96%	38.14%	53.22%	42.74% (42.47%)**
San Diego Bay	Chollas HSA (908.22) - Chollas Creek	92.06%	92.15%	98.46%	17.82%	24.84%	21.46% (21.36%)**

Notes:

* The percent load reductions are based on reducing loads compared to pollutant loads from 2001 to 2002.

** The alternative *Enterococcus* percent load reduction was calculated based on a numeric target of 104 MPN/100mL instead of 61 MPN/100mL, protective of the REC-1 "moderately to lightly used area" usage frequency that is protective of freshwater creeks and downstream beaches. Acceptable evidence that impaired freshwater creeks can be considered "moderately to lightly used areas" must be provided before these alternative pollutant load reductions can be utilized.

(c) Best Management Practices

- (i) The Water Quality Improvement Plans for the applicable Watershed Management Areas in Table 6.0 must incorporate the Comprehensive Load Reduction Plans (CLRPs) required to be developed pursuant to Resolution No. R9-2010-0001.
- (ii) The Responsible Copermittee must implement BMPs to achieve the receiving water limitations under Specific Provision 6.b.(2)(a) and/or the effluent limitations under Specific Provision 6.b.(2)(b) for the segments or areas of the water bodies listed in Table 6.0.
- (iii) The Responsible Copermittees should coordinate any BMPs implemented to address this TMDL with Caltrans, owners/operators of small MS4s, and agricultural dischargers as possible.

(3) Final TMDL Compliance Determination

Compliance with the final WQBELs, on or after the final TMDL compliance dates, may be demonstrated via one of the following methods:

- (a) There is no direct or indirect discharge from the Responsible Copermittee's MS4s to the receiving water; OR
- (b) There are no exceedances of the final receiving water limitations under Specific Provision 6.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee's MS4 outfalls; OR
- (c) There are no exceedances of the final effluent limitations under Specific Provision 6.b.(2)(b)(i) at the Responsible Copermittee's MS4 outfalls; OR
- (d) The pollutant load reductions for discharges from the Responsible Copermittees' MS4 outfalls are greater than or equal to the final effluent limitations under Specific Provision 6.b.(2)(b)(ii); OR
- (e) The Responsible Copermittees can demonstrate that exceedances of the final receiving water limitations under Specific Provision 6.b.(2)(a) in the receiving water are due to loads from natural sources, AND pollutant loads from the Copermittees' MS4s are not causing or contributing to the exceedances; OR
- (f) The Responsible Copermittees develop and implement the Water Quality Improvement Plan as follows:
 - (i) Incorporate the BMPs required under Specific Provision 6.b.(2)(c) as part of the Water Quality Improvement Plan,

- (ii) Include an analysis in the Water Quality Improvement Plan, utilizing a watershed model or other watershed analytical tools, to demonstrate that the implementation of the BMPs required under Provision 6.b.(2)(c) achieves compliance with Specific Provisions 6.b.(3)(a), 6.b.(3)(b), 6.b.(3)(c), 6.b.(3)(d), and/or 6.b.(3)(e),
- (iii) The results of the analysis must be accepted by the San Diego Water Board as part of the Water Quality Improvement Plan,
- (iv) The Responsible Copermittees continue to implement the BMPs required under Specific Provision 6.b.(2)(c), AND
- (v) The Responsible Copermittees continue to perform the specific monitoring and assessments specified in Specific Provision 6.d, to demonstrate compliance with Specific Provisions 6.b.(3)(a), 6.b.(3)(b), 6.b.(3)(c), 6.b.(3)(d), 6.b.(3)(e) and/or 6.b.(3)(f).

c. INTERIM TMDL COMPLIANCE REQUIREMENTS

The interim indicator bacteria TMDL compliance requirements for the water bodies listed in Table 6.0 consist of the following:

(1) Interim TMDL Compliance Dates

The Responsible Copermittees must achieve compliance with the interim TMDL compliance requirements, as determined in accordance with Specific Provision 6.c.(3), by the interim compliance dates given in Table 6.4, unless alternative interim compliance dates are accepted by the San Diego Water Board Executive Officer as part of the Water Quality Improvement Plan.

Table 6.4*Interim Compliance Dates to Achieve Interim TMDL Compliance Requirements*

Watershed Management Area and Watershed	Water Body	Segment or Area	Interim Compliance Dates	
			Interim Dry Weather WQBELs	Interim Wet Weather WQBELs
South Orange County	Pacific Ocean Shoreline	Cameo Cove at Irvine Cove Drive – Riviera Way	April 4, 2016	April 4, 2021
		at Heisler Park - North		
San Joaquin Hills HSA (901.11) and Laguna Beach HSA (901.12)	Pacific Ocean Shoreline	at Main Laguna Beach	April 4, 2016	April 4, 2021
		Laguna Beach at Ocean Avenue		
		Laguna Beach at Cleo Street		
		Arch Cove at Bluebird Canyon Road		
		Laguna Beach at Dumond Drive		
South Orange County	Pacific Ocean Shoreline	Laguna Beach at Lagunita Place / Blue Lagoon Place at Aliso Beach	April 4, 2016	April 4, 2021
	Aliso Creek	Entire reach (7.2 miles) and associated tributaries: - Aliso Hills Channel - English Canyon Creek - Dairy Fork Creek - Sulfur Creek - Wood Canyon Creek	April 4, 2018	April 4, 2021
	Aliso Creek Mouth	at mouth	April 4, 2018	April 4, 2021
South Orange County	Pacific Ocean Shoreline	Aliso Beach at West Street	April 4, 2016	April 4, 2021
		Aliso Beach at Table Rock Drive		
		100 Steps Beach at Pacific Coast Hwy at hospital (9 th Avenue)		
		at Salt Creek (large outlet)	April 4, 2017	April 4, 2021
		Salt Creek Beach at Salt Creek service road		
		Salt Creek Beach at Strand Road		

Table 6.4 (Cont'd)*Interim Compliance Dates to Achieve Interim WQBELs*

Watershed Management Area and Watershed	Water Body	Segment or Area	Interim Compliance Dates	
			Interim Dry Weather WQBELs	Interim Wet Weather WQBELs
South Orange County Lower San Juan HSA (901.27)	Pacific Ocean Shoreline	at San Juan Creek	April 4, 2016	April 4, 2021
	San Juan Creek	lower 1 mile	April 4, 2018	April 4, 2021
	San Juan Creek Mouth	at mouth	April 4, 2016	April 4, 2021
South Orange County San Clemente HA (901.30)	Pacific Ocean Shoreline	at Poche Beach	April 4, 2016	April 4, 2021
		Ole Hanson Beach Club Beach at Pico Drain	April 4, 2016	April 4, 2021
		San Clemente City Beach at El Portal Street Stairs	April 4, 2017	April 4, 2021
		San Clemente City Beach at Mariposa Street		
		San Clemente City Beach at Linda Lane	April 4, 2016	April 4, 2021
		San Clemente City Beach at South Linda Lane	April 4, 2018	April 4, 2021
		San Clemente City Beach at Lifeguard Headquarters	April 4, 2017	April 4, 2021
		under San Clemente Municipal Pier		
		San Clemente City Beach at Trafalgar Canyon (Trafalgar Lane)	April 4, 2018	April 4, 2021
		San Clemente State Beach at Riviera Beach	April 4, 2016	April 4, 2021
San Clemente State Beach at Cypress Shores	April 4, 2017	April 4, 2021		
San Luis Rey River San Luis Rey HU (903.00)	Pacific Ocean Shoreline	at San Luis Rey River mouth	April 4, 2017	April 4, 2021
Carlsbad San Marcos HA (904.50)	Pacific Ocean Shoreline	at Moonlight State Beach	April 4, 2016	April 4, 2021
San Dieguito River San Dieguito HU (905.00)	Pacific Ocean Shoreline	at San Dieguito Lagoon mouth	April 4, 2016	April 4, 2021

ATTACHMENT E: SPECIFIC PROVISIONS FOR TOTAL MAXIMUM DAILY LOADS
6. Revised Total Maximum Daily Loads for Indicator Bacteria, Project I –
Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek)

Table 6.4 (Cont'd)
Interim Compliance Dates to Achieve Interim WQBELs

Watershed Management Area and Watershed	Water Body	Segment or Area	Interim Compliance Dates	
			Interim Dry Weather WQBELs	Interim Wet Weather WQBELs
Penasquitos Miramar Reservoir HA (906.10)	Pacific Ocean Shoreline	Torrey Pines State Beach at Del Mar (Anderson Canyon)	April 4, 2016	April 4, 2021
Mission Bay Scripps HA (906.30)	Pacific Ocean Shoreline	La Jolla Shores Beach at El Paseo Grande	April 4, 2016	April 4, 2021
		La Jolla Shores Beach at Caminito del Oro		
		La Jolla Shores Beach at Vallecitos		
		La Jolla Shores Beach at Avenida de la Playa		
		at Casa Beach, Children's Pool		
		South Casa Beach at Coast Boulevard		
		Whispering Sands Beach at Ravina Street		
		Windansea Beach at Vista de la Playa		
		Windansea Beach at Bonair Street		
		Windansea Beach at Playa del Norte		
		Windansea Beach at Palomar Avenue		
		at Tourmaline Surf Park		
at Pacific Beach at Grand Avenue				
Mission Bay Tecolote HA (906.50)	Tecolote Creek	Entire reach and tributaries		
San Diego River Mission San Diego HSA (907.11) and Santee HSA (907.12)	Forrester Creek	lower 1 mile	April 4, 2018	April 4, 2021
	San Diego River	lower 6 miles		
	Pacific Ocean Shoreline	at San Diego River mouth at Dog Beach		
San Diego Bay Chollas HSA (908.22)	Chollas Creek	lower 1.2 miles	April 4, 2018	April 4, 2021

(2) Interim Water Quality Based Effluent Limitations

The Responsible Copermittees for discharges to the water bodies in Table 6.0 must comply with the following interim WQBELs by the interim compliance dates given in Specific Provision 6.c.(1):

(a) Interim Receiving Water Limitations

(i) *Interim Dry Weather Receiving Water Limitations*

The Responsible Copermittee must calculate the “existing” exceedance frequencies of the 30-day geometric mean water quality objectives for each of the indicator bacteria by analyzing the available monitoring data collected between January 1, 1996 and December 31, 2002. “Existing” exceedance frequencies may be calculated by water body and/or by Watershed Management Area listed in Table 6.0. Separate “existing” exceedance frequencies must be calculated for beaches and creeks/creek mouths.

The Responsible Copermittees must achieve a 50 percent reduction in the “existing” exceedance frequency of the 30-day geometric mean WQBELs for the water bodies listed in Table 6.0 by the interim compliance dates given in Table 6.4. A 50 percent reduction in the “existing” exceedance frequency is equivalent to half of the “existing” exceedance frequency of the 30-day geometric mean WQBELs.

The “existing” exceedance frequencies and the interim dry weather allowable exceedance frequencies (i.e. interim dry weather receiving water limitations) calculated by the Responsible Copermittees must be included in the Water Quality Improvement Plans for the applicable Watershed Management Areas.

(ii) *Interim Wet Weather Receiving Water Limitations*

The Responsible Copermitees must achieve the interim wet weather receiving water limitations in Table 6.5, expressed as interim wet weather allowable exceedance frequencies, by the interim compliance dates given in Table 6.4.

Table 6.5
Interim Wet Weather Receiving Water Limitations Expressed as Interim Wet Weather Allowable Exceedance Frequencies

Watershed Management Area and Watershed	Water Body	Segment or Area	Interim Wet Weather Allowable Exceedance Frequencies		
			Total Coliform	Fecal Coliform	Enterococcus
South Orange County San Joaquin Hills HSA (901.11) and Laguna Beach HSA (901.12)	Pacific Ocean Shoreline	Cameo Cove at Irvine Cove Drive – Riviera Way	38%	37%	39%
		at Heisler Park - North			
	Pacific Ocean Shoreline	at Main Laguna Beach			
		Laguna Beach at Ocean Avenue			
		Laguna Beach at Cleo Street			
		Arch Cove at Bluebird Canyon Road			
Laguna Beach at Dumond Drive					
South Orange County Aliso HSA (901.13)	Pacific Ocean Shoreline	Laguna Beach at Lagunita Place / Blue Lagoon Place at Aliso Beach	41%	41%	42%
	Aliso Creek	Entire reach (7.2 miles) and associated tributaries: - Aliso Hills Channel - English Canyon Creek - Dairy Fork Creek - Sulfur Creek - Wood Canyon Creek	41%	41%	42%
		Aliso Creek Mouth	at mouth	41%	41%	42%
South Orange County Dana Point HSA (901.14)	Pacific Ocean Shoreline	Aliso Beach at West Street	36%	36%	36%
		Aliso Beach at Table Rock Drive			
		100 Steps Beach at Pacific Coast Hwy at hospital (9 th Avenue)			
		at Salt Creek (large outlet)			
		Salt Creek Beach at Salt Creek service road			
		Salt Creek Beach at Strand Road			

Table 6.5 (Cont'd)
Interim Wet Weather Receiving Water Limitations Expressed as Interim Wet Weather Allowable Exceedance Frequencies

Watershed Management Area and Watershed	Water Body	Segment or Area	Interim Wet Weather Allowable Exceedance Frequencies		
			Total Coliform	Fecal Coliform	Enterococcus
South Orange County Lower San Juan HSA (901.27)	Pacific Ocean Shoreline	at San Juan Creek	44%	44%	48%
	San Juan Creek	lower 1 mile	44%	44%	47%
	San Juan Creek Mouth	at mouth	44%	44%	47%
South Orange County San Clemente HA (901.30)	Pacific Ocean Shoreline	at Poche Beach	35%	35%	36%
		Ole Hanson Beach Club Beach at Pico Drain			
		San Clemente City Beach at El Portal Street Stairs			
		San Clemente City Beach at Mariposa Street			
		San Clemente City Beach at Linda Lane			
		San Clemente City Beach at South Linda Lane			
		San Clemente City Beach at Lifeguard Headquarters			
		under San Clemente Municipal Pier			
		San Clemente City Beach at Trafalgar Canyon (Trafalgar Lane)			
		San Clemente State Beach at Riviera Beach			
		San Clemente State Beach at Cypress Shores			
San Luis Rey River San Luis Rey HU (903.00)	Pacific Ocean Shoreline	at San Luis Rey River mouth	45%	44%	47%
Carlsbad San Marcos HA (904.50)	Pacific Ocean Shoreline	at Moonlight State Beach	40%	40%	41%
San Dieguito River San Dieguito HU (905.00)	Pacific Ocean Shoreline	at San Dieguito Lagoon mouth	33%	33%	36%

Table 6.5 (Cont'd)

Interim Wet Weather Receiving Water Limitations Expressed as Interim Wet Weather Allowable Exceedance Frequencies

Watershed Management Area and Watershed	Water Body	Segment or Area	Interim Wet Weather Allowable Exceedance Frequencies		
			Total Coliform	Fecal Coliform	Enterococcus
Penasquitos Miramar Reservoir HA (906.10)	Pacific Ocean Shoreline	Torrey Pines State Beach at Del Mar (Anderson Canyon)	26%	26%	26%
Mission Bay Scripps HA (906.30)	Pacific Ocean Shoreline	La Jolla Shores Beach at El Paseo Grande	37%	37%	37%
		La Jolla Shores Beach at Caminito del Oro			
		La Jolla Shores Beach at Vallecitos			
		La Jolla Shores Beach at Avenida de la Playa			
		at Casa Beach, Children's Pool			
		South Casa Beach at Coast Boulevard			
		Whispering Sands Beach at Ravina Street			
		Windansea Beach at Vista de la Playa			
		Windansea Beach at Bonair Street			
		Windansea Beach at Playa del Norte			
		Windansea Beach at Palomar Avenue			
		at Tourmaline Surf Park			
		Pacific Beach at Grand Avenue			
Mission Bay Tecolote HA (906.50)	Tecolote Creek	Entire reach and tributaries	49%	49%	51%
San Diego River	Forrester Creek	lower 1 mile	46%	43%	49%
	San Diego River	lower 6 miles	46%	43%	49%
Mission San Diego HSA (907.11) and Santee HSA (907.12)	Pacific Ocean Shoreline	at San Diego River mouth at Dog Beach	46%	43%	51%
San Diego Bay Chollas HSA (908.22)	Chollas Creek	lower 1.2 miles	41%	41%	43%

(b) Interim Effluent Limitations

Indicator bacteria percent load reductions from the Responsible Copermittees' MS4s that are greater than or equal to the following effluent limitations by the interim compliance dates under Specific Provision 6.c.(1) will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 6.c.(2)(a):

Table 6.6

Interim Effluent Limitations Expressed as Percent Load Reductions in MS4 Discharges to the Water Body*

Watershed Management Areas	Watersheds and Water Bodies	Load-Based Effluent Limitations					
		Dry Weather			Wet Weather		
		Total Coliform	Fecal Coliform	Enterococcus	Total Coliform	Fecal Coliform	Enterococcus
South Orange County	San Joaquin Hills HSA (901.11) and Laguna Hills HSA (901.12) - Pacific Ocean Shoreline	45.89%	45.86%	49.14%	23.43%	26.04%	25.63%
	Aliso HSA (901.13) - Pacific Ocean Shoreline - Aliso Creek - Aliso Creek mouth	47.74%	47.79%	49.57%	12.65%	13.31%	13.76% (13.69%)**
	Dana Point HSA (901.14) - Pacific Ocean Shoreline	47.52%	47.52%	49.49%	6.58%	7.43%	7.58%
	Lower San Juan HSA (901.27) - Pacific Ocean Shoreline - San Juan Creek - San Juan Creek mouth	36.48%	37.11%	47.47%	9.61%	6.41%	13.56% (13.45%)**
	San Clemente HA (901.30) - Pacific Ocean Shoreline	47.14%	47.12%	49.42%	11.93%	12.29%	12.63%
San Luis Rey River	San Luis Rey HU (903.00) - Pacific Ocean Shoreline	19.07%	19.55%	43.69%	2.81%	1.56%	5.85%
Carlsbad	San Marcos HA (904.50) - Pacific Ocean Shoreline	41.41%	41.28%	48.02%	9.24%	9.49%	10.10%

Table 6.6 (Cont'd)

Interim Effluent Limitations Expressed as Percent Load Reductions in MS4 Discharges to the Water Body*

Watershed Management Areas	Watersheds and Water Bodies	Load-Based Effluent Limitations					
		Dry Weather			Wet Weather		
		Total Coliform	Fecal Coliform	Enterococcus	Total Coliform	Fecal Coliform	Enterococcus
San Dieguito River	San Dieguito HU (905.00) - Pacific Ocean Shoreline	7.20%	10.36%	41.74%	2.15%	0.73%	3.86%
Penasquitos	Miramar Reservoir HA (906.10) - Pacific Ocean Shoreline	48.25%	48.30%	49.71%	0.81%	1.00%	0.97%
Mission Bay	Scripps HA (906.30) - Pacific Ocean Shoreline	48.22%	48.21%	49.63%	8.16%	10.57%	9.41%
	Tecolote HA (906.50) - Tecolote Creek	47.26%	47.30%	49.47%	8.26%	10.24%	9.08% (9.04%)**
San Diego River	Mission San Diego HSA (907.11) and Santee HSA (907.12) - Pacific Ocean Shoreline - Forrester Creek (lower 1 mile) - San Diego River (lower 6 miles)	37.02%	34.72%	46.98%	19.07%	26.61%	21.37% (21.24%)**
San Diego Bay	Chollas HSA (908.22) - Chollas Creek	46.03%	46.08%	49.23%	8.91%	12.42%	10.73% (10.68%)**

Notes:

* The percent load reductions are based on reducing loads compared to pollutant loads from 2001 to 2002.

** The alternative *Enterococcus* percent load reduction was calculated based on a numeric target of 104 MPN/100mL instead of 61 MPN/100mL, protective of the REC-1 "moderately to lightly used area" usage frequency that is protective of freshwater creeks and downstream beaches. Acceptable evidence that impaired freshwater creeks can be considered "moderately to lightly used areas" must be provided before these alternative pollutant load reductions can be utilized.

(3) Interim TMDL Compliance Determination

Compliance with the interim WQBELs, on or after the interim TMDL compliance dates, may be demonstrated via one of the following methods:

- (a) There is no direct or indirect discharge from the Responsible Copermitttee's MS4s to the receiving water; OR

- (b) There are no exceedances of the final receiving water limitations under Specific Provision 6.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee's MS4 outfalls; OR
- (c) There are no exceedances of the final effluent limitations under Specific Provision 6.b.(2)(b)(i) at the Responsible Copermittee's MS4 outfalls; OR
- (d) The pollutant load reductions for discharges from the Responsible Copermittees' MS4 outfalls are greater than or equal to the final effluent limitations under Specific Provision 6.b.(2)(b)(ii); OR
- (e) The Responsible Copermittees can demonstrate that exceedances of the final receiving water limitations under Specific Provision 6.b.(2)(a) in the receiving water are due to loads from natural sources, AND pollutant loads from the Copermittees' MS4s are not causing or contributing to the exceedances; OR
- (f) There are no exceedances of the interim receiving water limitations under Specific Provision 6.c.(2)(a) in the receiving water at, or downstream of the Responsible Copermittees' MS4 outfalls; OR
- (g) The pollutant load reductions for discharges from the Responsible Copermittees' MS4 outfalls are greater than or equal to the interim effluent limitations under Specific Provision 6.c.(2)(b); OR
- (h) The Responsible Copermittees have submitted and are fully implementing a Water Quality Improvement Plan, accepted by the San Diego Water Board, which provides reasonable assurance that the interim TMDL compliance requirements will be achieved by the interim compliance dates.

d. SPECIFIC MONITORING AND ASSESSMENT REQUIREMENTS

(1) Monitoring and Assessment Requirements for Beaches

(a) Monitoring Stations

For beaches addressed by the TMDL, monitoring locations should consist of, at a minimum, the same locations used to collect data required pursuant to Order Nos. R9-2007-0001 and R9-2009-0002, and beach monitoring for Health and Safety Code section 115880.³⁵ If exceedances of the applicable interim or final receiving water limitations are observed in the monitoring data, additional monitoring locations and/or other source

³⁵ Commonly referred to as AB 411 monitoring

identification methods must be implemented to identify the sources causing the exceedances. The additional monitoring locations must also be used to demonstrate that the bacteria loads from the identified anthropogenic sources have been addressed and are no longer causing exceedances in the receiving waters.

(b) Monitoring Procedures

- (i) The Responsible Copermittees must collect dry weather monitoring samples from the receiving water monitoring stations at least monthly. Dry weather samples collected from additional monitoring stations established to identify sources must be collected at an appropriate frequency to demonstrate bacteria loads from the identified sources have been addressed and are no longer causing exceedances in the receiving waters.
- (ii) The Responsible Copermittees must collect wet weather monitoring samples from the receiving water monitoring stations at least once within the first 24 hours of the end of a storm event³⁶ during the rainy season (i.e. October 1 through April 30). Wet weather samples collected from receiving water stations and any additional monitoring stations established to identify sources must be collected at an appropriate frequency to demonstrate bacteria loads from the identified sources have been addressed and are no longer in exceedance of the allowable exceedance frequencies in the receiving waters.
- (iii) Samples must be analyzed for total coliform, fecal coliform, and *Enterococcus* indicator bacteria.
- (iv) For Pacific Ocean Shoreline segments or areas listed in Table 6.0 that have been de-listed from the Clean Water Act Section 303(d) List, the Responsible Copermittees may propose alternative monitoring procedures to demonstrate that the water bodies continue to remain in compliance with water quality standards under wet weather and dry weather conditions. The alternative monitoring procedures must be submitted as a part of the Water Quality Improvement Plans or any updates required under Provisions F.1 and F.2.c of the Order.

(c) Assessment and Reporting Requirements

- (i) The Responsible Copermittees must analyze the dry weather and

³⁶ Wet weather days are defined by the TMDL as storm events of 0.2 inches or greater and the following 72 hours. The Responsible Copermittees may choose to limit their wet weather sampling requirements to storm events of 0.2 inches or greater, or also include storm events of 0.1 inches or greater as defined by the federal regulations [40CFR122.26(d)(2)(iii)(A)(2)].

wet weather monitoring data to assess whether the interim and final WQBELs for the Pacific Ocean Shoreline segments or areas listed in Table 6.0 have been achieved.

- (ii) Dry weather exceedance frequencies must be calculated as follows:
 - [a] 30-day geometric means must be calculated from the results of any dry weather samples collected from the segments or areas for each water body listed in Table 6.0;
 - [b] The method and number of samples need for calculating the 30-day geometric means must be consistent with the number of samples required by the Ocean Plan;
 - [c] Where there are multiple segments or areas associated with a water body listed in Table 6.0, the Copermittees may calculate geometric means for each segment or area, or combine the dry weather monitoring data from all the segments or areas to calculate geometric means for the water body;
 - [d] The exceedance frequency must be calculated by dividing the number of geometric means that exceed the geometric mean receiving water limitations in Table 6.2 by the total number of geometric means calculated from samples collected during the dry season.
- (iii) Wet weather exceedance frequencies must be calculated as follows:
 - [a] If only one sample is collected for a storm event, the bacteria density for every wet weather day associated with that storm event must be assumed to be equal to the results from the one sample collected;
 - [b] If more than one sample is collected for a storm event, but not on a daily basis, the bacteria density for all wet weather days of the storm event not sampled must be assumed to be equal to the highest bacteria density result reported from the samples collected;
 - [c] If there are any storm events not sampled, the bacteria density for every wet weather day of those storm events must be assumed to be equal to the average of the highest bacteria densities reported from each storm event sampled; and
 - [d] The single sample maximum exceedance frequency must be calculated by dividing the number of wet weather days that exceed the single sample maximum receiving water limitations in Table 6.2 by the total number of wet weather days during the rainy season.
 - [e] The data collected for dry weather must be used in addition to the data collected for wet weather to calculate the wet weather 30-day geometric means. The exceedance frequency of the wet weather 30-day geometric means must be calculated by dividing the number of geometric means that exceed the geometric mean

receiving water limitations in Table 6.2 by the total number of geometric means calculated from samples collected during the wet season.

- (iv) For assessing and determining compliance with the concentration-based effluent limitations under Specific Provision 6.b.(2)(b)(i), dry and wet weather discharge bacteria densities may be calculated based on a flow-weighted average across all major MS4 outfalls along a water body segment or within a jurisdiction if samples are collected within a similar time period.
- (v) The monitoring and assessment results must be submitted as part of the Transitional Monitoring and Assessment Program and Water Quality Improvement Plan Annual Reports required under Provision F.3.b of this Order.

(2) Monitoring and Assessment Requirements for Creeks and Creek Mouths

(a) Monitoring Stations

For creeks addressed by the TMDL, monitoring locations should consist of, at a minimum, a location at or near the mouth of the creek (e.g. Mass Loading Station or Mass Emission Station) and one or more locations upstream of the mouth (e.g. Watershed Assessment Station). If exceedances of the applicable interim or final receiving water limitations are observed in the monitoring data, additional monitoring locations and/or other source identification methods must be implemented to identify the sources causing the exceedances. The additional monitoring locations must also be used to demonstrate that the bacteria loads from the identified sources have been addressed and are no longer causing exceedances in the receiving waters.

(b) Monitoring Procedures

- (i) The Responsible Copermittees must collect dry weather monitoring samples from the receiving water monitoring stations in accordance with the requirements of Provision D.
- (ii) The Responsible Copermittees must collect wet weather monitoring samples from the receiving water monitoring stations within the first 24 hours of the end of a storm event³⁷ during the rainy season (i.e. October 1 through April 30).

³⁷ Wet weather days are defined by the TMDL as storm events of 0.2 inches or greater and the following 72 hours. The Responsible Copermittees may choose to limit their wet weather sampling requirements to storm events of 0.2 inches or greater, or also include storm events of 0.1 inches or greater as defined by the federal regulations [40CFR122.26(d)(2)(iii)(A)(2)].

- (iii) Samples collected from receiving water monitoring stations must be analyzed for fecal coliform and *Enterococcus* indicator bacteria.
- (iv) For creeks or creek mouths listed in Table 6.0 that have been de-listed from the Clean Water Act Section 303(d) List, the Responsible Copermittees may propose alternative monitoring procedures to demonstrate that the water bodies continue to remain in compliance with water quality standards under wet weather and dry weather conditions. The alternative monitoring procedures must be submitted as a part of the Water Quality Improvement Plans or any updates required under Provisions F.1 and F.2.c of the Order.

(c) Assessment and Reporting Requirements

- (i) The Responsible Copermittees must analyze the receiving water monitoring data to assess whether the interim and final receiving water WQBELs for the creeks and creek mouths listed in Table 6.0 have been achieved.
- (ii) Dry weather exceedance frequencies must be calculated as follows:
 - [a] 30-day geometric means must be calculated from the results of any dry weather samples collected from the segment or area for each water body listed in Table 6.0;
 - [b] The method and number of samples need for calculating the 30-day geometric means must be consistent with the number of samples required by the Basin Plan;
 - [c] The exceedance frequency must be calculated by dividing the number of 30-day geometric means that exceed the 30-day geometric mean receiving water limitations in Table 6.2 by the total number of 30-day geometric means calculated from samples collected during the dry season.
- (iii) Wet weather exceedance frequencies must be calculated as follows:
 - [a] If only one sample is collected for a storm event, the bacteria density for every wet weather day associated with that storm event must be assumed to be equal to the results from the one sample collected;
 - [b] If more than one sample is collected for a storm event, but not on a daily basis, the bacteria density for all wet weather days of the storm event not sampled must be assumed to be equal to the highest bacteria density result reported from the samples collected;
 - [c] If there are any storm events not sampled, the bacteria density for every wet weather day of those storm events must be assumed to be equal to the average of the highest bacteria densities reported from each of the storm events sampled; and

- [d] The exceedance frequency must be calculated by dividing the number of wet weather days that exceed the single sample maximum receiving water limitations in Table 6.2 by the total number of wet weather days during the rainy season.
 - [e] The data collected for dry weather must be used in addition to the data collected for wet weather to calculate the wet weather 30-day geometric means. The exceedance frequency of the wet weather 30-day geometric means must be calculated by dividing the number of geometric means that exceed the geometric mean receiving water limitations in Table 6.2 by the total number of geometric means calculated from samples collected during the wet season.
- (iv) The Responsible Copermittee must identify and incorporate additional MS4 outfall and receiving water monitoring stations and/or adjust monitoring frequencies to identify sources causing exceedances of the receiving water WQBELs.
 - (v) For assessing and determining compliance with the concentration-based effluent limitations under Specific Provision 6.b.(2)(b)(i), dry and wet weather discharge bacteria densities may be calculated based on a flow-weighted average across all major MS4 outfalls along a water body segment or within a jurisdiction if samples are collected within a similar time period.
 - (vi) The monitoring and assessment results must be submitted as part of the Transitional Monitoring and Assessment Program and Water Quality Improvement Plan Annual Reports required under Provision F.3.b of this Order.

Order No. R9-2013-0001

As amended by Order No. R9-2015-0001

Amended February 11, 2015

7. Total Maximum Daily Loads for Sediment in Los Peñasquitos Lagoon

a. APPLICABILITY

(1) TMDL Basin Plan Amendment: Resolution No. R9-2012-0033

(2) TMDL Adoption and Approval Dates:

<u>San Diego Water Board Adoption Date:</u>	<u>June 13, 2012</u>
<u>State Water Board Approval Date:</u>	<u>January 21, 2014</u>
<u>Office of Administrative Law Approval Date:</u>	<u>July 14, 2014</u>
<u>US EPA Approval Date:</u>	<u>October 30, 2014</u>

(3) TMDL Effective Date: July 14, 2014

(4) Watershed Management Area: Los Peñasquitos

(5) Water Body: Los Peñasquitos Lagoon

(6) Responsible Copermittees: County of San Diego, City of San Diego, City of Del Mar, and City of Poway

b. FINAL TMDL COMPLIANCE REQUIREMENTS

The final sediment TMDL compliance requirements for Los Peñasquitos Lagoon consist of the following:

(1) Final TMDL Compliance Date

The Responsible Copermittees must be in compliance with the final TMDL compliance requirements by December 31, 2034.

(2) Final Water Quality Based Effluent Limitations

(a) Final Receiving Water Limitations

Discharges from the MS4s must not prohibit the sustainable restoration of tidal and non-tidal saltmarsh vegetation of at least 346 acres.

(b) Final Effluent Limitations

Discharges from the MS4s containing pollutant loads that do not exceed the following effluent limitations by the compliance date under Provision 7.b(1) will not cause or contribute to a failure of the receiving water condition specified under Specific Provision 7.b.(2)(a):

Order No. R9-2013-0001

As amended by Order No. R9-2015-0001Amended February 11, 2015**Table 7.1***Final Effluent Limitations as Expressed as Wet Season Loads in MS4 Discharges to Los Peñasquitos Lagoon*

<u>Constituent</u>	<u>Effluent Limitation</u>
Sediment	2,580 tons/wet season

*Final effluent limitations are to be achieved by the following Responsible Parties: County of San Diego, City of San Diego, City of Del Mar, City of Poway, Phase II MS4 permittees, Caltrans, general construction storm water NPDES permittees, and general industrial storm water NPDES permittees.

(c) Best Management Practices

- (i) The Water Quality Improvement Plan for the Los Peñasquitos Watershed Management Area must incorporate the Sediment Load Reduction Plan required to be developed pursuant to Resolution No. R9-2012-0033.
- (ii) The Responsible Copermittees must implement BMPs to achieve the receiving water limitations under Specific Provision 7.b.(2)(a) and/or the Copermittee's portion of the effluent limitations under Specific Provision 7.b.(2)(b) for Los Peñasquitos Lagoon.

(3) Final TMDL Compliance Determination

Compliance with the final WQBELs, on or after the final TMDL compliance date, may be demonstrated via one of the following methods:

- (a) Successful restoration of 80 percent of the 1973 acreage of tidal and non-tidal lagoon salt marsh (346 acres); OR
- (b) The Responsible Copermittees develop and implement the Water Quality Improvement Plan as follows:
 - (i) Incorporate the BMPs required under Specific Provision 7.b.(2)(c)(ii) as part of the Water Quality Improvement Plan,
 - (ii) Include an analysis in the Water Quality Improvement Plan, utilizing a watershed model or other watershed analytical tools, to demonstrate that the implementation of the BMPs required under Provision 7.b.(2)(c)(ii) or other implementation actions achieve compliance with Specific Provision 7.b.(3)(a),
 - (iii) The results of the analysis must be accepted by the San Diego Water Board as part of the Water Quality Improvement Plan,
 - (iv) The Responsible Copermittees continue to implement the BMPs required under Specific Provision 7.b.(2)(c)(ii) or other implementation actions, AND

Order No. R9-2013-0001

[As amended by Order No. R9-2015-0001](#)[Amended February 11, 2015](#)

- (v) The Responsible Copermittees continue to perform the specific monitoring and assessments specified in Specific Provision 7.d to demonstrate compliance with Specific Provision 7.b.(3)(a).

C. INTERIM TMDL COMPLIANCE REQUIREMENTS

The interim sediment TMDL compliance requirements for Los Peñasquitos Lagoon consist of the following:

(1) Interim Compliance Dates and WQBELs

The Responsible Copermittees must comply with the interim WQBELs, expressed as wet season loads, by December 31 of the interim compliance year set forth in Table 7.2.

Table 7.2

*Interim Water Quality Based Effluent Limitations Expressed as Wet Season Loads in MS4 Discharges**

<u>Interim Compliance Date</u>	<u>Interim Effluent Limitations (tons/wet season)</u>
<u>December 31, 2019</u>	<u>6,691</u>
<u>December 31, 2023</u>	<u>5,663</u>
<u>December 31, 2027</u>	<u>4,636</u>
<u>December 31, 2029</u>	<u>3,608</u>

*Interim effluent limitations are to be achieved by the following Responsible Parties: County of San Diego, City of San Diego, City of Del Mar, City of Poway, Phase II MS4 permittees, Caltrans, general construction storm water NPDES permittees, and general industrial storm water NPDES permittees.

(2) Interim TMDL Compliance Determination

Compliance with interim WQBELs, on or after the interim TMDL compliance dates, may be demonstrated via one of the following methods:

- (a) There is no direct or indirect discharge from the Responsible Copermittee's MS4s to the receiving water; OR
- (b) The final receiving water limitation under Specific Provision 7.b.(2)(a) is met; OR
- (c) There are no exceedances of the Copermittee's portion of interim effluent limitations under Table 7.2 at the Responsible Copermittee's MS4 outfalls; OR
- (d) The Responsible Copermittees have submitted and is fully implementing a Water Quality Improvement Plan, accepted by the San Diego Water Board, which provides reasonable assurance that the Copermittee's portion of the

interim TMDL compliance requirements described in Attachment A of Resolution No. R9-2010-0033 will be achieved by the interim compliance date.

d. SPECIFIC MONITORING AND ASSESSMENT REQUIREMENTS

(1) Watershed Monitoring

The Responsible Copermittees must conduct suspended sediment, bed load, and flow monitoring to calculate total sediment loading to the Los Peñasquitos Lagoon for each wet season (October 1 thru April 30) as set forth below:

(a) The Responsible Copermittees must monitor enough storm events throughout the season to quantify sediment loading over each wet season, and

(b) The Responsible Copermittees must monitor at least 3 stations to quantify cumulative sediment loading into Los Peñasquitos Lagoon. Stations must be located within the Los Peñasquitos, Carroll Canyon, and Carmel Creek tributaries prior to discharging into Los Peñasquitos Lagoon.

(2) Lagoon Monitoring

The Responsible Copermittees must monitor Los Peñasquitos Lagoon each Fall for changes in the extent of the vegetation types as set forth below:

(a) The Responsible Copermittees must acquire aerial photos of Los Peñasquitos Lagoon and digitize them at an approximate scale of 1:2,500.

(b) The Responsible Copermittees must appropriately interpret the vegetation and classify the various types as saltmarsh, non-tidal saltmarsh, freshwater marsh, non-tidal saltmarsh –*Lolium perrene* infested, southern willow scrub/mulefat scrub, herbaceous wetland, or upland land cover.

(3) Assessment and Reporting Requirements

(a) The Responsible Copermittees must analyze the monitoring data collected under Specific Provision 7.d(1) and 7.d(2) to assess whether the interim and final WQBELs have been achieved.

(b) For assessing and determining compliance with the final receiving water limitations under Specific Provision 7.b.(2)(a), the Responsible Copermittees must use the data acquired under Specific Provision 7.d.(2) to estimate the acreage of tidal and non-tidal saltmarsh actually restored.

Order No. R9-2013-0001

As amended by Order No. R9-2015-0001

Amended February 11, 2015

- (c) For assessing and determining compliance with the final effluent limitations under Specific Provision 7.b.(2)(b), the Responsible Copermittees must use the data acquired under Specific Provision 7.d.(1) to estimate sediment loading into Los Peñasquitos Lagoon. Sediment loading must be evaluated using a 3-year, weighted rolling average. The first reported average shall be calculated using data collected in the year 2015-2016, 2016-2017, and 2017-2018 wet seasons.
- (d) The monitoring and assessment results must be submitted as part of the Water Quality Improvement Plan Annual Reports required under Provision F.3.b of this Order.

ATTACHMENT F

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION**

FACT SHEET / TECHNICAL REPORT

FOR

ORDER NO. R9-2013-0001

[AS AMENDED BY ORDER No. R9-2015-0001](#)

NPDES NO. CAS0109266

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT
AND WASTE DISCHARGE REQUIREMENTS FOR
DISCHARGES FROM THE MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)
DRAINING THE WATERSHEDS WITHIN THE SAN DIEGO REGION**

MAY 8, 2013

[Amended on February 11, 2015](#)

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TABLE OF CONTENTS

I. FACT SHEET FORMAT	3
II. CONTACT INFORMATION	5
III. PUBLIC PROCESS AND NOTIFICATION PROCEDURES	7
IV. BACKGROUND OF THE SAN DIEGO REGION MUNICIPAL STORM WATER PERMITS	10
V. REGIONAL MS4 PERMIT APPROACH	15
VI. ECONOMIC CONSIDERATIONS.....	18
VII. APPLICABLE STATUTES, REGULATIONS, PLANS AND POLICIES	
A. Legal Authorities – Federal Clean Water Act and California Water Code	24
B. Legal Authority for the Permit Issued on a Region-wide Basis.....	25
C. Federal and California Endangered Species Acts.....	27
D. California Environmental Quality Act.....	27
E. State and Federal Regulations, Plans and Policies.....	27
F. Unfunded State Mandates.....	33
VIII. PROVISIONS	
A. Prohibitions and Limitations	36
A.1. Discharge Prohibitions	36
A.2. Receiving Water Limitations	39
A.3. Effluent Limitations	40
A.4. Compliance with Discharge Prohibitions and Receiving Water Limitations	42
B. Water Quality Improvement Plans.....	46
B.1 Watershed Management Areas	48
B.2. Priority Water Quality Conditions	51
B.3. Water Quality Improvement Goals, Strategies and Schedules	52
B.4 Water Quality Improvement Monitoring and Assessment	57
B.5 Iterative Approach and Adaptive Management Process	58
B.6 Water Quality Improvement Plan Submittal, Updates, and Implementation	58
C. Action Levels.....	62
C.1. Non-storm Water Action Levels	63
C.2. Storm Water Action Levels	65
D. Monitoring and Assessment Program Requirements	68
D.1 Receiving Water Monitoring Requirements	69
D.2 MS4 Outfall Discharge Monitoring Requirements	74
D.3 Special Studies	78
D.4 Assessment Requirements	80

**TABLE OF CONTENTS
(Cont'd)**

VIII. PROVISIONS (Cont'd)

E. Jurisdictional Runoff Management Programs.....	84
E.1. Legal Authority Establishment and Enforcement	84
E.2. Illicit Discharge Detection and Elimination	85
E.3. Development Planning	94
E.4. Construction Management	106
E.5 Existing Development Management	108
E.6. Enforcement Response Plans	115
E.7. Public Education and Participation	116
E.8. Fiscal Analysis	117
F. Reporting.....	118
F.1. Water Quality Improvement Plans	118
F.2. Updates	120
F.3. Progress Reporting	121
F.4. Regional Clearinghouse	125
F.5. Report of Waste Discharge	125
F.6. Application for Early Coverage	126
G. Principal Watershed Copermittee Responsibilities	127
H. Modification of Order.....	128
I. Standard Permit Provisions and General Provisions.....	129

IX. ATTACHMENTS

Attachment A – Discharge Prohibitions and Special Protections.....	130
Attachment B – Standard Permit Provisions and General Provisions.....	131
Attachment C – Acronyms, Abbreviations and Definitions.....	132
Attachment D – Jurisdictional Runoff Management Program Annual Report Form	133
Attachment E – Specific Provisions for Total Maximum Daily Loads.....	136

I. FACT SHEET FORMAT

This Fact Sheet briefly sets forth the principal facts and the significant factual, legal, methodological, and policy questions that the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) considered in preparing Order No. R9-2013-0001 (Order) [as amended by Order No. R9-2015-0001](#). In accordance with the Code of Federal Regulations (CFR) Title 40 Parts 124.8 and 124.56 (40 CFR 124.8 and 40 CFR 124.56), this Fact Sheet includes, but is not limited to, the following information:

1. Contact information
2. Public process and notification procedures
3. Background of municipal storm water permits
4. Regional MS4 Permit approach
5. Economic considerations
6. Applicable statutes, regulations, plans and policies
7. Discussion of the provisions in the Order

Tentative Order No. R9-2013-0001 was distributed for public review on October 31, 2012. The San Diego Water Board accepted written comments on the Tentative Order until January 11, 2013. A public hearing was subsequently held on April 10 and 11, 2013, that was continued to May 8, 2013 to receive oral comments from interested persons. [The San Diego Water Board adopted Order No. R9-2013-0001 on May 8, 2013.](#)

[Order No. R9-2015-0001, an Order amending Order No. R9-2013-0001, was distributed for public review on September 19, 2014. Order No. R9-2015-0001 amended the findings and provisions of Order No. R9-2013-0001 to:](#)

- a. [Enroll the County of Orange, the Orange County Flood Control District and the south Orange County Cities of Aliso Viejo, Dana Point, Laguna Beach, Laguna Hills, Laguna Niguel, Laguna Woods, Mission Viejo, Rancho Santa Margarita, San Clemente, and San Juan Capistrano as Copermittees responsible for compliance with the terms and conditions of Order No. R9-2013-0001, as amended by Order No. R9-2015-0001;](#)
- b. [Designate the San Diego Water Board to regulate all Phase I MS4 discharges within the jurisdiction of the Cities of Laguna Woods and Laguna Hills and agree to the designation of the Santa Ana Water Board to regulate all Phase I MS4 discharges within the jurisdiction of the City of Lake Forest, subject to the terms of the February 10, 2015 agreement between San Diego Water Board and the Santa Ana Water Board described in Finding 29 of this Order, upon the later effective date of Order No. R9-2015-0001 or Order No. R8-2015-0001 \(superseding Order No. R8-2009-0030\);](#)

- c. Establish interim exceptions to land development requirements for those priority development projects that discharge to engineered channels and large river reaches as described in Provision E.3.c(2)(e) of this Order;
- d. Incorporate the amended requirements of the State Water Resources Control Board's (State Water Board) General Exception to require that pollutant reductions be achieved within 6 years for storm water and nonpoint source discharges to ASBS within the Region;
- e. Incorporate applicable requirements of the Los Peñasquitos Lagoon Sediment TMDL;
- f. Require the Orange County Copermittees to implement the "Workgroup Recommendation for a Unified Beach Water Quality Monitoring and Assessment Program in South Orange County," dated October 2014, made effective in the Monitoring and Reporting Program/Order issued pursuant to California Water Code section 13383 in the December 5, 2014 San Diego Water Board Letter Directive and subject to future revisions by the Executive Officer after appropriate public input;

A public hearing was held on February 11, 2015, to receive oral comments from Copermittees and interested persons. The San Diego Water Board adopted Order No. R9-2015-0001 amending Order No. R9-2013-0001 on February 11, 2015.

The San Diego Water Board files applicable to the issuance of Order No. R9-2013-0001 and amendments thereto are incorporated into the administrative record in support of the findings and requirements of the Order.

II. CONTACT INFORMATION

San Diego Water Board

Eric Becker, P.E.
Senior Water Resource Control Engineer
~~9174 Sky Park Court, Suite 100~~
~~San Diego, CA 92123~~
~~858-467-1785~~
~~858-571-6972 (fax)~~
[619-521-3364](tel:619-521-3364)
[619-516-1994 \(fax\)](tel:619-516-1994)
[2375 Northside Drive, Suite 100](mailto:eric.becker@waterboards.ca.gov)
[San Diego, CA 92108](mailto:eric.becker@waterboards.ca.gov)
email: eric.becker@waterboards.ca.gov

Christina Arias, P.E.
Water Resource Control Engineer
~~9174 Sky Park Court, Suite 100~~
~~San Diego, CA 92123~~
~~858-627-3931~~
~~858-571-6972 (fax)~~
[619-521-3361](tel:619-521-3361)
[619-516-1994 \(fax\)](tel:619-516-1994)
[2375 Northside Drive, Suite 100](mailto:christina.arias@waterboards.ca.gov)
[San Diego, CA 92108](mailto:christina.arias@waterboards.ca.gov)
email: christina.arias@waterboards.ca.gov

Wayne Chiu, P.E.
Water Resource Control Engineer
~~9174 Sky Park Court, Suite 100~~
~~San Diego, CA 92123~~
~~858-637-5558~~
~~858-571-6972 (fax)~~
[619-521-3354](tel:619-521-3354)
[619-516-1994 \(fax\)](tel:619-516-1994)
[2375 Northside Drive, Suite 100](mailto:wayne.chiu@waterboards.ca.gov)
[San Diego, CA 92108](mailto:wayne.chiu@waterboards.ca.gov)
email: wayne.chiu@waterboards.ca.gov

Laurie Walsh, P.E.
Water Resource Control Engineer
~~9174 Sky Park Court, Suite 100~~
~~San Diego, CA 92123~~
~~858-467-2970~~
~~858-571-6972 (fax)~~
[619-521-3373](tel:619-521-3373)
[619-516-1994 \(fax\)](tel:619-516-1994)
[2375 Northside Drive, Suite 100](mailto:laurie.walsh@waterboards.ca.gov)
[San Diego, CA 92108](mailto:laurie.walsh@waterboards.ca.gov)
email: laurie.walsh@waterboards.ca.gov

The Order and other related documents can be downloaded from the San Diego Water Board website at

http://www.swrcb.ca.gov/rwqcb9/water_issues/programs/stormwater/index.shtml
http://www.waterboards.ca.gov/sandiego/water_issues/programs/stormwater/oc_storm_water.shtml

The documents referenced in this Fact Sheet and in Order No. R9-2013-0001 [and amendments thereto](#) are available for public review at the San Diego Water Board office, located at the address listed above. Public records are available for inspection during regular business hours, from 8:00 am to 5:00 pm Monday through Friday. To schedule an appointment to inspect public records, contact the San Diego Water Board Records Management Officer at ~~858-467-2952~~[619-516-1990](tel:619-516-1990).

COPERMITTEES

Orange County Copermittees

- County of Orange
 - City of Aliso Viejo
 - City of Dana Point
 - City of Laguna Beach
 - City of Laguna Hills
 - City of Laguna Niguel
 - City of Laguna Woods
 - City of Lake Forest*
 - City of Mission Viejo
 - City of Ranch Santa Margarita
 - City of San Clemente
 - City of San Juan Capistrano
 - Orange County Flood Control District

* While not listed in the above table, the City of Lake Forest remains a Copermittee under this Order until the later effective date of this Order or Santa Ana Water Board Tentative Order No. R8-2015-0001. Thereafter, the City of Lake Forest will no longer be considered a Copermittee under this Order because its Phase I MS4 discharges will be regulated by the Santa Ana Water Board pursuant to Water Code section 13328 designation. The requirements of this Order that apply to the City of Lake Forest for the duration of this Order, consistent with the Water Code section 13228 agreement dated February 10, 2015, are described in Finding 29 and Footnote 2 to Table B-1.

Riverside County Copermittees

- County of Riverside
 - City of Murrieta
 - City of Temecula
 - City of Wildomar
 - Riverside County Flood Control and Water Conservation District

San Diego County Copermittees

- County of San Diego
 - City of Carlsbad
 - City of Chula Vista
 - City of Coronado
 - City of Del Mar
 - City of El Cajon
 - City of Encinitas
 - City of Escondido
 - City of Imperial Beach
 - City of La Mesa
 - City of Lemon Grove
 - City of National City
 - City of Oceanside
 - City of Poway
 - City of San Diego
 - City of San Marcos
 - City of Santee
 - City of Solana Beach
 - City of Vista
 - San Diego County Regional Airport Authority
 - San Diego Unified Port District

III. PUBLIC PROCESS AND NOTIFICATION PROCEDURES

The San Diego Water Board followed the schedule listed below for the preparation of Order No. R9-2013-0001:

San Diego County Copermittee Permit Reissuance Process

1. On February 8, 2011, the San Diego Water Board met with the San Diego County Copermittees to discuss the Report of Waste Discharge required pursuant to Order No. R9-2007-0001.
2. Between February and May 2011, the San Diego Water Board met with select San Diego County, Orange County, and Riverside County Copermittees, as well as representatives of the environmental community to discuss concepts and receive recommendations for elements to be incorporated in a Regional Municipal Separate Storm Sewer System Permit (Regional MS4 Permit).
3. On June 27, 2011 the San Diego Water Board received the Report of Waste Discharge from the San Diego County Copermittees for the renewal of their NPDES permit, Order No. R9-2007-0001.
4. On April 9, 2012, the San Diego Water Board released an administrative draft of Tentative Order No. R9-2013-0001 for preliminary informal comments and feedback.
5. On April 25, 2012, the San Diego Water Board held an informal public workshop to present the administrative draft of Tentative Order No. R9-2013-0001 and receive verbal comments.
6. Between June and August 2012, the San Diego Water Board held four (4) focused meetings with representatives of the principal stakeholders (the Copermittees, the environmental community, the development/business community, and USEPA) to discuss and receive preliminary comments and feedback about specific elements in the administrative draft of Tentative Order No. R9-2013-0001.
7. On September 5, 2012, the San Diego Water Board held an informal public workshop to present the modifications that were expected to be incorporated into the Tentative Order based on the preliminary comments and feedback received during the focused meetings held between June and August 2012.
8. Informal written comments on the administrative draft of Tentative Order No. R9-2013-0001 were accepted until September 14, 2012.
9. On October 12, 2012, the San Diego Water Board released a revised administrative draft of Tentative Order No. R9-2013-0001.

10. On October 24, 2012, the San Diego Water Board held a focused meeting with representatives of the principal stakeholders (the Copermittees, the environmental community, the development/business community, and USEPA) to discuss modifications incorporated into the administrative draft of Tentative Order No. R9-2013-0001.
11. On October 31, 2012, the San Diego Water Board released Tentative Order No. R9-2013-0001 for formal public review and comment.
12. On November 13, 2012 and December 12, 2012, the San Diego Water Board held a formal public Board workshop to present the public draft of Tentative Order No. R9-2013-0001 and receive verbal comments.
13. Formal written comments on the public draft of Tentative Order No. R9-2013-0001 were accepted until January 11, 2013.
14. A public hearing of Tentative Order No. R9-2013-0001 was conducted on April 10 and 11, 2013, that was continued to May 8, 2013.

Orange County Copermittee Permit Reissuance Process

15. On May 20, 2014 the San Diego Water Board received the Report of Waste Discharge from the Orange County Copermittees for the renewal of their MS4 NPDES permit, Order No. R9-2009-0002.
16. On June 24, 2014, the San Diego Water Board met with the Orange County Copermittees to discuss the Report of Waste Discharge required pursuant to Order No. R9-2009-0002 and the process for enrollment as Copermittees under Regional MS4 Permit Order No. R9-2013-0001.
17. On July 1, 2014, the San Diego Water Board held a public meeting to discuss the Orange County Report of Waste Discharge (RoWD) and receive comments on potential modifications to Order No. R9-2013-0001. Based on comments received from the Orange County Copermittees and other interested persons at this meeting, the San Diego Water Board determined that additional public meetings were not needed prior to release of Tentative Order No. R9-2015-0001, amending Order No. R9-2013-0001 in redlined – strikeout format for public review and comment.
18. On September 19, 2014, the San Diego Water Board released Tentative Order No. R9-2015-0001 for a 60 day public review and comment period.
19. On October 8, 2014, the San Diego Water Board held a formal public workshop at a regular board meeting to receive information and discuss the proposed amendments to Order No. R9-2013-0001 described in Tentative Order No. R9-2015-0001.

20. In accordance with State and federal laws and regulations, the San Diego Water Board notified San Diego County, Orange County and Riverside County Copermittees, and all known interested agencies and persons of its intent to adopt Tentative Order No. R9-2015-0001 and provided them with an opportunity to submit their written comments and recommendations. Written comments and recommendations on Tentative Order No. R9-2015-0001 were accepted until November 19, 2014.
21. The San Diego Water Board held a public workshop on October 8, 2014, and a public hearing on February 11, 2015, and heard and considered all comments pertaining to the adoption of Tentative Order No. R9-2015-0001 on February 11, 2015.

IV. BACKGROUND OF THE SAN DIEGO REGION MUNICIPAL STORM WATER PERMITS

In developed and developing areas, storm water runoff is commonly transported through municipal separate storm sewer systems (MS4s) and discharged into local receiving water bodies. As the storm water runs off and flows over the land or impervious surfaces (e.g., paved streets, parking lots, and building rooftops), it accumulates debris, chemicals, sediment, and other pollutants that can adversely affect receiving water quality if discharged untreated. The United States Environmental Protection Agency (USEPA) recognizes wet weather flows from urban areas as the number one source of estuarine pollution in coastal communities,¹ such as those within the San Diego Region.

The federal Clean Water Act (CWA) was amended in 1987 to address and regulate discharges of storm water associated with industrial activities and from municipal storm sewers. With the amendments, many municipalities throughout the United States were obligated for the first time to obtain National Pollutant Discharge Elimination System (NPDES) permits for discharges of storm water from their MS4s.

In response to the CWA 1987 amendment, as well as the pending federal NPDES regulations which would implement the amendment, the San Diego Water Board issued “early” MS4 permits. The San Diego Water Board adopted and issued Order Nos. 90-38, 90-42, and 90-46 to regulate storm water discharges from the MS4s in Orange County, San Diego County, and Riverside County, respectively, within the San Diego Region on July 16, 1990.

The “early” MS4 permits, or First Term Permits, were issued prior to the November 1990 promulgation of the final federal NPDES storm water regulations. By issuing these First Term Permits before the federal regulations took effect, the San Diego Water Board was able to provide the Copermittees additional flexibility in addressing and managing storm water discharges. The First Term Permits contained the essentials of the 1990 regulations, and required the Copermittees to develop and implement runoff management programs, but provided little specificity about what was required to be included in or actually achieved by those programs.

The flexibility provided in the First Term Permits was generally continued through the Second Term Permits. The combination of the lack of specificity in the First and Second Term Permits, a general lack of meaningful action by the Copermittees and a general lack of corresponding reaction (i.e. enforcement) by the San Diego Water Board during the first ten years of the storm water program, resulted in few substantive steps

¹ US EPA. 1999. 40 CFR Parts 9, 122, 123, and 124. National Pollutant Discharge Elimination System – Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges; Final Rule. 64 FR 68727.

towards achieving improvements in the quality of receiving waters or storm water discharges from the MS4s.

From 2001, the regulatory approach incorporated into Third Term Permits was a significant departure from the regulatory approach of the First and Second Term Permits. The Third Term Permits issued by the San Diego Water Board included more detailed requirements that outlined the minimum level of implementation required for the Copermittees' programs to meet the maximum extent practicable (MEP) standard for storm water. The Third Term Permits included more detail to emphasize and enhance the jurisdictional runoff management programs developed by the Copermittees and introduced requirements for developing and implementing watershed-based programs.

The Third Term Permits also incorporated two precedent setting decisions by the State Water Board. In Order WQ 99-05, the State Water Board established receiving water limitation language to be included in all MS4 permits. The State Water Board's precedential language clarified that municipal storm water permits must include provisions requiring discharges to be controlled to attain water quality standards in receiving waters. Unlike previously adopted versions of the receiving water limitation language in the First and Second Term Permits, the language no longer stated that "*violations of water quality standards are not violations of the municipal storm water permit under certain conditions.*" In addition, the receiving water limitation language no longer indicated that the "*implementation of best management practices is the 'functional equivalent' of meeting water quality standards.*" State Water Board Order WQ 99-05 specifically requires language in MS4 permits for the Copermittees to comply with water quality standards based discharge prohibitions and receiving water limitations through timely implementation of control measures and other actions to reduce pollutants in discharges. (See State Water Board Order WQ 99-05 (*Environmental Health Coalition*)).

In Order WQ 2000-11, also a precedential decision, the State Water Board addressed design standards for structural post-construction best management practices (BMPs) for new development and significant redevelopment. The State Water Board found that the design standards, which require that runoff generated by 85 percent of storm events from specific development categories be infiltrated or treated, reflect the MEP standard. State Water Board Order WQ 2000-11 also found that the post-construction BMP provisions, or Standard Storm Water Mitigation Plan (SSMP) provisions, constitute MEP for addressing storm water pollutant discharges resulting from specific development categories.

The Third Term San Diego County and Orange County Permits (Order Nos. 2001-01 and R9-2002-0001, respectively) were appealed to the State Water Board. Minor modifications were made by the State Water Board, but the requirements were largely upheld. In State Water Board Order WQ 2001-15, the State Water Board upheld the Third Term San Diego County Permit requirements with certain modifications. The State Water Board removed the prohibition of storm water discharges *into* the MS4 that cause or contribute to exceedances of water quality objectives. The revision allows for

treatment of pollutants in storm water runoff after the pollutants have entered the MS4. State Water Board Order WQ 2001-15 otherwise upheld all the other requirements of the permit.

In addition to the modification to the discharge prohibition in Order WQ 2001-15, the State Water Board refined Order WQ 99-05 by making clear that the Copermittees may use an iterative approach to achieving compliance with water quality standards that involves ongoing assessments and revisions. Thus, the language for the discharge prohibitions and receiving water limitations was revised to explicitly require the Copermittees to implement an iterative process of assessments and revisions to comply with the discharge prohibitions and receiving water limitations. The San Diego Water Board retained the authority to enforce receiving water limitations and discharge prohibitions even if the Copermittee is engaged in the iterative process.

The Third Term San Diego County Permit was subsequently challenged in the Superior Court of the State of California and the Court of Appeal, Fourth Appellate District. The Court of Appeal, Fourth Appellate District, found that the approach of the Third Term San Diego County Permit to regulating discharges into the MS4 was appropriate (*Building Industry Ass'n. v. State Water Resources Control Bd., et al.*, 124 Cal.App.4th 866 (2004)). The State of California Supreme Court denied review sought by the Building Industry Association in March 2005.

The Fourth Term Permits, or current MS4 permits, began with the adoption of Order No. R9-2007-0001 issued to the Copermittees of San Diego County in January 2007. Order Nos. R9-2009-0002 and R9-2010-0016 were subsequently issued to the Copermittees of Orange County and Riverside County. The Fourth Term Permits continued to include more detailed requirements to be implemented by each Copermittee's jurisdictional runoff management program. The Fourth Term Permits also include requirements to further emphasize a watershed management approach and for more coordination among jurisdictional runoff management programs. In addition, the Fourth Term Permits included more requirements for assessing the effectiveness of the runoff management programs being implemented by the Copermittees. The intent of the inclusion of additional requirements was to enhance and better define elements of the permit that were expected to be incorporated into the iterative process for managing runoff from each Copermittee's jurisdiction and within the watersheds of the San Diego Region.

The Fourth Term Permits include several new and emerging approaches for managing storm water runoff and discharges. Low impact development (LID) requirements are included for development and significant redevelopment to reduce pollutants in storm water runoff from sites through more natural processes such as infiltration and biofiltration closer to the source, rather than utilizing conventional mechanical end-of-pipe treatment systems. Hydrograph modification (hydromodification) management requirements also are included to mitigate the potential for increased erosion in receiving waters due to increased runoff rates and durations often caused by development and increased impervious surfaces. The Fourth Term Orange County and

Riverside County Permits introduced requirements to identify areas of existing development where retrofitting with LID projects would be feasible and could be implemented to reduce storm water runoff and pollutants in storm water discharges.

The Fourth Term Orange County and Riverside County Permits included a clearer distinction between storm water and non-storm water discharges. The term “urban runoff” was completely removed, and a distinction between storm water (wet weather) runoff and non-storm water (dry weather) runoff was emphasized. This clarification was made to prevent any potential misunderstanding that regulation under the MS4 permits is limited only to urbanized areas, and to prevent non-storm water runoff from being managed in the same manner as storm water runoff. The term “urban runoff” is not defined in the Code of Federal Regulations (CFR) or Federal Register (FR) in the regulation of MS4 discharges. According to the CWA 402(p)(3)(B)(ii), MS4 permits must include a requirement to effectively prohibit non-storm water discharges into the MS4s.

Finally, for the Fourth Term Orange County and Riverside County Permits the San Diego Water Board found that non-storm water discharges to the MS4 from over application of irrigation water are sources of pollutants. The San Diego Water Board found that non-storm water discharges resulting from over-irrigation must be prohibited from entering the MS4 in accordance with the requirements of the CWA and pursuant to 40 CFR 122.26(d)(2)(iv)(B)(1).

The requirements of the Fourth Term Permits issued to the Copermittees in each county within the San Diego Region now have substantively the same core requirements such as discharge prohibitions, receiving water limitations, jurisdictional runoff management program components, and monitoring program requirements. There are, however, several inconsistencies that exist among the three Fourth Term Permits which complicate oversight and implementation of the permits by the San Diego Water Board.

The Fourth Term San Diego County Permit expired in January 2012. The Fourth Term Orange County ~~permit and Riverside County Permits will~~ expired in December 2014 and ~~the Fourth Term Riverside County Permit will expire in~~ November 2015, ~~respectively~~. Issuing the Fifth Term Permits within five years for three counties under three different permits would require the San Diego Water Board to expend significant time and resources for the issuance of the permits through three separate public proceedings, thereby greatly reducing the time and resources available to oversee implementation and compliance. Multiple permits also create confusion for determining compliance among regulated entities, especially for the land development community.

The San Diego Water Board has acknowledged that issuing a single MS4 permit for all the Copermittees in the San Diego Region can and is expected to result in more consistent implementation, improve communication among agencies within watersheds crossing multiple jurisdictions, and minimize resources spent with each permit renewal process. Within the findings of the Fourth Term Riverside County Permit issued in

November 2010, the San Diego Water Board notified the public of its intent to develop and issue a single Regional MS4 Permit.

V. REGIONAL MS4 PERMIT APPROACH

The Fifth Term Permit, or Regional MS4 Permit, shifts the focus of the permit requirements from a minimum level of actions to be implemented by the Copermittees to identifying outcomes to be achieved by those actions. Order No. R9-2013-0001 represents an important paradigm shift in the approach for MS4 permits within the San Diego Region.

Historical Permitting Approach

The First and Second Term Permits were very broad and provided little specificity about what was required to be developed and implemented by the Copermittees. The Third Term Permits began to become more specific about the minimum level of implementation required by the Copermittees. The Fourth Term Permits, ~~or current permits~~, subsequently increased in specificity. The MS4 permits have progressively become more detailed and focused on specifying the minimum level of actions expected to be implemented by the Copermittees. As detailed and specific as the MS4 permits have become, however, they include very little detail about what the desired outcomes of the required actions are expected to achieve. Compliance with the permit requirements has essentially been tracking numbers of actions and reporting, not tracking progress or actual improvements in the quality of receiving waters or discharges from the MS4s. The result has been an increase in actions being implemented by the Copermittees with little or no ability or expectations to determine whether or not improvements in water quality are being achieved.

The Fourth Term Permits result in significant resource expenditure by the Copermittees to report permit compliance information to the San Diego Water Board in the form of annual jurisdictional runoff management program, watershed program, and monitoring program reports. The San Diego Water Board must then expend much of its limited resources on reviewing more than 50 voluminous reports submitted annually by the Copermittees. The information currently reported by the Copermittees is of limited value when trying to measure progress toward achieving improvements in the quality of receiving waters or discharges from the MS4s. Oversight of the MS4 permits is further complicated by the inconsistencies among the requirements issued to the Orange County, San Diego County, and Riverside County Copermittees under three separate MS4 permits.

Under the Fourth Term Permits, the Copermittees must expend a significant portion of their limited resources collecting data of limited value, and putting together reports to submit that information to the San Diego Water Board. Likewise, the San Diego Water Board must expend most of its limited resources reviewing reports, and developing permits instead of working directly with the Copermittees to identify solutions to problems causing impacts to water quality. This is an unsustainable course that will continue to demand more resources from the Copermittees and the San Diego Water Board, and would continue to result in unknown water quality benefits.

New Permitting Approach

The goal of the Regional MS4 Permit is twofold: 1) bring a consistent set of MS4 permit requirements to all of the Copermittees within the San Diego Region; and, 2) provide an MS4 permit with requirements that will allow the Copermittees to focus their efforts and resources on achieving goals and desired outcomes toward the improvement of water quality rather than completing specific actions.

The overall approach included in the Regional MS4 Permit with respect to the jurisdictional runoff management programs will not differ significantly from the current permits. The general requirements for the jurisdictional runoff management program components and compliance with those requirements will remain and be applied consistently throughout the San Diego Region under the Regional MS4 Permit.

The most significant difference in the new permitting approach is the specific manner of implementation for those jurisdictional runoff management programs. Implementation will be based on decisions made by the Copermittees in accordance with what they have identified as their highest priority water quality conditions. In other words, the Copermittees will have significant control in how to implement the jurisdictional runoff management programs to best utilize their available resources in addressing a specific set of priorities effectively, instead of trying to address all the water quality priorities ineffectively.

The Copermittees are given the responsibility of identifying their highest priority water quality conditions that they intend to address. The Copermittees will develop goals that can be used to measure and demonstrate progress or improvements toward addressing those priorities. In addition to the goals, the Copermittees will provide a schedule for achieving the goals for those highest priorities. The measurement of progress toward achieving the goals for those highest priorities requires a better defined and more focused program of monitoring and assessment than under the Fourth Term Permits.

The monitoring and assessment program must be designed to inform the Copermittees of their progress, and the need for modifications in their jurisdictional runoff management programs and schedules to achieve their goals to improve water quality. The monitoring and assessment program requirements will have a more central role in the Regional MS4 Permit than in earlier permits. The monitoring and assessment requirements must also be designed to enable the Copermittees to focus and direct their efforts in implementing their jurisdictional runoff management programs toward their stated desired outcomes to improve the quality of receiving waters and/or discharges from the MS4s.

By providing an MS4 permit that allows the Copermittees to make more decisions about how to utilize and focus their resources, along with a better defined monitoring and assessment program to inform their water quality management decisions, the Copermittees will have the opportunity to:

- 1) *Plan strategically.* The Copermittees must have the ability to identify their available resources and develop and implement long term plans that can organize, collect, and use those resources in the most strategically advantageous and efficient manner possible. This ability to develop long term plans will allow the Copermittees to focus and utilize their resources in a more concerted way over the short term and long term to address specific water quality priorities through stated desired outcomes.
- 2) *Manage adaptively.* The Copermittees must be given the ability to modify their plans as additional information and data are collected from the monitoring and assessment programs. The Copermittees' plans may require modifications to the programs, priorities, goals, strategies, and/or schedules in order for the Copermittees to achieve a stated desired outcome.
- 3) *Identify synergies.* The Copermittees must be given more flexibility to identify efficiencies within and among their jurisdictional runoff management programs as the strategies are developed and implemented to increase the Copermittees' collective effectiveness. The Copermittees must also be able to identify and utilize resources available from other agencies and entities to further augment and enhance their jurisdictional runoff management programs and/or to collectively work with those other agencies and entities toward achieving a stated desired outcome.

The Regional MS4 Permit requirements will provide the Copermittees the flexibility and responsibility to decide what actions will be necessary to achieve an outcome that is tailored and designed by the Copermittees to improve specific prioritized water quality conditions. The San Diego Water Board expects the approach of the Regional MS4 Permit to give the Copermittees a greater sense of ownership for restoring the quality of receiving waters in the San Diego Region by becoming an integral part of the decision making process in identifying water quality conditions to be addressed, as well as determining the best use of their resources.

VI. ECONOMIC CONSIDERATIONS

Statutory Considerations

California Water Code (CWC) section 13241 requires the San Diego Water Board to consider certain factors, including economic considerations, in the adoption of water quality objectives. CWC section 13263 requires the San Diego Water Board to take into consideration the provisions of CWC section 13241 in adopting waste discharge requirements.

In *City of Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4th 613, the California Supreme Court considered whether Regional Water Boards must comply with CWC section 13241 when issuing waste discharge requirements under CWC section 13263(a) by taking into account the costs a permittee will incur in complying with the permit requirements. The Court concluded that whether it is necessary to consider such cost information “*depends on whether those restrictions meet or exceed the requirements of the federal Clean Water Act.*” (*Id.* at p. 627.) The Court ruled that Regional Water Boards may not consider the factors in CWC section 13241, including economics, to justify imposing pollutant restrictions that are less stringent than applicable federal law requires. (*Id.* At pp. 618, 626-627 [“*[Water Code section 13377 specifies that [] discharge permits issued by California’s regional boards must meet the federal standards set by federal law. In effect, section 13377 forbids a regional board’s consideration of any economic hardship on the part of the permit holder if doing so would result in the dilution of the requirements set by Congress in the Clean Water Act...Because CWC section 13263 cannot authorize what federal law forbids, it cannot authorize a regional board, when issuing a [] discharge permit, to use compliance costs to justify pollutant restrictions that do not comply with federal clean water standards.]*”). However, when pollutant restrictions in an NPDES permit are more stringent than federal law requires, CWC section 13263 requires that the Regional Water Boards consider the factors described in CWC section 13241 as they apply to those specific restrictions.

As discussed in Section VII.F, Unfunded State Mandates, the San Diego Water Board finds that the requirements in this Order are not more stringent than the minimum federal requirements. Among other requirements, federal law requires MS4 permits to include requirements to effectively prohibit non-storm water discharges into the MS4s, in addition to requiring controls to reduce the discharge of pollutants in storm water to the MEP, and other provisions as USEPA or the State determines are appropriate for the control of pollutants in MS4 discharges.

The requirements in this Order may be more specific or detailed than those enumerated in federal regulations under 40 CFR 122.26 or in the USEPA guidance. However, the requirements have been designed to be consistent with and within the federal statutory mandates described in CWA section 402(p)(3)(B)(ii) and (iii) and the related federal regulations and guidance. Consistent with federal law, all of the

conditions in this Order could have been included in a permit adopted by USEPA in the absence of the in lieu authority of California to issue NPDES permits.

Moreover, the inclusion of numeric WQBELs in this Order does not cause this Order to be more stringent than federal law. Federal law authorizes both narrative and numeric effluent limitations to meet state water quality standards. The inclusion of WQBELs as discharge specifications in an NPDES permit in order to achieve compliance with water quality standards is not a more stringent requirement than the inclusion of BMP based permit limitations to achieve water quality standards (State Water Board Order No. WQ 2006-0012 (*Boeing*)). Therefore, consideration of the factors set forth in CWC section 13241 is not required for permit requirements to implement the effective prohibition on the discharge of non-storm water discharges into the MS4 or for controls to reduce the discharge of pollutants in storm water to the MEP, or other provisions that the San Diego Water Board has determine appropriate to control such pollutants, as those requirements are mandated by federal law.

Included in the provisions of the Order are monitoring and reporting requirements that are designed to demonstrate that the Copermittees are implementing programs to comply with the CWA municipal storm water requirements. CWA section 308(a) and 40 CFR 122.41(h), (j)-(l), 122.44(i) and 122.48 require that all NPDES permits specify monitoring and reporting requirements. Federal regulations applicable to large and medium MS4s (40 CFR 122.26(d)(1)(iv)(D), 122.26(d)(1)(v)(B), 122.26(d)(2)(i)(F), 122.26(d)(2)(iii)(D), 122.26(d)(2)(iv)(B)(2) and 122.42(c)) also specify additional monitoring and reporting requirements. In addition to the federal requirements of the CWA, the San Diego Water Board also has the authority in CWC 13383 to establish monitoring, reporting, and recordkeeping requirements that implement federal and state laws and regulations through NPDES permits.

The monitoring and assessment information that will be reported to the San Diego Water Board is necessary to determine if the Copermittees are making progress toward achieving compliance with the discharge prohibitions, receiving water limitations, and effluent limitations under Provision A of the Order. The monitoring and assessment information that will be reported is also expected to be key to the iterative approach and adaptive management process that is required to be implemented by the Copermittees if they cannot meet the discharge prohibitions and receiving water limitations under the present conditions, which is also part of the requirements under Provision A of the Order.

Notwithstanding the above, the San Diego Water Board has considered cost information in issuing this Order, as discussed below. The San Diego Water Board has also considered all of the evidence that has been presented to the San Diego Water Board regarding the CWC section 13241 factors in adopting this Order. The San Diego Water Board finds that the requirements in this Order are reasonably necessary to protect beneficial uses identified in the Basin Plan and the economic information related to costs of compliance and other CWC section 13241 factors are not sufficient to justify failing to protect those beneficial uses. Where appropriate, the

San Diego Water Board has provided or will consider providing the Copermittees with additional time to implement control measures to achieve final WQBELs and/or water quality standards.

Cost Information

Discussions of the financial and economic ramifications of municipal storm water management programs tend to focus on the significant costs incurred by municipalities in developing and implementing the programs. When considering the cost of implementing the programs, however, it is also important to consider the alternative costs that are incurred when programs are not fully implemented, as well as the economic benefits which result from effective program implementation.

The recent financial and economic conditions have amplified the concerns about the costs incurred by the municipalities in developing and implementing their programs. The reduction in resources resulting from the recent financial and economic conditions has been cited by many of the Copermittees as a justification for reducing the requirements that must be met by their programs. While the recent conditions are a cause for concern in the short term, these programs also have an opportunity to identify and implement improvements and efficiencies before the next period of growth and development, resulting in more effective and sustainable programs over the long term.

In addition, it is very difficult to ascertain the true cost of implementation of the Copermittees' management programs because of inconsistencies in reporting by the Copermittees. Reported costs of compliance for the same program element can vary widely from city to city, often by a very wide margin that is not easily explained.² Despite these problems, efforts have been made to identify management program costs, which can be helpful in understanding the costs of program implementation.

The San Diego Water Board recognizes that the Copermittees will incur costs in implementing this Order, potentially above and beyond the costs from the Copermittees' prior permits. The San Diego Water Board also recognizes that, due to California's current economic condition, many Copermittees currently have limited staff and resources to implement actions to address its MS4 discharges. Based on the economic considerations below, the San Diego Water Board has provided the Copermittees a significant amount of flexibility to choose how to implement the requirements of the Order.

The Order also allows the Copermittees to customize their plans, programs, and monitoring requirements. In the end, it is up to the Copermittees to determine the effective BMPs and measures necessary to comply with this Order. The Copermittees can choose to implement the least expensive measures that are effective in meeting

² LARWQCB, 2003. Review and Analysis of Budget Data Submitted by the Permittees for Fiscal Years 2000-2003. P. 2.

the requirements of this Order. This Order also does not require the Copermittees to fully implement all requirements within a single permit term. Where appropriate, the Board has provided the Copermittees with additional time outside of the permit term to implement control measures to achieve final WQBELs and/or water quality standards.

The San Diego Water Board has considered available cost information associated with compliance with this Order. It is not possible to predict accurately the cost impact of the requirements that involve an unknown level of implementation or that depend on environmental variables that are as yet undefined. Only general conclusions can be drawn from this information.

Estimated Municipal Storm Water Program Implementation Costs

The USEPA, the State Water Board, and the California Regional Water Quality Control Boards (Regional Water Boards) have attempted to evaluate the costs of implementing municipal storm water programs. The assessments have demonstrated that the true costs are difficult to ascertain and reported costs vary widely. In addition, reported fiscal analyses tend to neglect the costs incurred to municipalities when storm water and non-storm water runoff is not effectively managed, which are incurred as a result of pollution, contamination, nuisance, and damage to ecosystems, property, and human health. Nonetheless, they provide a useful context for considering the costs of requirements within Order No. R9-2013-0001.

In 1999, the USEPA reported on multiple studies it conducted to determine the cost of management programs. A study of Phase II municipalities determined that the annual cost of the Phase II program was expected to be \$9.16 per household. The USEPA also studied 35 Phase I municipalities, finding costs to be \$9.08 per household annually, similar to those anticipated for Phase II municipalities.³

The State Water Board commissioned a study by the California State University, Sacramento to assess costs of the Phase I MS4 program. This study includes an assessment of costs incurred by Phase I MS4s throughout the state to implement their programs. Annual cost per household in the study ranged from \$18 to \$46, with the Fresno-Clovis Metropolitan Area representing the lower end of the range, and the City of Encinitas (in San Diego County) representing the upper end of the range.⁴

A study on Phase I MS4 program costs was also conducted by the California Regional Water Quality Control Board, Los Angeles Region (Los Angeles Water Board), where program costs reported in the municipalities' annual reports were assessed. The Los

³ Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68791-68792.

⁴ State Water Board, 2005. NPDES Stormwater Cost Survey. P. ii.

Angeles Water Board estimated that average per household cost to implement the MS4 program in Los Angeles County was \$12.50.⁵

It is important to note that reported program costs are not all attributable to solely complying with MS4 permits. Many program components, and their associated costs, existed before any MS4 permits were ever issued. For example, street sweeping and trash collection costs cannot be solely or even principally attributable to MS4 permit compliance, since these practices have long been expected from and implemented by municipalities.

Therefore, true program cost resulting from MS4 permit requirements is some fraction of reported costs. The California State University, Sacramento study found that only 38 percent of program costs are new costs fully attributable to MS4 permits. The remainder of the program costs was either pre-existing or resulted from enhancement of pre-existing programs.⁶ In 2000, the County of Orange found that even lower amounts of program costs are solely attributable to MS4 permit compliance, reporting that the amount attributable to implement the County of Orange Drainage Area Management Plan (DAMP), was less than 20 percent of the total budget. The remaining 80 percent was attributable to pre-existing programs.⁷ More current data from the County of Orange is not used in this discussion because the County of Orange no longer reports such information.

Estimated Value of Healthy Water Quality

Economic considerations of municipal storm water management programs cannot be limited only to program costs. Evaluation of programs must also consider information on the benefits derived from environmental protection and improvement.⁸ Attention is often focused on municipal storm water management program costs, but the programs must also be viewed in terms of their value to the public.

Placing a value on healthy receiving waters is very difficult. Often the value of receiving waters with good water quality manifests in other forms, such as tourism, recreational opportunities, and/or increased property values. When surface water bodies are degraded, thereby degrading the habitat within and adjacent to the water bodies, the public loses the value and benefits associated with being able to use the area in and around the water bodies. Surface waters that are able to support the beneficial uses designated in the Basin Plan can sustain plants and wildlife that can attract visitors and residents, providing aesthetic, recreational, as well as monetary value to the public. At this time, however, there have been no studies for the San

⁵ Los Angeles Water Board, 2003. Review and Analysis of Budget Data Submitted by the Permittees for Fiscal Years 2000-2003. P. 2.

⁶ State Water Board, 2005. NPDES Stormwater Cost Survey. P. 58.

⁷ County of Orange, 2000. A NPDES Annual Progress Report. P. 60.

⁸ Ribaudo M.O. and D. Heelerstein. 1992, *Estimating Water Quality Benefits: Theoretical and Methodological Issues*. U.S. Department of Agriculture. Technical Bulletin No. 1808.

Diego Region to quantify the added value that surface waters with healthy water quality can provide.

USEPA has estimated that household willingness to pay for improvements in fresh water quality for fishing and boating is approximately \$158-\$210.⁹ This estimate can be considered conservative, since it does not include important considerations such as marine waters benefits, wildlife benefits, or flood control benefits. Another study conducted by California State University, Sacramento reported that the annual household willingness to pay for statewide clean water is approximately \$180.¹⁰

A study conducted by the University of Southern California and University of California, Los Angeles assessed the costs and benefits of implementing various approaches for achieving compliance with the MS4 permits in the Los Angeles region. The study found that non-structural systems would cost \$2.8 billion but provide \$5.6 billion in benefit. If structural systems were determined to be needed, the study found that total costs would be \$5.7 to \$7.4 billion, while benefits could reach \$18 billion.¹¹ Costs are anticipated to be borne over many years, probably at least ten years.

As can be seen, the benefits of the municipal storm water management programs are expected to considerably exceed their costs. Such findings are corroborated by USEPA, which found that the benefits of implementation of its Phase II storm water rule would also outweigh the costs.¹²

⁹ Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68793.

¹⁰ State Water Board, 2005. NPDES Stormwater Cost Survey. P. iv.

¹¹ Los Angeles Water Board, 2004. Alternative Approaches to Stormwater Control.

¹² Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68791.

VII. APPLICABLE STATUTES, REGULATIONS, PLANS AND POLICIES

A. Legal Authorities – Federal Clean Water Act and California Water Code

This Order is issued pursuant to section 402 of the CWA and implementing regulations adopted by the USEPA and chapter 5.5, division 7 of the CWC (commencing with section 13370). This Order serves as an NPDES permit for point source discharges to surface waters. This Order also serves as waste discharge requirements pursuant to article 4, chapter 4, division 7 of the CWC (commencing with section 13260).

The objective of the CWA is “*to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.*” To carry out this objective, the CWA requires the implementation of permit programs to regulate the discharge of pollutants and dredged or fill material to the navigable waters of the U.S. and to regulate the use and disposal of sewage sludge. CWA section 402 provides the legal authority to issue a permit for the discharge of pollutants to waters of the U.S. under the NPDES. The CWA provides that NPDES permits may be issued by states which are authorized to implement the provisions of that act. California became authorized to implement the NPDES permit program on May 14, 1973.

The Porter-Cologne Water Quality Control Act (Division 7, commencing with CWC section 13000) established the State Water Resources Control Board (State Water Board) and nine Regional Water Quality Control Boards (Regional Water Boards) as the principal state agencies with primary responsibility for the coordination and control of water quality. CWC section 13200(f) established the San Diego Water Board, which has the primary responsibility for the coordination and control of water quality in the San Diego Region, which includes all the basins draining into the Pacific Ocean between the southern boundary of the Santa Ana Region and the California-Mexico boundary. The San Diego Water Board implements the CWA through Chapter 5.5 of the CWC, commencing with section 13370. CWC section 13377 provides the San Diego Water Board the legal authority to issue waste discharge requirements to ensure compliance with all applicable provisions of the CWA and acts amendatory thereof or supplementary, thereto, to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance.

CWA section 402(p) requires the USEPA or authorized state to issue NPDES permits for storm water discharges from municipal separate storm sewer systems (MS4s) to waters of the U.S. CWA section 402(p)(3)(B)(ii) requires that NPDES permits for storm water discharges from MS4s “*effectively prohibit non-storm water discharges*” into the MS4s. CWA section 402(p)(3)(B)(iii) requires that NPDES permits for storm water discharges from MS4s to “*require controls to reduce the discharge of pollutants [in storm water] to the maximum extent practicable [MEP], including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control*

of such pollutants.”

The USEPA published implementing regulations (Code of Federal Regulations [CFR] Title 40, Part 122 [40 CFR 122]), which prescribe permit application requirements for storm water discharges from MS4s pursuant to CWA 402(p), on November 16, 1990. The USEPA published an Interpretive Policy Memorandum on Reapplication Requirements for Municipal Separate Storm Sewer Systems, which provided guidance on permit application requirements for regulated MS4s, on May 17, 1996. The federal regulations in 40 CFR 122 and guidance issued by USEPA serve as the foundation for the provisions of Order No. R9-2013-0001. The legal authorities provided by the above statutes and regulations are included as part of the discussions in Section VIII of this Fact Sheet.

B. Legal Authority for the Permit Issued on a Region-wide Basis

CWA section 402(p)(3)(B) provides the San Diego Water Board the legal authority to issue an NPDES permit for the San Diego Region as compared to separate MS4 permits based upon County- and partial County-wide boundaries as they exist within the San Diego Region. CWA section 402(p)(3)(B) states that “*Permits for discharges from municipal storm sewers- (i) may be issued on a system- or jurisdiction-wide basis*” The federal regulations in 40 CFR 122.26(a)(1)(v) also state that the San Diego Water Board “*may designate dischargers from municipal separate storm sewers on a system-wide or jurisdiction-wide basis. In making this determination, the [San Diego Water Board] may consider the following factors: (A) the location of the discharge with respect to waters of the United States; (B) the size of the discharge; (C) the quantity and nature of the pollutants discharged to waters of the United States; and (D) other relevant factors.*”

More specifically, the federal regulations provide that for large and medium MS4 systems, the San Diego Water Board may issue a regional permit. Specifically, the federal regulation in 40 CFR 122.26(a)(3) provide:

- "(ii) The Director may either issue one system-wide permit covering all discharges from municipal separate storm sewers within a large or medium municipal storm sewer system or issue distinct permits for appropriate categories of discharges within a large or municipal separate storm sewer system including, but not limited to: all discharges owned or operated by the same municipality; located within the same jurisdiction; all discharges within a system that discharge to the same watershed; discharges within a system that are similar in nature; or for individual discharges from municipal separate storm sewers within the system.*
- (iii) The operator of a discharge from a municipal separate storm sewer which is part of a large or medium municipal separate storm sewer system must either: (A) Participate in a permit application (to be a permittee or a co-permittee) with one or more other operator of discharges from the large or medium municipal*

storm sewer system which covers all, or a portion of all, discharges from the municipal separate storm sewer system; (B) Submit a distinct permit application which only covers discharges from the municipal separate storm sewers for which the operator is responsible; or (C) A regional authority may be responsible for submitting a permit application under the following guidelines....

- (iv) One permit application may be submitted for all or a portion of all municipal separate storm sewers within adjacent or interconnected large or medium municipal separate storm sewer systems. The Director may issue one systemwide permit covering all, or a portion of all municipal separate storm sewers in adjacent or interconnected large or medium municipal separate storm sewer systems.*
- (v) Permits for all or a portion of all discharges from large or medium municipal separate storm sewer systems that are issued on a system-wide, jurisdiction-wide, watershed or other basis may specify different conditions relating to different discharges covered by the permit, including different management programs for different drainage areas which contribute storm water to the system."*

Based on these regulations, the San Diego Water Board may issue a region-wide MS4 permit. The regulations also clarify that the permit may include different conditions for separate discharges covered by the permit. This allows the San Diego Water Board to ensure that suitable water quality conditions and provisions are identified for each watershed.

The USEPA's responses to comments in the Final Rule for the above-mentioned regulations also make it clear that the permitting authority, in this case the San Diego Water Board, has the flexibility to establish system- or region-wide, permits. In the Final Rule published in the Federal Register and containing the responses to comments, USEPA notes that 40 CFR 122.26(a)(3)(iv) would allow an entire system in a geographical region under the purview of a State agency to be designated under a permit.¹³ USEPA also states that many commenters wanted to allow the permitting authority broad discretion to establish system-wide permits, and that EPA believes that paragraphs 40 CFR 122.26 (a)(1)(v) and (a)(3)(ii) allow for such broad discretion.¹⁴

This Order creates watershed requirements that apply to multiple counties. The regional nature of this Order will ensure consistency of regulation within watersheds and is expected to result in overall cost savings for the Copermitees. Managing storm water on a regional and watershed basis is expected to result in improved water quality, as the Order focuses on monitoring and management practices necessary to improve each watershed rather than political boundaries. A single permit also allows the San Diego Water Board staff to expend fewer resources developing successive multiple permits and allows more resources to be devoted to working cooperatively with all three

¹³ 55 Federal Register 47990-01, 48042

¹⁴ Ibid

current groups of Copermittees to ensure implementation of this Order results in improved water quality.

C. Federal and California Endangered Species Acts

This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2115.5) or the Federal Endangered Species Act (16 United States Code [USC] sections 1531 to 1544). This Order requires compliance with requirements to protect the beneficial uses of waters of the U.S. The Copermittees are responsible for meeting all requirements of the applicable Endangered Species Act.

D. California Environmental Quality Act

The action to adopt an NPDES Permit is exempt from the provisions of Chapter 3 of the California Environmental Quality Act (CEQA) (Public Resources Code section 21100, et seq.) pursuant to CWC section 13389. (*County of Los Angeles v. Cal. Water Boards* (2006) 143 Cal.App.4th 985.)

E. State and Federal Regulations, Plans and Policies

The legal authority provided by the following regulations, plans, and policies are also included as part of the discussions in Section VIII of this Fact Sheet.

Water Quality Control Plan for the San Diego Basin

The CWA requires the San Diego Water Board to establish water quality standards for each water body in its region. Water quality standards include beneficial uses, water quality objectives and criteria that are established at levels sufficient to protect beneficial uses, and an antidegradation policy to prevent degrading of waters. On September 8, 1994, the San Diego Water Board adopted the *Water Quality Control Plan for the San Diego Basin* (Basin Plan). The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters in the San Diego Region. The San Diego Water Board has amended the Basin Plan on multiple occasions since 1994. In addition, the Basin Plan implements State Water Board Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Beneficial uses applicable to the surface water bodies that receive discharges from the MS4s within the San Diego Region generally include those listed below:

The Basin Plan identifies the following existing and potential beneficial uses for inland surface waters in the San Diego Region:

- Municipal and Domestic Supply (MUN)
- Agricultural Supply (AGR)
- Industrial Process Supply (PROC)
- Industrial Service Supply (IND)
- Ground Water Recharge (GWR)
- Contact Water Recreation (REC1)
- Non-contact Water Recreation (REC2)
- Warm Freshwater Habitat (WARM)
- Cold Freshwater Habitat (COLD)
- Wildlife Habitat (WILD)
- Rare, Threatened, or Endangered Species (RARE)
- Freshwater Replenishment (FRSH)
- Hydropower Generation (POW)
- Preservation of Biological Habitats of Special Significance (BIOL)

The following additional existing and potential beneficial uses are identified for coastal waters of the San Diego Region:

- Navigation (NAV)
- Commercial and Sport Fishing (COMM)
- Estuarine Habitat (EST)
- Marine Habitat (MAR)
- Aquaculture (AQUA)
- Migration of Aquatic Organisms (MIGR)
- Spawning, Reproduction, and/or Early Development (SPWN)
- Shellfish Harvesting (SHELL)

Pursuant to Water Code sections 13263 and 13377, the requirements of this Order implement the Basin Plan.

Water Quality Control Plan for Ocean Waters of California, California Ocean Plan

In 1972, the State Water Board adopted the Water Quality Control Plan for Ocean Waters of California, California Ocean Plan (Ocean Plan). The State Water Board adopted the most recent amended Ocean Plan on September 15, 2009. The Office of Administrative Law approved it on March 10, 2010. On October 8, 2010, USEPA approved the 2009 Ocean Plan. The Ocean Plan is applicable, in its entirety, to ocean waters of the State. In order to protect beneficial uses, the Ocean Plan establishes water quality objectives and a program of implementation. Pursuant to Water Code sections 13263 and 13377, the requirements of this Order implement the Ocean Plan. The Ocean Plan identifies the beneficial uses of ocean waters of the State to be

protected as summarized below:

- Industrial water supply
- Water contact and non-contact recreation, including aesthetic enjoyment; navigation
- Commercial and sport fishing
- Mariculture
- Preservation and enhancement of designated Areas of Special Biological Significance
- Rare and endangered species
- Marine habitat
- Fish spawning and shellfish harvesting

On March 20, 2012, the State Water Board approved Resolution No. 2012-0012 approving an exception to the Ocean Plan prohibition against discharges to Areas of Special Biological Significance (ASBS) for certain nonpoint source discharges and NPDES permitted municipal storm water discharges. [On June 19, 2012, the State Water Board adopted Order No. 2012-0031, amending Order No. 2012-0012 to require pollutant load reductions to be achieved within six years for the ASBS Compliance Plans, section A.2.d\(2\) and ASBS Pollution Prevention Plans, section B.2.b\(2\).](#) The State Water Board Resolution No. 2012-0012, [as amended](#) requires monitoring and testing of marine aquatic life and water quality in several ASBS to protect California's coastline during storms when rain water overflows into coastal waters. Specific terms, prohibitions, and special conditions were adopted to provide special protections for marine aquatic life and natural water quality in ASBS. The City of San Diego's municipal storm water discharges to the San Diego Marine Life Refuge in La Jolla, and the City of Laguna Beach's municipal storm water discharges to the Heisler Park ASBS are subject terms and conditions of State Water Board Resolution No. 2012-0012, [as amended](#). The Special Protections contained in Attachment B to State Water Board Resolution No. 2012-0012, [as amended](#), applicable to these discharges, are ~~hereby~~ incorporated in [Attachment A of](#) this Order ~~as if fully set forth herein~~. Requirements of this Order implement the Ocean Plan.

Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality

On September 16, 2008, the State Water Board adopted the Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality (Sediment Quality Control Plan). The Sediment Quality Control Plan became effective on August 25, 2009. The Sediment Quality Control Plan establishes 1) narrative sediment quality objectives for benthic community protection from exposure to contaminants in sediment and to protect human health, and 2) a program of implementation using a multiple lines of evidence approach to interpret the narrative sediment quality objectives. Requirements of this Order implement the Sediment Quality Control Plan.

Antidegradation Policy

Federal regulations (40 CFR 131.12) require that the state water quality standards include an antidegradation policy consistent with the federal antidegradation policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16 ("Statement of Policy with Respect to Maintaining the Quality of the Waters of the State"). State Water Board Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law.

The San Diego Water Board's Basin Plan implements and incorporates by reference both the State and federal antidegradation policies. State Water Board Resolution No. 68-16 and 40 CFR 131.12 require the San Diego Water Board to maintain high quality waters of the State until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in the San Diego Water Boards' policies. State Water Board Resolution No. 68-16 requires that discharges of waste be regulated to meet best practicable treatment or control to assure that pollution or nuisance will not occur and the highest water quality consistent with the maximum benefit to the people of the State be maintained.

The discharges permitted in this Order are consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution No. 68-16. Many of the water bodies within the area covered by this Order are of high quality. The Order requires the Copermitees to meet best practicable treatment or control to meet water quality standards. As required by 40 CFR 122.44(a), the Copermitees must comply with the "maximum extent practicable" technology-based standard set forth in CWA section 402(p) for discharges of pollutants in storm water from the MS4s.

Many of the waters within the area covered by this Order are impaired and listed on the State's CWA Section 303(d) List and the San Diego Water Board has established TMDLs to address the impairments. This Order requires the Copermitees to comply with permit provisions to implement the WLAs set forth in the TMDLs in order to restore the beneficial uses of the impaired water bodies consistent with the assumptions and requirements of the TMDLs. This Order includes requirements to develop and implement storm water management programs, achieve WQBELs, and effectively prohibit non-storm water discharges into the MS4. The issuance of this Order does not authorize an increase in the amount of discharge of waste.

Anti-Backsliding Requirements

CWA sections 402(o) and 303(d)(4) and 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations or conditions may be relaxed. All effluent limitations and other conditions in this Order are at least as stringent as the effluent limitations in the previous permits issued to the San Diego County Copermitees, the Orange County Copermitees and the Riverside County Copermitees.

Clean Water Act Section 303(d) List

CWA section 303(d)(1) requires each State to identify specific water bodies within its boundaries where water quality standards are not being met or are not expected to be met after implementation of technology-based effluent limitations on point sources. Water bodies that do not meet water quality standards are considered impaired and are placed on the state's "303(d) List." Periodically, USEPA approves the State's 303(d) List.

Most recently, USEPA approved the State's 2010 303(d) List of impaired water bodies on October 11, 2011, which includes certain receiving waters in the San Diego Region. For each listed water body, the state or USEPA is required to establish a TMDL of each pollutant impairing the water quality standards in that water body. A TMDL is a tool for implementing water quality standards and is based on the relationship between pollution sources and in-stream water quality conditions. The TMDL establishes the allowable pollutant loadings for a water body and thereby provides the basis to establish water quality-based controls. These controls should provide the pollution reduction necessary for a water body to meet water quality standards.

A TMDL is the sum of the allowable pollutant loads of a single pollutant from all contributing point sources (the waste load allocations or WLAs) and non-point sources (load allocations of LAs) plus the contribution from background sources and a margin of safety (40 CFR 130.2(i)). MS4 discharges are considered point source discharges. For 303(d)-listed water bodies and pollutants in the San Diego Region, the San Diego Water Board or USEPA develops and adopts TMDLs that specify these requirements.

Since 2002, the San Diego Water Board has established ~~six (6)~~ seven (7) TMDLs to remedy water quality impairments in various water bodies within the San Diego Region (see Attachment E to the Order). These TMDLs identify MS4 discharges as a source of pollutants to these water bodies, and, as required, establish WLAs for MS4 discharges to reduce the amount of pollutant discharged to receiving waters. CWA section 402(p)(3)(B)(iii) requires the San Diego Water Board to impose permit conditions, including: "management practices, control techniques and system, design and engineering methods, and *such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.*" (Emphasis added.) CWA section 402(a)(1) also requires states to issue permits with conditions necessary to carry out the provisions of the CWA. Federal regulations also require that NPDES permits contain WQBELs consistent with the assumptions and requirements of all available WLAs (40 CFR 122.44(d)(1)(vii)(B)). CWA section 13377 also requires that NPDES permits include limitations necessary to implement water quality control plans. Therefore, this Order includes WQBELs and other provisions to implement the TMDL WLAs assigned to Copermitees regulated by this Order.

Other Regulations, Plans and Policies

This Order implements all other applicable federal regulations and State regulations, plans and policies, including the California Toxics Rule at 40 CFR 131.38 (Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California Rule [California Toxics Rule or CTR]), and State Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP).

F. Unfunded State Mandates

Article XIII B, Section 6(a) of the California Constitution provides that whenever “any state agency mandates a new program or higher level of service on any local government, the state shall provide a subvention of funds to reimburse that local government for the costs of the program or increased level of service.” The requirements of this Order do not constitute state mandates that are subject to a subvention of funds for several reasons, including, but not limited to, the following.

First, the requirements of this Order do not constitute a new program or a higher level of service as compared to the requirements contained in the previous Fourth Term Permits. The overarching requirement to impose controls to reduce the pollutants in discharges from MS4s is dictated by the CWA and is not new to this permit cycle (33 USC section 1342(p)(3)(B)). The inclusion of new and advanced measures as the MS4 programs evolve and mature over time is anticipated under the CWA (55 FR 47990, 48052 (Nov. 16, 1990)), and to the extent requirements in this Order are interpreted as new advanced measures, they do not constitute a new program or higher level of service.

Second, and more broadly, mandates imposed by federal law, rather than by a state agency, are exempt from the requirement that the local agency’s expenditures be reimbursed (Cal. Const., art. XIII B, section 9, subd. (b)). This Order implements federally mandated requirements under the CWA and its requirements are therefore not subject to subvention of funds. This includes federal requirements to effectively prohibit non-storm water discharges, to reduce the discharge of pollutants in storm water to the MEP, and to include such other provisions as the Administrator or the State determines appropriate for the control of such pollutants (33 USC section 1342(p)(3)(B)). Federal cases have held these provisions require the development of permits and permit provisions on a case-by-case basis to satisfy federal requirements. (*Natural Resources Defense Council, Inc., v. USEPA* (9th Cir. 1992) 966 F.2d 1292, 1308, fn. 17.)

The authority exercised under this Order is not reserved state authority under the CWA’s savings clause (cf. *Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4th 613, 627-628 [relying on 33 USC section 1370, which allows a state to develop requirements which are not “less stringent” than federal requirements]), but instead is part of a federal mandate to develop pollutant reduction requirements for municipal separate storm sewer systems. To this extent, it is entirely federal authority that forms the legal basis to establish the permit provisions. (See, *City of Rancho Cucamonga v. Regional Water Quality Control Board, Santa Ana Region* (2006) 135 Cal.App.4th 1377, 1389; *Building Industry Ass’n of San Diego Co. v. State Water Resources Control Bd.* (2004) 124 Cal.App.4th 866, 882-883.)

The MEP standard is a flexible standard that balances a number of considerations, including technical feasibility, cost, public acceptance, regulatory compliance, and effectiveness. (*Building Ind. Ass’n., supra*, 124 Cal.App.4th at pp. 873-874, 889.) Such

considerations change over time with advances in technology and with experience gained in storm water management (55 FR 47990, 48052 (Nov. 16, 1990)). Accordingly, a determination of whether the conditions contained in this Order exceed the requirements of federal law cannot be based on a point by point comparison of the permit conditions and the minimum control measures that are required “at a minimum” to reduce pollutants to the maximum extent practicable and to protect water quality (40 CFR 122.34). Rather, the appropriate focus is whether the permit conditions, as a whole, exceed the MEP standard.

In recent months, the County of Los Angeles and County of Sacramento Superior Courts have granted writs setting aside decisions of the Commission on State Mandates that held certain requirements in Phase I permits constituted unfunded mandates. In both cases, the courts have found that the correct analysis in determining whether an MS4 permit constituted a state mandate was to evaluate whether the permit as a whole exceeds the MEP standard. (*State of Cal. v. Comm. on State Mandates* (Super. Ct. Sacramento County, 2012, No. 34-2010-80000604), *State of California v. County of Los Angeles* (Super. Ct. Los Angeles County, 2011, No. BS130730.) Both cases are currently pending appeal.

The requirements of the Order, taken as a whole rather than individually, are necessary to reduce the discharge of pollutants to the MEP and to protect water quality. The San Diego Water Board finds that the requirements of the Order are practicable, do not exceed federal law, and thus do not constitute an unfunded mandate. These findings are the expert conclusions of the principal state agency charged with implementing the NPDES program in California (CWC sections 13001, 13370).

It should also be noted that the provisions in this Order to effectively prohibit non-storm water discharges are also mandated by the CWA (33 USC section 1342(p)(3)(B)(ii)). Likewise, the provisions of this Order to implement TMDLs are federal mandates. The CWA requires TMDLs to be developed for water bodies that do not meet federal water quality standards (33 USC section 1313(d)). Once the USEPA or a state establishes or adopts a TMDL, federal law requires that permits must contain effluent limitations consistent with the assumptions and requirements of any applicable waste load allocation in a TMDL (40 CFR 122.44(d)(1)(vii)(B)).

Third, the local agency Copermittees’ obligations under this Order are similar to, and in many respects less stringent than, the obligations of non-governmental dischargers who are issued NPDES permits for storm water discharges. With a few inapplicable exceptions, the CWA regulates the discharge of pollutants from point sources (33 USC section 1342) and the Porter-Cologne Act regulates the discharge of waste (CWC section 13263), both without regard to the source of the pollutant or waste. As a result, the “costs incurred by local agencies” to protect water quality reflect an overarching regulatory scheme that places similar requirements on governmental and non-governmental dischargers. (See *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 57-58 [finding comprehensive workers’ compensation scheme did not create a cost for local agencies that was subject to state subvention].)

The CWA and the Porter-Cologne Act largely regulate storm water with an even hand, but to the extent there is any relaxation of this even-handed regulation, it is in favor of the local agencies. Generally, the CWA requires point source dischargers, including dischargers of storm water associated with industrial or construction activity, to comply strictly with water quality standards (33 USC section 1311(b)(1)(C); *Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d 1159, 1164-1165 [noting that industrial discharges must strictly comply with water quality standards]). As discussed in prior State Water Board decisions, certain provisions of this Order do not require strict compliance with water quality standards (State Water Board Order No. WQ 2001-0015, p. 7). Those provisions of this Order regulate the discharge of waste in municipal storm water under the CWA's MEP standard, not the BAT/BCT standard that applies to other types of discharges. These provisions, therefore, regulate the discharge of waste in municipal storm water more leniently than the discharge of waste from non-governmental sources.

Fourth, the Copermittees have requested permit coverage in lieu of compliance with the complete prohibition against the discharge of pollutants contained in CWA section 301(a) (33 USC section 1311(a)). To the extent that the local agency Copermittees have voluntarily availed themselves of the permit, the program is not a state mandate. (*Accord, County of San Diego v. State of California* (1997) 15 Cal.4th 68, 107-108.)

Fifth, the local agency Copermittees' responsibility for preventing discharges of waste that can create conditions of pollution or nuisance from conveyances that are within their ownership or control under state law predates the enactment of Article XIII B, Section (6) of the California Constitution.

Finally, even if any of the permit provisions could be considered unfunded mandates, under Government Code section 17556, subdivision (d), a state mandate is not subject to reimbursement if the local agency has the authority to charge a fee. The local agency Copermittees have the authority to levy service charges, fees, or assessments sufficient to pay for compliance with this Order, subject to certain voting requirements contained in the California Constitution. (See Cal. Const., Art. XIII D, section 6, subd. (c); see also *Howard Jarvis Taxpayers Ass'n v. City of Salinas* (2002) 98 Cal.App.4th 1351, 1358-1359.) The Fact Sheet demonstrates that numerous activities contribute to the pollutant loading in the MS4. Local agencies can levy service charges, fees, or assessments on these activities, independent of real property ownership. (See, e.g., *Apartment Ass'n of Los Angeles County, Inc., v. City of Los Angeles* (2001) 24 Cal.4th 830, 842 [upholding inspection fees associated with renting property].) The authority and ability of a local agency to defray the cost of a program without raising taxes indicates that a program does not entail a cost subject to subvention. (*Clovis Unified School Dist. V. Chiang* (2010) 188 Cal.App.4th 794, 812, citing *Connell v. Sup. Ct.* (1997) 59 Cal.App.4th 382, 401; *County of Fresno v. State of California* (1991) 53 Cal. 3d. 482, 487-488.)

VIII. PROVISIONS

The provisions (i.e. NPDES permit requirements) of the Order are discussed below.

A. Prohibitions and Limitations

Purpose: Provision A includes the prohibitions and limitations requirements that are the foundation of all the subsequent requirements included in the Order. Compliance with the prohibitions and limitations will restore and protect receiving waters from impacts that may be caused by discharges into and from the Copermittees' MS4s and ultimately achieve the objective of the CWA.

In meeting the requirements set forth in the Order, the Copermittees must be cognizant that the prohibitions and limitations exist and will be the standard by which the San Diego Water Board will be measuring the progress and success of their implementation of the NPDES permit requirements.

Discussion: The objective of the CWA is to “*restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.*” The CWA requires the implementation of NPDES permit programs to regulate discharges of pollutants and dredged or fill material to the navigable waters of the U.S. For discharges into and from MS4s, the CWA requires the NPDES permits to “*effectively prohibit non-stormwater discharges into the storm sewers*” and “*require controls to reduce the discharge of pollutants [in storm water] to the maximum extent practicable.*”

Provision A includes limitations, consistent with the requirements of the CWA for discharges from MS4s. Provision A expresses these limitations as discharge prohibitions, receiving water limitations, and effluent limitations. Compliance with the discharge prohibitions and receiving water limitations is also explicitly described, in conformance with precedential State Water Board Orders.

More specific and detailed discussions of the requirements of Provision A are provided below.

Provision A.1 (Discharge Prohibitions) prohibits the discharge of specific types of waste into and/or from the Copermittees' MS4s.

Provision A.1.a restates and reiterates Basin Plan Waste Discharge Prohibition 1, by prohibiting discharges into and from MS4s in a manner causing, or threatening to cause, a condition of pollution, contamination, or nuisance in receiving waters of the

state. The terms pollution,¹⁵ contamination,¹⁶ and nuisance¹⁷ are defined under CWC 13050. Provision A.1.c incorporates all the waste discharge prohibitions of the Basin Plan into the requirements of the Order. The waste discharge prohibitions from the Basin Plan have been reproduced and provided in Attachment A to the Order.

Provision A.1.b requires non-storm water discharges into the MS4s to be effectively prohibited, consistent with the requirements of the CWA for MS4 permits to “*effectively prohibit non-stormwater discharges into the storm sewers.*” The effective prohibition is required to be implemented by each Copermittee within its jurisdiction through the illicit discharge detection and elimination requirements under Provision E.2. The prohibition does not apply to NPDES permitted discharges into the Copermittees’ MS4s.

The CWA employs the strategy of prohibiting the discharge of any pollutant from a point source into waters of the United States unless the discharger of the pollutant(s) obtains an NPDES permit pursuant to CWA Section 402. The 1987 amendment to the CWA includes provision 402(p) that specifically addresses NPDES permitting requirements for storm water discharges from MS4s. CWA section 402(p) prohibits the discharge of pollutants from specified MS4s to waters of the U.S. except as authorized by an NPDES permit and identifies two substantive standards for MS4 storm water permits. MS4 permits (1) “*shall include a requirement to effectively prohibit nonstormwater discharges into the storm sewers*” and (2) “*shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or State determines appropriate for the control of such pollutants.*” (CWA section 402(p)(3)(B)(ii-iii).)

In November 1990, the USEPA published regulations addressing storm water discharges from MS4s (55 FR 47990 and following (Nov. 16, 1990) (Phase I Final Rule)). The regulations establish minimum requirements for MS4 permits, and generally focus on the requirement that MS4s implement programs to reduce the amount of pollutants found in storm water discharges to the MEP. The CWA’s municipal storm water MEP standard does not require storm water discharges to strictly meet water quality standards, as is required for other NPDES permitted

¹⁵ CWC 13050(l): “(1) ‘Pollution’ means an alteration of the quality of waters of the state by waste to a degree which unreasonably affects either of the following: (A) The water for beneficial uses. (B) Facilities which serve beneficial uses. (2) ‘Pollution’ may include “contamination.

¹⁶ CWC 13050(k): “Contamination’ means an impairment of the quality of waters of the state by waste to a degree which creates a hazard to public health through poisoning or through the spread of disease. ‘Contamination’ includes any equivalent effect resulting from the disposal of waste, whether or not waters of the state are affected.”

¹⁷ CWC 13050(m): “Nuisance’ means anything which meets all of the following requirements: (1) Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property. (2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal. (3) Occurs during, or as a result of, the treatment or disposal of wastes.”

discharges. Compliance is achieved through an iterative approach of continuous implementation of improved BMPs. This distinction reflects Congress's recognition that variability in flow and intensity of storm events render difficult strict compliance with water quality standards by MS4 permittees. In describing the controls that permits must include to reduce pollutants in storm water discharges to the MEP, the statute (CWA section 402(p)(3)(B)(iii)) states that the controls shall include: "*management practices, control techniques and system, design and engineering methods, and such other provisions as the [permit writer] determines appropriate for the control of such pollutants.*"

In contrast, non-storm water discharges from the MS4 that are not authorized by separate NPDES permits are subject to requirements under the NPDES program, including discharge prohibitions, technology based effluent limitations and water quality-based effluent limitations (40 CFR 122.44). The regulations also require the Copermitee's program to include an element to detect and remove illicit discharges and improper disposal into the storm sewer (40 CFR 122.26(d)(2)(iv)(B)).

While "non-storm water" is not defined in the CWA or federal regulations, the federal regulations (at 40 CFR 122.26(b)(2)) define "*illicit discharge*" as "*any discharge to a municipal separate storm sewer that is not composed entirely of storm water and that is not covered by an NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer and discharges resulting from fire fighting activities).*" This definition is the most closely applicable definition of "non-storm water" contained in federal law. As stated in the Phase I Final Rule, USEPA added the illicit discharge program requirement to begin implementation of the 'effective prohibition' requirement to detect and control non-storm water discharges to their municipal system.

Thus, federal law mandates that permits issued to MS4s must require management practices that will result in reducing storm water pollutants to the MEP yet at the same time requires that non-storm water discharges be effectively prohibited from entering the MS4. "Effectively" prohibit does not mean that non-storm water discharges are authorized to be discharged into and from the Copermitees' MS4s. The Phase I Final Rule clarifies what "effectively prohibit" means (55 FR 47995):

"Section 402(p)(3)(B) requires that permits for discharges from municipal separate storm sewers require the municipality to "effectively prohibit" non-storm water discharges from the municipal separate storm sewer...Ultimately, such non-storm water discharges through a municipal separate storm sewer must either be removed from the system or become subject to an NPDES permit (other than the permit for the discharge from the municipal separate storm sewer)" [Emphasis added].

Consistent with federal law, unless non-storm water discharges to the MS4 are authorized by a separate NPDES permit, non-storm water discharges are

appropriately subject to the effective prohibition requirement in the CWA and Regional Water Boards are not limited by the iterative MEP approach to storm water regulation in crafting appropriate regulations for non-storm water discharges.

The federal regulations (40CFR122.26(d)(2)(i)(B)) require the Copermittees to establish the legal authority which authorizes or enables the Copermittees to prohibit illicit discharges to the MS4s. The federal regulations (40 CFR 122.26(d)(2)(vi)(B)(1)) require the Copermittees to “*implement and enforce an ordinance, order or similar means*” to prevent non-storm water discharges to their MS4s. Thus, the Copermittees are required to “*effectively*” prohibit non-storm water discharges to their MS4s through enforcing their legal authority established under “*ordinance, order or similar means*” and either remove those discharges to their MS4s, or require those discharges to obtain coverage under a separate NPDES permit. More detail about the program that must be implemented to “*effectively*” prohibit non-storm water discharges to the Copermittees’ MS4s is provided under the discussion for Provision E.2.

Provision A.1.d was included to be consistent Resolution No. 2012-0012, adopted by the State Water Board on March 20, 2012. Provision A.1.d prohibits discharges from MS4s to Areas of Special Biological Significance (ASBS), except for storm water discharges from the City of San Diego’s MS4 to the San Diego Marine Life Refuge in La Jolla, and the City of Laguna Beach to the Heisler Park ASBS subject to the Special Protections contained in Attachment B to State Water Board Resolution No. 2012-0012. The pertinent Special Protections contained in Attachment B to State Water Board Resolution No. 2012-0012 are provided in Attachment A to the Order.

Provision A.2 (Receiving Water Limitations) specifies the condition of the receiving waters that must be achieved when there are discharges from the Copermittees’ MS4s. Receiving water limitations are included in all NPDES permits issued pursuant to the CWA section 402. CWA section 402(p)(3)(B)(iii) authorizes the inclusion of “*such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.*” This requirement gives USEPA or the State permitting authority, in this case the San Diego Water Board, discretion to determine what permit conditions are necessary to control pollutants.

In its Phase I Final Rule (see 55 FR 47990, 47994 (Nov. 16, 1990)), USEPA elaborated on these requirements, stating that, “*permits for discharges from municipal separate storm sewer systems must require controls to reduce the discharge of pollutants to the maximum extent practicable, and where necessary water quality-based controls.*” USEPA reiterated in its Phase II Final Rule (64 FR 68722, 68737), that MS4 “*permit conditions must provide for attainment of applicable water quality standards (including designated uses), allocations of pollutant loads established by a TMDL, and timing requirements for implementation of a TMDL.*” CWC section 13377 also requires that NPDES permits include limitations necessary to implement water quality control plans. Both the State Water Board and the San Diego Water Board have previously concluded that discharges from the MS4 contain pollutants that have

the reasonable potential to cause or contribute to excursions above water quality standards. As such, inclusion of receiving water limitations is appropriate to control MS4 discharges.

The inclusion of receiving water limitations is also consistent with the Ninth Circuit Court of Appeals' ruling in *Defenders of Wildlife v. Browner* (191 F.3d 1159, 1166 (1999)) that the permitting authority has discretion regarding the nature and timing of requirements that it includes as MS4 permit conditions to attain water quality standards. The Ninth Circuit Court of Appeals recently explained that, "[w]ater quality standards are used as a supplementary basis for effluent limitations [guidelines] so that numerous dischargers, despite their individual compliance with technology based effluent limitations, can be regulated to prevent water quality from falling below acceptable levels." (*Natural Resources Defense Council v. County of Los Angeles* (9th Cir. 2011) 673 F.3d 880, 886 (revd. On other grounds and remanded by *Los Angeles County Flood Control District v. Natural Resources Defense Council* (133 S.Ct. 710 (2013)))

The receiving water limitations included in this Order consist of all applicable numeric or narrative water quality objectives or criteria, or limitations to implement the applicable water quality objectives or criteria, for receiving waters as contained in the Basin Plan or in water quality control plans or policies adopted by the State Water Board, including State Water Board Resolution No. 68-16, or in federal regulations, including but not limited to 40 CFR 131.12 and 131.38. The water quality objectives in the Basin Plan and other State Water Board plans and policies have been approved by USEPA and combined with designated beneficial uses constitute the water quality standards required under federal law.

Provision A.2.a requires that discharges from the Copermittees' MS4s must not cause or contribute to the violation of water quality standards in receiving waters. The water quality standards of the receiving waters must be protected from the impacts that may be caused by the Copermittees' MS4 discharges. Water quality standards applicable to the surface waters in the San Diego Region must be achieved through meeting the technology based standard of MEP through an iterative process of improved management actions. Provision A.2.a is also consistent with State Water Board Order WQ 99-05 precedent-setting language requiring discharges from MS4s to attain receiving water quality standards. The water quality control plans and policies with water quality standards applicable to the waters in the San Diego Region are included under Provision A.2.a.

Provisions A.2.b was included to be consistent with the requirements of State Water Board Resolution No. 2012-0012, adopted on March 20, 2012.

Provision A.3 (Effluent Limitations) specifies the condition of the discharges from the Copermittees' MS4s that must be achieved if and when there are discharges.

Consistent with CWA section 301(b)(1)(A) and 40 CFR 122.44(a), Provision A.3.a includes the technology-based effluent limitations that must be included in the Order. The technology-based effluent limits, representing the minimum level of control that must be imposed in a permit under CWA section 402, requires that pollutants in discharges of storm water from the Copermittees' MS4s be reduced to the MEP. This provision applies specifically to storm water discharges. Non-storm water discharges must be effectively prohibited, as required under Provision A.1.b. Non-storm water (dry weather) discharges from the MS4 are not considered storm water (wet weather) discharges and therefore are not subject to the MEP standard.

The technology-based MEP standard is an ever-evolving, flexible, and advancing concept. Neither Congress nor USEPA has specifically defined the term "maximum extent practicable." Congress established this flexible MEP standard so that the administrative bodies would have "*the tools to meet the fundamental goals of the Clean Water Act in the context of storm water pollution.*" (*Building Industry Ass'n of San Diego County v. State Water Resources Control Bd.* (2004) 124 Cal.App.4th 866, 884.) As knowledge about controlling storm water runoff and discharges continues to evolve, so does the knowledge which constitutes MEP. Reducing the discharge of pollutants in storm water from the MS4 to the MEP requires the Copermittees to assess each program component and revise activities, control measures, BMPs, and measurable goals, as necessary to meet MEP.

The San Diego Water Board or the State Water Board ultimately define MEP, and may include requirements that provide specific guidance on what is expected to demonstrate MEP. It is the responsibility of the Copermittees to propose actions that implement BMPs to reduce storm water pollution to the MEP. In other words, the Copermittees' runoff management programs developed and implemented under the Order are the Copermittees' proposals for achieving MEP. Their total collective and individual activities conducted pursuant to their runoff management programs become their proposal for achieving MEP as it applies both to their overall effort, as well as to specific activities. Provisions B through E of the Order provides a minimum framework to guide the Copermittees in achieving the MEP standard for discharges of pollutants in storm water.

Provision A.3.b incorporates any water quality based effluent limitations (WQBELs) applicable to the MS4s established for TMDLs adopted and approved for the San Diego Region and requires the Copermittees to comply with those WQBELs. This is consistent with 40 CFR 122.44(d)(1)(vii)(B), which requires that NPDES permits to incorporate WQBELs "*developed to protect a narrative water quality criterion, a numeric water quality criterion, or both...consistent with the assumptions and requirements of any available wasteload allocation for the discharge...*"

Pursuant to CWA section 303(d), for surface water bodies identified as impaired by one or more pollutants, the San Diego Water Board is required to establish TMDLs "*at a level necessary to implement the applicable water quality standards with seasonal*

variations and a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality.” The TMDLs identify sources of the pollutants causing the impairments and assign portions of the TMDL as WLAs to point sources, which include MS4s.

WLAs must be expressed in NPDES permits as WQBELs, which may include one or more numeric components such as numeric effluent limits, and/or receiving water limitations, and/or BMP requirements. Because numeric targets for TMDLs typically include a component that will be protective of water quality standards, a TMDL will likely include one or more numeric receiving water limitations and/or effluent limitations as part of the assumptions or requirements of the TMDL. Any numeric receiving water limitations and/or effluent limitations developed as part of the assumptions or requirements of a TMDL must be incorporated and included as part of WQBELs for the MS4s.

Because the development and approval of new TMDLs, or modification of existing TMDLs, may occur during the term of this Order, the specific provisions of those TMDLs, including effluent limitations applicable to MS4s are provided within Attachment E to the Order. Attachment E will be updated with new TMDLs and modifications to existing TMDLs in a timely manner as they occur.

Provision A.4 (Compliance with Discharge Prohibitions and Receiving Water Limitations) describes the process required to be implemented by the Copermittees if compliance with the discharge prohibitions of Provisions A.1.a and A.1.c and receiving water limitations of Provision A.2.a are not being achieved under current conditions.

In its Phase II Stormwater Regulations, Final Rule, USEPA states that MS4 “*permit conditions must provide for attainment of applicable water quality standards (including designated uses), allocations of pollutant loads established by a TMDL, and timing requirements for implementation of a TMDL.*”¹⁸ In a series of comment letters on MS4 permits issued by various Regional Water Boards, USEPA has also reiterated that MS4 discharges must meet water quality standards.¹⁹ In addition, the Ninth Circuit Court of Appeals explained in a recent ruling that, “[w]ater quality standards are used as a supplementary basis for effluent limitations [guidelines] so that numerous dischargers, despite their individual compliance with technology based effluent limitations, can be regulated to prevent water quality from falling below acceptable levels.”²⁰

¹⁸ Phase II Stormwater Regulations, Final Rule, 64 Fed. Reg. 68722, 68737.

¹⁹ Letter from Alexis Strauss, Acting Director, Water Division, USEPA Region IX, to Walt Pettit, Executive Director, State Water Board, re: SWRCB/OCC File A-1041 for Orange County, dated January 21, 1998.

²⁰ NRDC v. County of Los Angeles (9th Cir. 2011), 673 F.3d 880, 886 (revd. on other grounds and remanded by *Los Angeles County Flood Control District v. Natural Resources Defense Council* (133 S.Ct. 710 (2013))). See also, *Building Industry Ass’n of San Diego County v. State Water Resources*

Water quality standards for the San Diego Region are established in the Basin Plan. The water quality standards of the Basin Plan are incorporated into this Order as the discharge prohibitions under Provisions A.1.a and A.1.c and receiving water limitations under Provision A.2.a. The discharge prohibitions and receiving water limitations in this Order consist of all applicable numeric or narrative water quality objectives or criteria, or limitations or prohibitions to implement the applicable water quality objectives or criteria, for receiving waters as contained in the Basin Plan, water quality control plans or policies adopted by the State Water Board, including Resolution No. 68-16, or federal regulations, including but not limited to, 40 CFR 131.12 and 131.38. The waste discharge prohibitions and water quality objectives in the Basin Plan have been approved by USEPA and combined with the designated beneficial uses constitute the water quality standards required under federal law.

Under federal law (CWA section 402(p)(3)(B)(iii)), an MS4 permit must include “controls to reduce the discharge of pollutants to the maximum extent practicable...and such other provision as...the State determines appropriate for control of such pollutants.” The State Water Board has previously determined that limitations necessary to meet water quality standards are appropriate for the control of pollutants discharged by MS4s and must be included in MS4 permits. (State Water Board Orders WQ 91-03, 98-01, 99-05, 2001-15; see also *Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d 1159.) This Order prohibits discharges that cause or contribute to violations of water quality standards.

The discharge prohibitions under Provisions A.1.a and A.1.c and receiving water limitations under Provision A.2.a are included in this Order to ensure that discharges from the MS4s do not cause or contribute to exceedances of water quality objectives necessary to protect the beneficial uses of the receiving waters.

Provision A.4 is consistent with the precedent-setting language in State Water Board Order WQ 99-05 required to be included in municipal storm water permits. State Water Board Order WQ 2001-15 refined Order WQ 99-05 by requiring an iterative approach to compliance with water quality standards involving ongoing assessments and revisions, as referred to as the “iterative process.” The “iterative process” is a fundamental NPDES requirement for municipal storm water permits to achieve the objectives of the CWA.

The State Water Board and Regional Water Boards have stated that the provisions under Provisions A.1.a, A.1.c, A.2.a, and A.4 are independently applicable, meaning that compliance with one provision does not provide a “safe harbor” where there is non-compliance with another provision (i.e., compliance with the Provision A.4 does not shield a Copermitttee who may have violated Provision A.1.a, A.1.c, or A.2.a from

Control Bd. (2004) 124 Cal.App.4th 866, 884-886, citing *Defenders of Wildlife v. Browning*, (9th Cir. 1999) 191 F.3d 1159.)

an enforcement action). The intent of Provision A.4 is to ensure that the Copermitees have the necessary storm water management programs and controls in place, and that they are modified by the Copermitees in a timely fashion when necessary, so that compliance with Provisions A.1.a, A.1.c, and/or A.2.a is achieved as soon as possible. USEPA expressed the importance of this independent applicability in a series of comment letters on MS4 permits proposed by various Regional Water Boards. At that time, USEPA expressly objected to certain MS4 permits that included language stating, “*permittees will not be in violation of this [receiving water limitation] provision ... [if certain steps are taken to evaluate and improve the effectiveness of the jurisdictional runoff management programs],*” concluding that this phrase would not comply with the CWA.²¹

The Ninth Circuit held in *Natural Resources Defense Council v. County of Los Angeles* (2011) 673 F3d. 880, 886 (revd. on other grounds and remanded by *Los Angeles County Flood Control District v. Natural Resources Defense Council* (133 S.Ct. 710 (2013))) that engagement in the iterative process does not provide a safe harbor from liability for violations of permit terms prohibiting exceedances of water quality standards. The Ninth Circuit holding is consistent with the position of the State and Regional Water Boards that exceedances of water quality standards in an MS4 permit constitute violations of permit terms subject to enforcement by the Water Boards or through a citizen suit. While the Water Boards have generally directed dischargers to achieve compliance by improving control measures through the iterative process, the San Diego Water Board retains the discretion to take other appropriate enforcement and the iterative process does not shield dischargers from citizen suits under the CWA.

The requirements of Provision A.4, therefore, are required to be implemented until the water quality standards expressed under Provisions A.1.a, A.1.c, and A.2.a are achieved. The CWA requires MS4 permits to “*require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.*” The requirements of this Order have been deemed or determined to be “appropriate” to achieve water quality standards in receiving waters.

Part of the “*controls*” required by the Order is the process described in Provision A.4. Provision A.4 includes the process that is ultimately expected to achieve compliance with the requirement that discharges from the MS4 do not cause or contribute to violations of water quality standards in the receiving waters. The implementation of Provision A.4 is required when the Copermitees or the San Diego Water Board have

²¹ Letter from Alexis Strauss, Acting Director, Water Division, USEPA Region IX, to Walt Pettit, Executive Director, State Water Board, re: SWRCB/OCC File A-1041 for Orange County, dated January 21, 1998.

determined that discharges from the MS4 are causing or contributing to violations of water quality standards in the receiving waters.

The Copermittees must effectively prohibit non-storm water discharges into the MS4s, reduce the discharge of pollutants in storm water from the MS4s to the MEP, and ensure that their MS4 discharges do not cause or contribute to violations of water quality standards. If the Copermittees have effectively prohibited non-storm water discharges and reduced storm water pollutant discharges to the MEP, but their discharges are still causing or contributing to violations of water quality standards, Provision A.4 provides a clear “iterative process” for the Copermittees to follow.

Provision A.4 essentially requires the Copermittees to implement additional BMPs until MS4 discharges no longer cause or contribute to a violation of water quality standards.

In assessing compliance and potential enforcement actions, the San Diego Water Board looks at the Copermittees’ efforts in total to meet the requirements of Provisions A.1.a, A.1.c, A.2.a and Provision A.4. The Copermittees need to demonstrate that they are making improvements to their programs and making progress toward achieving the discharge prohibitions and receiving water limitations in Provisions A.1.a, A.1.c, and A.2.a by implementing the requirements of Provision A.4. The San Diego Water Board would consider these efforts prior to strictly enforcing the requirements of Provisions A.1.a, A.1.c, and A.2.a. Causes of exceedances of the receiving water limitations can often be more difficult to identify and attribute solely to the Copermittees’ MS4s. The intent of the Order is to provide the Copermittees more clarity and flexibility in addressing these exceedances through the iterative approach and adaptive management process until the requirements under Provisions A.1.a, A.1.c, and A.2.a are fully achieved.

An exception to the iterative approach and adaptive management process would be in receiving waters subject to adopted and approved TMDLs. For TMDLs that are incorporated into the Order, there is a specific date for compliance to be achieved, after which the iterative approach and adaptive management process required under Provision A.4 no longer provides the flexibility to achieve compliance. Where compliance dates for a TMDL have passed, compliance with the WQBELs incorporated into the Order established by a TMDL in Attachment E to protect water quality standards is required. Thus, after the interim or final compliance dates for a TMDL have passed, if the discharges from the Copermittees’ MS4s are causing or contributing to a violation of WQBELs, exceedances of WQBELs must be strictly enforced by the San Diego Water Board. In the meantime, however, the Copermittees are in compliance with the interim or final TMDL requirements in Attachment E as long as the interim or final WQBELs are being achieved in accordance with the interim or final compliance dates.

B. Water Quality Improvement Plans

Purpose: Since 1990, the Copermittees have been developing and implementing programs and BMPs intended to effectively prohibit non-storm water discharges to the MS4s and control pollutants in storm water discharges from the MS4s to receiving waters. As a result, several water body / pollutant combinations have been de-listed from the CWA Section 303(d) List, beach closures have been significantly reduced, and public awareness of water quality issues has increased. The Copermittees have been able to achieve improvements in water quality in some respects, but significant improvements to the quality of receiving waters and discharges from the MS4s are still necessary to meet the requirements and objectives of the Clean Water Act.

Provision B includes requirements for the Copermittees to develop and implement Water Quality Improvement Plans to ultimately comply with the prohibitions and limitations under Provision A. The Water Quality Improvement Plans will provide the Copermittees a comprehensive program that can achieve the requirements and further the objectives of the CWA. Implementation of the Water Quality Improvement Plans will also improve the quality of the receiving waters in the San Diego Region.

The Water Quality Improvement Plan is the backbone of the Regional MS4 Permit requirements. Provision B provides the guidance, criteria, and minimum expectations and requirements for the elements of the Water Quality Improvement Plan to be developed and implemented by the Copermittees. The Water Quality Improvement Plans will be implemented in the Watershed Management Area by the Copermittees within their jurisdictions through their jurisdictional runoff management programs.

The Water Quality Improvement Plan also incorporates a program to monitor and assess the progress of the Copermittees' jurisdictional runoff management programs toward improving the quality of discharges from the MS4s, as well as tracking improvements to the quality of receiving waters. A process to adapt and improve the effectiveness of the Water Quality Improvement Plans has also been incorporated into the requirements of Provision B to be consistent with the "iterative approach" required to achieve compliance with discharge prohibitions of Provisions A.1.a and A.1.c and receiving water limitations of Provision A.2.a, pursuant to the requirements of Provision A.4.

The Water Quality Improvement Plans have also been structured to incorporate the requirements of any TMDLs that have been adopted for the San Diego Region. Incorporating the requirements of the TMDLs into the requirements of Provision B allows the Copermittees to develop a single plan, instead of separate plans, to coordinate their non-storm water and storm water runoff management programs. The Water Quality Improvement Plans allow the Copermittees to meet the requirements of this Order, as well as fulfill the requirements of the TMDLs.

As an added benefit, if the Copermitees demonstrate that impaired water bodies within the Watershed Management Area listed on the 303(d) List will be addressed with their Water Quality Improvement Plans in a reasonable period of time, the San Diego Water Board may be able to remove the water bodies from the 303(d) List, which would greatly reduce the need for the San Diego Water Board to develop additional TMDLs that would have to be incorporated into the Order and implemented by the Copermitees.

Discussion: The federal NPDES regulations require the Copermitees to develop a proposed management program (40 CFR 122.26(d)(2)(iv)). The proposed management program must include “a *comprehensive planning process*” and “*where necessary intergovernmental coordination*” for the “*duration of the permit.*” The Water Quality Improvement Plan is the Copermitees’ “*comprehensive planning process*” document for the proposed management program that will be implemented within a Watershed Management Area. Implementation of the Water Quality Improvement Plan requires “*intergovernmental coordination*” among the Copermitees for at least the “*duration of the permit,*” and likely into and beyond the next iteration of the permit.

Developing Water Quality Improvement Plans based upon watersheds is consistent with federal regulations that support the development of permit conditions, as well as implementation of storm water management programs, at a watershed scale (40 CFR 122.26(a)(3)(ii), 122.26(a)(3)(v), and 122.26(d)(2)(iv)). In 2003, USEPA issued a Watershed-Based NPDES Permitting Policy Statement (USEPA, 2003) that defines watershed-based permitting as an approach that produces NPDES permits that are issued to point sources on a geographic or watershed basis. In this policy statement, USEPA explains that “[*t*]he utility of this tool relies heavily on a *detailed, integrated, and inclusive watershed planning process.*” USEPA identifies a number of important benefits of watershed permitting, including more environmentally effective results, the ability to emphasize measuring the effectiveness of targeted actions on improvements in water quality, reduced cost of improving the quality of the nation’s waters and more effective implementation of watershed plans, including TMDLs, among others.

An emphasis on watersheds is appropriate at this stage in the San Diego Region’s MS4 program to shift the focus to more targeted, water quality driven planning and implementation. Addressing discharges on a watershed scale focuses on water quality results by emphasizing the receiving waters in the watershed. The conditions of the receiving waters drive management actions, which in turn focus measures to address pollutant contributions from MS4 discharges.

The Water Quality Improvement Plan gives the Copermitees the responsibility of developing a comprehensive plan to coordinate the efforts of their jurisdictional runoff management programs for addressing the problems related to MS4 discharges causing impacts to water quality in the Watershed Management Area. The development of the plan provides the Copermitees the opportunity to provide

significant input on how to implement their jurisdictional runoff management programs, and how to best utilize their available resources in addressing a focused set of priorities that they believe will result in measureable improvements to water quality within the Watershed Management Area.

The Copermittees are encouraged to separate the Watershed Management Area into subwatersheds, as appropriate. This allows the Copermittees to identify priorities applicable to a subset of the Copermittees or specific water bodies or areas within the Watershed Management Area.

Included in the requirements for the elements to be included in the Water Quality Improvement Plan are monitoring and assessment requirements that are necessary to implement, as well as ensure the Copermittees are in compliance with, the requirements of the Order. In addition to the federal requirements of the CWA section 308(a) and 40 CFR 122.26(d), the San Diego Water Board has the authority to establish monitoring, reporting, and recordkeeping requirements for NPDES permits under CWC 13383.

More specific and detailed discussions of the requirements of Provision B are provided below.

Provision B.1 (Watershed Management Areas) requires the Copermittees to develop a Water Quality Improvement Plan for each of the Watershed Management Areas defined by the San Diego Water Board.

Pursuant to 40 CFR 122.26(d)(2)(iv), proposed management programs “*may impose controls on a... watershed basis...*” The Water Quality Improvement Plan is the Copermittees’ proposed management program. A Water Quality Improvement Plan must be developed for each Watershed Management Area identified in the Order.

The Watershed Management Areas are identified in Table B-1. Table B-1 establishes ten (10) Watershed Management Areas, and identifies the Copermittees that are responsible for developing and implementing the Water Quality Improvement Plan for each Watershed Management Area.

The Copermittees from each of the three counties within the San Diego Region are expected to be phased in as their respective NPDES municipal storm water permits expire. Because Order No. R9-2007-0001 expired in January 2012, the San Diego County Copermittees ~~are~~were covered under the Regional MS4 Permit on [June 27, 2013](#), the effective date of the Order. [Because Order No. R9-2009-0002 expired in December 2014, the Orange County Copermittees are covered under the Regional MS4 Permit on April 1, 2015, the effective date of Order No. R9-2013-0001 as amended by Order No. R9-2015-0001.](#)

After [the](#) San Diego Water Board receives and considers the Reports of Waste

Discharge required to be submitted by the ~~Orange County Copermittees and~~ Riverside County Copermittees pursuant to the requirements of their current permits, and makes any necessary changes to the Order, the ~~Orange County Copermittees and~~ Riverside County Copermittees will be covered under the Regional MS4 Permit after ~~Order No. R9-2009-0002 expires in November 2014, and~~ Order No. R9-2010-0016 expires in December 2015, ~~respectively~~.

The ~~Orange County Copermittees and~~ Riverside County Copermittees also have the option to obtain coverage under the Regional MS4 Permit earlier than their respective permit expiration dates. The process to apply for early coverage is described Provision F.6.

Because the Santa Margarita River Watershed Management Area includes Copermittees from both San Diego County and Riverside County, a footnote to Table B-1 has been included to specify that the requirements of Provision B are not required to be implemented by the County of San Diego until the Riverside County Copermittees have received a notice of coverage under the Order. Until the Riverside County Copermittees are notified of coverage under the Order, the County of San Diego is subject to the prohibitions and limitations under Provision A, responsible for continuing to implement its existing jurisdictional runoff management program, and responsible for implementing the transitional monitoring and assessment requirements of Provision D, the transitional annual reporting requirements of Provision F.3.b, and the TMDL requirements of Attachment E to the Order.

[The City of Laguna Woods and Laguna Hills are located partially within the jurisdictions of both the California Regional Water Quality Control Board, Santa Ana Region \(Santa Ana Water Board\) and the San Diego Water Board. Written requests for designation of a single Regional Water Board to regulate matters pertaining to permitting of Phase I MS4 discharges were submitted to the San Diego Water Board and the Santa Ana Water Board by the City of Laguna Woods by letter dated September 8, 2014, and the City of Laguna Hills by letter dated March 12, 2014. The Cities of Laguna Woods and Laguna Hills requested designation of the San Diego Water Board pursuant to CWC section 13228. The Cities of Laguna Woods and Laguna Hills reported that management and implementation of municipal programs to comply with two different Phase I MS4 permits creates a significant administrative and financial burden and inhibits their ability to contribute to greater overall water quality improvements in either Region. In an effort to address these concerns, the San Diego Water Board and the Santa Ana Water Board have entered into an agreement dated February 10, 2015, whereby the San Diego Water Board is designated to regulate Phase I MS4 discharges within the jurisdiction of the Cities of Laguna Woods and Laguna Hills including areas in the Santa Region upon the later effective date of this Order or Tentative Order No. R8-2015-0001. Under the terms of the agreement, each Regional Water Board retains the authority to enforce provisions of the Phase I MS4 permits issued to each city but compliance will be determined based upon the Phase I MS4 permit in which a particular city is regulated as a Copermittee \(Water](#)

Code section 13228 (b)). Also under the terms of the agreement, any TMDL and associated MS4 permit requirements issued by the San Diego Water Board or the Santa Ana Water Board which include the Cities of Laguna Woods or Laguna Hills as a responsible party, will be incorporated into the appropriate Phase I MS4 permit by reference. Enforcement of the applicable TMDL would remain with the Regional Water Board which has jurisdiction over the targeted impaired water body. Applicable TMDLs subject to the terms of the agreement include, but are not limited to, the Santa Ana Water Boards' San Diego Creek/Newport Bay TMDL and the San Diego Water Boards indicator Bacteria Project I Beaches and Creeks TMDL. In conformance with this agreement, a footnote to Table B-1 has been included to specify coverage under Order No. R9-2013-0001 for those Phase I MS4 discharges within the jurisdictional boundaries of the Cities of Laguna Woods and Laguna Hills within the Santa Ana Region. The footnote specifies that the City of Laguna Woods and Laguna Hills are identified as responsible Copermitees in the San Diego Creek/Newport Bay TMDL in the Santa Ana Region and remain obligated to comply with the San Diego Creek/Newport Bay TMDL pursuant to section XVIII of Tentative Order No. R8-2015-0001 (NPDES No. CAS618030) and any reissuance thereof.

The City of Lake Forest is located partially within the jurisdictions of both the Santa Ana Water Board and the San Diego Water Board. By letters dated January 14, 2013 and April 4, 2014 the City of Lake Forest submitted a written request, pursuant to CWC section 13228, to the San Diego Water Board and the Santa Ana Water Board requesting the Santa Ana Water Board be designated to regulate matters within the City of Lake Forest pertaining to permitting of their Phase I MS4 discharges. The City of Lake Forest reported that management and implementation of municipal programs to comply with two different Phase I MS4 permits creates a significant administrative and financial burden and inhibits their ability to contribute to greater overall water quality improvements in either Region. In an effort to address these concerns, the San Diego Water Board and the Santa Ana Water Board have entered into an agreement dated February 10, 2015, whereby the Santa Ana Water Board is designated to regulate Phase I MS4 discharges within the jurisdiction of the City of Lake Forest within the San Diego Region upon the later date of this Order or Santa Ana Water Board Tentative Order No. R8-2015-0001. Under the terms of the agreement, each Regional Water Board retains the authority to enforce provisions of the Phase I MS4 permits issued to each city but compliance will be determined based upon the Phase I MS4 permit in which a particular city is regulated as a Copermitee (Water Code section 13228 (b)). Also under the terms of the agreement, any TMDL and associated Phase I MS4 permit requirements issued by the San Diego Water Board or the Santa Ana Water Board which include the City of Lake Forest as a responsible party, will be incorporated into the appropriate Phase I MS4 permit by reference. Enforcement authority for the applicable TMDL would remain with the Regional Water Board which has the jurisdiction over the targeted impaired water body. Applicable TMDLs subject to the terms of the agreement include, but are not limited to, the Santa Ana Water Boards' San Diego Creek/Newport Bay TMDL and the San Diego Water Boards' indicator Bacteria Project I Beaches and Creeks TMDL. In conformance with this

agreement, a footnote to Table B-1 has been included to specify that Phase I MS4 discharges within the jurisdictional boundaries of the City of Lake Forest located within the San Diego Region will be regulated under Santa Ana Water Board Order No. R8-2015-0001 (NPDES No. CAS618030) and any reissuance thereof. The footnote specifies that the City of Lake Forest is an identified responsible Copermitee in the Indicator Bacteria Project I Beaches and Creeks TMDL (Bacteria TMDL) in the San Diego Region and remains obligated to comply with the Bacteria TMDL pursuant to Attachment E of Order No. R9-2013-0001 and any reissuance thereto. The City is also identified as a responsible Copermitee in the San Diego Creek/Newport Bay TMDL established by the Santa Ana Water Board. The City remains obligated to comply with the San Diego Creek/New Port Bay TMDL pursuant to the Santa Ana Water Board's Phase I MS4 Permit (Tentative Order No. R8-2015-0001 (NPDES No. CAS618030). Under the terms of the agreement, the City of Lake Forest must retain and continue implementation of the over irrigation prohibition in Title 15, Chapter 15, Section 14.030, List (b) of the City Municipal Code throughout its jurisdiction. Also under the terms of the agreement, the City of Lake Forest must actively participate in the development and implementation of the Aliso Creek Watershed Management Area Water Quality Improvement Plan required pursuant to Order No. R9-2013-0001, and any reissuance thereof.

The bases supporting the Cities of Laguna Woods, Laguna Hills, and Lake Forest requests to designate a specific Regional Water Board for regulatory oversight of Phase I MS4 discharges may change under future conditions and circumstances, therefore the San Diego Water Board will periodically review the effectiveness of the agreement during each MS4 permit reissuance. Based on this periodic review the San Diego Water Board may terminate the agreement with the Santa Ana Water Board or otherwise modify the agreement subject to the approval of the Santa Ana Water Board.

Provision B.2 (Priority Water Quality Conditions) requires the Copermitees in each Watershed Management Area to identify the highest priority water quality conditions which will be the focus of the Water Quality Improvement Plan implementation.

Provisions B.2.a and B.2.b provide the criteria that must be assessed when characterizing the receiving water quality and potential impacts from MS4 discharges of the receiving waters within the Watershed Management Area. The criteria are based primarily on the requirements in 40 CFR 122.26(d)(1)(iv)(C) and (C)(1)-(9). Characterizing the receiving water quality and identifying the potential impacts caused by MS4 discharges to receiving waters in the Watershed Management Area is necessary to identify the impacts to receiving waters associated with MS4 discharges that are of the most concern to the Copermitees.

Based on the information required to be considered under Provisions B.2.a and B.2.b, Provision B.2.c requires to Copermitees to identify the highest priority water quality conditions related to discharges from the MS4s that will be the primary focus of the

Water Quality Improvement Plan in the Watershed Management Area. Addressing and improving these highest priority water quality conditions will become the focus of each Copermittee's jurisdictional runoff management program as the Water Quality Improvement Plan is implemented in the Watershed Management Area. The highest priority water quality conditions are expected to include source of pollutants and/or stressors, and/or receiving water conditions, that the Copermittees consider the highest threats or most likely to have adverse impacts on the physical, chemical, and biological integrity of receiving waters. Addressing these threats and/or adverse impacts should restore the physical, chemical, and biological integrity of receiving waters, and result in the restoration and protection of the beneficial uses of the receiving waters in the Watershed Management Area.

Provision B.2.d requires the Copermittees to identify known and suspected sources of pollutants and/or stressors contributing to the highest priority water quality conditions. The requirements of Provision B.2.d are based primarily on the requirements in 40 CFR 122.26(d)(1)(iii)(B)(1)-(6). The Copermittees are required to evaluate several factors in the identification of those sources. The Copermittees must consider and evaluate the following: (1) the land uses that may contribute toward impacts to receiving waters, (2) the locations of the Copermittees' MS4s that can convey and discharge runoff and pollutants to receiving waters, (3) other sources that discharge into the Copermittees' MS4s and receiving waters, and (4) other information and data that can help the Copermittees to evaluate the relative importance of or contribution from those sources toward the highest priority water quality conditions. Identifying the known and suspected sources, and their relative contribution toward the highest priority water quality conditions, will help the Copermittees to focus, direct, and prioritize their resources and implementation efforts within their jurisdictions.

Provision B.2.e requires the Copermittees to identify potential strategies that can result in improvements to water quality in MS4 discharges and/or receiving waters within the Watershed Management Area. Potential water quality improvement strategies will not necessarily be implemented by the Copermittees, but provide a "menu" of options that the Copermittees will consider for implementation. The public participation process that will be implemented during the development of the Water Quality Improvement Plan is where the potential water quality improvement strategies will be identified.

Provision B.3 (Water Quality Improvement Goals, Strategies and Schedules) requires the Copermittees in each Watershed Management Area to identify the goals that the Copermittees' jurisdictional runoff management programs will work toward achieving to address and improve the highest priority water quality conditions identified under Provision B.2.c; the strategies that will be implemented by the Copermittees within their jurisdictions and the Watershed Management Area to achieve the goals; and, the schedules for implementing the strategies and achieving the goals. The element of the Water Quality Improvement Plan required under Provision B.3 is where the "*comprehensive planning*" and "*intergovernmental coordination*" [40 CFR 122.26(d)(2)(iv)] of the Copermittees' actions for the proposed management programs

within the Watershed Management Area is required to be described.

Provision B.3.a requires the Copermittees to identify interim and final numeric goals, and schedules to achieve those goals as part of the Water Quality Improvement Plans. Provision B.3.a.(1) requires the Copermittees to identify two types of numeric goals to be achieved:

- (1) Final numeric goals in the receiving waters and/or MS4 discharges that will result in the protection of the water quality standards of the receiving waters for the highest priority water quality conditions identified by the Copermittees for Provision B.2.c. These final numeric goals are the ultimate goals for the Water Quality Improvement Plan, and the achievement and maintenance of these final numeric goals will indicate that one or more beneficial uses have been successfully restored and/or protected from MS4 discharges.
- (2) Interim numeric goals that can be used by the Copermittees to demonstrate progress toward achieving the final numeric goals in the receiving waters and/or MS4 discharges for the highest priority water quality conditions in the Watershed Management Area. Achievement of the interim numeric goals will demonstrate to the San Diego Water Board that the Copermittees' implementation efforts are progressing toward achieving the final numeric goals.

Provision B.3.a.(1) does not specify what the interim and final numeric goals must be based on, but they essentially must be designed to achieve compliance with water quality standards in the receiving waters. To that end, the interim goals must be based on measureable criteria or indicators capable of demonstrating progress toward achieving the numeric goals.”

The interim and final numeric goals can be based on the water quality objectives in the Basin Plan. The water quality objectives in the Basin Plan, however, consist of numeric and narrative water quality objectives. Numeric water quality objectives can be directly used as numeric goals. Narrative water quality objectives, on the other hand, will require some interpretation to identify numeric goals. The achievement of multiple numeric goals based on the water quality objectives, used in combination, may be necessary to demonstrate that beneficial uses have been restored and/or protected.

The Copermittees could also propose other numeric goals that are not necessarily water quality objectives from the Basin Plan. For example, the Copermittees could propose a numeric goal that consists of achieving some percent improvement of a measureable indicator, such as acreage of a specific habitat or increase in a specific plant or animal species population. Other examples may include pollutant load reductions, number of impaired waterbodies delisted from the List of Water Quality Impaired Segments, Index of Biological Integrity (IBI) scores, etc.

The Copermittees may choose to develop interim numeric goals based on the final numeric goals they develop, such as incremental steps toward ultimately achieving the final numeric goals. The Copermittees may also choose to develop interim numeric goals that are based on other measureable indicators that can indirectly indicate improvements and progress toward the final numeric goals.

There are no limits to the types of interim numeric goals that could be proposed by the Copermittees, other than the goals must be based on measureable criteria or indicators capable of demonstrating progress toward achieving the numeric goals. Likewise, there are no limits to the types of final numeric goals that could be proposed by the Copermittees, other than the goals must “*restore and protect the water quality standards of the receiving waters.*”

Finally, Provision B.3.a.(2) also requires the Copermittees to develop schedules for measuring progress and achieving the interim and final numeric goals. Several criteria are included for the development of the schedules, but the Copermittees are required to achieve the numeric goals as soon as possible, consistent with federal NPDES regulations (40 CFR 122.47(a)(1)).

The Copermittees are also required to incorporate any compliance schedules for any applicable ASBS or TMDL requirements. Applicable ASBS and TMDL compliance schedules are set forth in Attachment A and Attachment E to the Order, respectively. The information provided by the Copermittees under Provision B.3.a.(2) will be used by the Copermittees and the San Diego Water Board to gauge and track the progress of the Copermittees’ efforts in addressing the highest priority water quality conditions identified in the Water Quality Improvement Plan.

Provision B.3.b requires the Copermittees to identify the strategies and schedules to implement those strategies as part of the Water Quality Improvement Plans. Provision B.3.b requires the Copermittees to identify the water quality improvement strategies that will be and may be implemented within the Watershed Management Area to 1) reduce of pollutants in storm water discharged from the MS4 to the MEP, 2) effectively prohibit non-storm water discharges from entering the MS4, 3) protect water quality standards in receiving waters by controlling MS4 discharges so that they do not cause or contribute to exceedances of receiving water limitations, and 4) achieve applicable WQBELs that implement TMDLs. The Copermittees will select the strategies to be implemented based on the likely effectiveness and efficiency of the potential water quality improvement strategies identified under Provision B.2.e to effectively prohibit non-storm water discharges to the MS4, reduce pollutants in storm water discharges from the MS4 to the MEP, and/or achieve the interim and final numeric goals identified under Provision B.3.a.

Provision B.3.b.(1) requires each Copermittee to identify the strategies that will be or may be implemented within its jurisdiction. Each Copermittee is required to describe the strategies it is committed to implementing as part of its jurisdictional runoff

management requirements under Provisions E.2 through E.7, and the optional jurisdictional strategies that the Copermittee will implement, as necessary, to achieve the numeric goals.

Each Copermittee is expected to implement the optional jurisdictional strategies identified under Provisions B.3.b.(1)(b) when the jurisdictional strategies it has committed to implement under Provision B.3.b.(1)(a) are not making adequate progress toward the interim and final numeric goals in accordance with the schedules established under Provision B.3.a. Provision B.3.b.(1)(b)(v) requires each Copermittee to describe the circumstances necessary to trigger implementation of the optional jurisdictional strategies, in addition to the requirements of Provisions B.3.b.(1)(a).

The San Diego Water Board recognizes that there may be optional jurisdictional strategies that will likely require funding and/or resources for planning, permitting, procurement of labor and materials, and implementation. Thus, Provision B.3.b.(1)(b)(iv) requires each Copermittee to describe the funding and/or resources that are necessary to implement these optional jurisdictional strategies. This information may provide interested groups and members of the public an understanding of the resources that they could provide or assist in obtaining to implement these optional jurisdictional strategies.

Provision B.3.b.(2) requires the Copermittees in the Watershed Management Area to identify the regional or multi-jurisdictional strategies that may be implemented, as necessary, to achieve the numeric goals. Similar to the requirements of Provision B.3.b.(1)(b), these regional or multi-jurisdictional strategies will likely require funding and/or resources for planning, permitting, procurement of labor and materials, and implementation, and San Diego Water Board recognizes that these strategies may be difficult to implement with only Copermittee resources. Thus, Provision B.3.b.(2)(d) requires the Copermittees to describe the funding and/or resources necessary to implement these optional regional or multi-jurisdictional strategies. This information may provide interested groups and members of the public an understanding of the resources that they could provide or assist in obtaining to implement these optional regional or multi-jurisdictional strategies.

Provision B.3.b.(3) requires the Copermittees to develop and include schedules in the Water Quality Improvement Plan for implementing the water quality improvement strategies identified under Provisions B.3.b.(1) and B.3.b.(2). The schedule for implementing the water quality improvement strategies will be used by the Copermittees and San Diego Water Board to measure and demonstrate the progress of the Copermittees' implementation efforts toward reducing pollutants in storm water discharged from the MS4 to the MEP, and eliminating illicit non-storm water discharges from entering the MS4.

Provision B.3.b.(4) provides the Copermittees in each Watershed Management Area

the option of implementing watershed-specific structural BMP requirements for Priority Development Projects. Historically, storm water permits have included very specific performance standards for permanent, structural BMPs. These standards describe the expectation for the capture or treatment of pollutants and control of excessive flow before storm water is discharged from a site. The Copermittees were also allowed to develop waiver programs for Priority Development Projects to avoid implementing the structural BMPs; however, the waiver programs were not necessarily tied into any sort of holistic watershed strategy. The result is that implementation of BMP requirements is largely done on a site-by-site basis. This requires proper design on the part of the Priority Development Project and strict oversight on the part of the Copermittee.

Provision B.3.b.(4) promotes the evaluation of multiple strategies for water quality improvement, in addition to the implementation of permanent structural BMPs, on a watershed-scale versus the site-by-site approach. In a report issued by the Southern California Coastal Water Research Project (SCCWRP) and several other research institutions, the report emphasized that a successful hydromodification management program will involve watershed analysis as a first step, and that integrating multiple watershed-based strategies is preferable over a site-by-site approach. Indeed, the report states that the watershed analysis “...*should lead to identification of existing opportunities and constraints that can be used to help prioritize areas of greater concern, areas of restoration potential, infrastructure constraints, and pathways for potential cumulative effects.*”²² Provision B.3.b.(4) promotes the findings and recommendations of the report by providing a pathway for Copermittees to develop an integrated approach to their land development programs.

Under Provision B.3.b.(4), the Copermittees in a Watershed Management Area must first perform an analysis by gathering as much information pertaining to the physical characteristics of the Watershed Management Area as possible. This includes, for example, identifying potential areas of coarse sediment supply, present and anticipated future land uses, and locations of physical structures within receiving streams and upland areas that affect the watershed hydrology (such as bridges, culverts, and flood management basins). Once this information is collected, the Copermittees must produce GIS layers (maps) that include this information.

From there, the Copermittees must use the results of the Watershed Management Area Analysis to identify and compile a list of candidate projects that could potentially be used as alternative compliance options for Priority Development Projects. Such projects include, for example, opportunities for stream or riparian area rehabilitation, opportunities for retrofitting existing infrastructure to incorporate storm water retention or treatment, and opportunities for regional BMPs, among others. Once these candidate projects are identified, Copermittees may allow Priority Development Projects to fund, partially fund, or completely implement these candidate projects. The

²² 2012. ED Stein, F Federico, DB Booth, BP Bledsoe, C Bowles, Z Rubin, GM Kondolf, A Sengupta. Technical Report 667. Southern California Coastal Water Research Project. Costa Mesa, CA.

Copermittees must first find that implementing such a candidate project would provide greater overall benefit to the watershed than requiring implementation of the structural BMPs onsite, and also enter into a voluntary agreement with the Priority Development Project that authorizes this arrangement. The Copermittees may use Provision B.3.b.(4) as both 1) a mechanism to reach their stated goals of the Water Quality Improvement Plan by using Priority Development Projects to either fund or implement projects that will provide water quality benefit, and 2) an alternative to requiring strict adherence to the structural BMP design standards.

Additionally, Provision B.3.b.(4) allows the Copermittees to use the results of the Watershed Management Area Analysis to identify areas within the Watershed Management Area where it is appropriate to allow Priority Development Projects to be exempt from the hydromodification management BMP performance requirements. Provision E.3.c.(2) already allows exemptions for Priority Development Projects that discharge to a conveyance channel whose bed and bank are concrete lined from the point of discharge to an enclosed embayment or the Pacific Ocean. However, there may be cases where further exemptions are warranted. The Copermittees may identify such cases on a watershed basis and include them in the Watershed Management Area Analysis; however, they must provide the supporting rationale to support all claims for exemptions.

Provision B.3.b.(4) provides an innovative pathway for Copermittees to regulate their land development programs by allowing alternative compliance in lieu of implementing structural BMPs on each and every Priority Development Project. This approach facilitates the integration of watershed-scale solutions for improving overall water quality and assisting Copermittees to achieve their stated goals of the Water Quality Improvement Plan. The San Diego Water Board understands, however, that undertaking this approach, which involves extensive planning, could be resource intensive for the Copermittees. Therefore, the Watershed Management Area Analysis is optional and not a requirement. The Copermittees can choose not to perform the watershed planning and mapping exercise described in Provision B.3.b.(4), and instead choose to require strict implementation of the structural BMPs onsite, pursuant to Provision E.3.b.

Provision B.4 (Water Quality Improvement Monitoring and Assessment) requires the Copermittees to develop an integrated monitoring and assessment program to track the progress of the Water Quality Improvement Plan toward meeting the implementation goals and schedules, and improving the water quality of the Watershed Management Area. Provision B.4 is the part of the Water Quality Improvement Plan where the Copermittees describe the monitoring data that will be collected, which is not only necessary to implement the “iterative approach” required by Provision A.4, but inform the adaptive management and “*comprehensive planning process*” that allows the Copermittees to make adjustments and modifications to the Water Quality Improvement Plans and the jurisdictional runoff management programs.

Provision B.4 requires the Copermittees, at a minimum, to include the requirements of Provision D as part of the water quality improvement monitoring and assessment program for the Water Quality Improvement Plan. The Copermittees, however, are not limited to the requirements of Provision D and may include additional monitoring and assessment methods to track progress toward improving water quality in the Watershed Management Area.

In addition to incorporating the requirements of Provision D, the water quality improvement monitoring and assessment program must incorporate any monitoring and assessment requirements specified for any applicable TMDLs included in Attachment E to the Order, and the monitoring requirements of Attachment B to State Water Board Resolution No. 2012-0012 for Watershed Management Areas with ASBS.

The monitoring and assessments required to be incorporated into the Water Quality Improvement Plan are necessary to implement, as well as ensure the Copermittees are in compliance with, the requirements of the Order.

Provision B.5 (Iterative Approach and Adaptive Management Process) requires the Copermittees to implement the iterative approach pursuant to Provision A.4 to adapt the Water Quality Improvement Plan, monitoring and assessment program, and jurisdictional runoff management programs to become more effective toward achieving compliance with Provisions A.1.a, A.1.c and A.2.a.

Provision B.5 requires the Copermittees in each Watershed Management Area to re-evaluate the highest priority water quality conditions and potential water quality improvement strategies, the water quality improvement goals, strategies and schedules, and the water quality improvement monitoring and assessment program and provide recommendations for modifying those elements to improve the effectiveness of the Water Quality Improvement Plan. The re-evaluation of the Water Quality Improvement Plan is part of the assessment requirements of Provision D.

Provision B.6 (Water Quality Improvement Plan Submittal, Updates, and Implementation) requires to Copermittees to submit, update, and implement the Water Quality Improvement Plans.

The requirements for the process to develop and submit the Water Quality Improvement Plans is described in more detail under the discussion for Provision F.1. The process will include several opportunities for the public to provide input during the development of the Water Quality Improvement Plans. The process for updating the Water Quality Improvement Plans is described in more detail under the discussion for Provision F.3.c. Upon acceptance of the Water Quality Improvement Plan and updates, the Copermittees are required to immediately begin implementing the Water Quality Improvement Plan and subsequent updates.

The Water Quality Improvement Plan is expected to be a dynamic document that will evolve over time. The Water Quality Improvement Plan is also expected to be a long

term plan that focuses the Copermittees' efforts and resources on a limited set of priority water quality conditions, with the ultimate goal of protecting all the beneficial uses of the receiving waters within the Watershed Management Area from impacts that may be caused or contributed to by MS4 discharges. As the Copermittees collect data, implement their jurisdictional runoff management programs, and review the results from their water quality improvement monitoring and assessment program, the Water Quality Improvement Plan is expected to be continually reviewed and updated until compliance with Provisions A.1.a, A.1.b, and A.2.a is achieved.

However, in specific cases supported by robust analytical documentation the implementation of the Water Quality Improvement Plans may demonstrate that TMDLs are not necessary for identified impaired water bodies within the Watershed Management Area if the analytical record demonstrates that technology-based effluent limitations required by the CWA, more stringent effluent limitations required by state, local, or federal authority, and/or other pollution control requirements (e.g., best management practices) required by local, state or federal authority are stringent enough to implement applicable water quality standards within a reasonable period of time.²³

The San Diego Water Board submits an Integrated Report to USEPA to comply with the reporting requirements of CWA sections 303(d), 305(b) and 314, which lists the attainment status of water quality standards for water bodies in the San Diego Region. According to USEPA guidance for the Integrated Report,²⁴ water bodies are placed in one of five categories. Water bodies included in Category 5 in the Integrated Report indicate at least one beneficial use is not being supported or is threatened, and a TMDL is required. Water bodies included in Category 5 are placed on the 303(d) List.

Category 4 in the Integrated Report is for water bodies where available data and/or information indicate that at least one beneficial use is not being supported or is threatened, but a TMDL is not needed.²⁵ Impaired surface water bodies may be included in Category 4 if a TMDL has been adopted and approved (Category 4a); if other pollution control requirements required by a local, state or federal authority are stringent enough to implement applicable water quality standards within a reasonable period of time (Category 4b); or, if the failure to meet an applicable water quality standard is not caused by a pollutant, but caused by other types of pollution (Category 4c).

Impaired water bodies can be included in Category 4a if a TMDL has been adopted and approved. The TMDLs in Attachment E to the Order implement the requirements of the TMDLs adopted by the San Diego Water Board, and approved by the State Water Board and USEPA. The water bodies in Attachment E will be included in

²³ 40 CFR 130.7(b)(1)

²⁴ USEPA, 2005. Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act

²⁵ Ibid

Category 4a in the Integrated Report and removed from the 303(d) List.

Impaired water bodies can be included in Category 4b if there are *acceptable* “pollution control requirements” required by a local, state or federal authority stringent enough to implement applicable water quality standards within a reasonable period of time (e.g., a compliance date is set). When evaluating whether a particular set of pollution controls are “requirements,” the USEPA considers a number of factors, including: (1) the authority (local, state, federal) under which the controls are required and will be implemented with respect to sources contributing to the water quality impairment (examples may include: self-executing state or local regulations, permits, and contracts and grant/funding agreements that require implementation of necessary controls), (2) existing commitments made by the sources and completion or soon to be completed implementation of the controls (including an analysis of the amount of actual implementation that has already occurred), (3) the certainty of dedicated funding for the implementation of the controls, and (4) other relevant factors as determined by USEPA depending on case-specific circumstances.²⁶

Impaired water bodies can be included in Category 4c if the failure to meet an applicable water quality standard is not caused by a pollutant, but caused by other types of pollution. Pollution, as defined by the CWA is “the man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water.”²⁷ In other cases, pollution does not result from a pollutant and a TMDL is not required. Examples of circumstances where an impaired segment may be placed in Category 4c include segments impaired solely due to lack of adequate flow, stream channelization, or hydromodification. In these situations, there may be water quality management actions that can address the cause(s) of the impairment, but a TMDL may not be required to implement the actions.

The Water Quality Improvement Plans will require the implementation of pollution controls and water quality management actions (i.e. water quality improvement strategies) which can result in the attainment of water quality standards in water bodies impaired by discharges from the Copermitees’ MS4s. The Water Quality Improvement Plans also include requirements that are expected to attain water quality standards in a reasonable period of time. The San Diego Water Board considers the Water Quality Improvement Plans to be a commitment by the Copermitees to develop, plan, budget for, and implement pollution controls that will attain water quality standards in receiving waters in a reasonable period of time, or as soon as possible. The results of the Copermitees’ efforts in implementing the Water Quality Improvement Plans can be used to re-evaluate the condition of the impaired water bodies during the next update to the 303(d) List.

²⁶ Ibid

²⁷ CWA section 502(19)

After the Copermittees submit the Water Quality Improvement Plans and demonstrate that water quality standards are being attained or will be attained in a reasonable period of time, the San Diego Water Board may re-evaluate the water bodies on the 303(d) List. These water bodies on the 303(d) List may be re-evaluated and placed into Category 4b or Category 4c in the Integrated Report. The water bodies placed in Category 4b or Category 4c in the Integrated Report must show a record that the water bodies are attaining water quality standards or supporting the identified beneficial uses, or will attain water quality standards or support identified beneficial uses in a reasonable period of time, in order for the water bodies to be appropriately removed from the 303(d) List.

C. Action Levels

Purpose: Provision C includes requirements for the Copermittees to identify and include numeric action levels in the Water Quality Improvement Plan to direct and focus the Copermittees' jurisdictional runoff management program implementation efforts for controlling MS4 discharges to receiving waters.

Discussion: Under Provision C, the numeric action levels required are for non-storm water discharges and storm water discharges. The non-storm water action levels (NALs) are applicable to non-storm water discharges from the Copermittees' MS4s, which can occur year-round. The storm water action levels (SALs) are applicable to storm water discharges from the Copermittees' MS4s, which occur during the rainy season defined as the period between October 1 and April 30.

The action levels required by Provision C are based on the action level requirements that were developed and incorporated into Order Nos. R9-2009-0002 and R9-2010-0016, the Orange County and Riverside County MS4 Permits, respectively. The Fact Sheets for these Orders provide detailed discussions about the development of the numeric NALs and SALs included in this Order.

Order Nos. R9-2009-0002 and R9-2010-0016 required the Copermittees to perform prescribed actions if the NALs or SALs are exceeded. The actions required under Order Nos. R9-2009-0002 and R9-2010-0016 generally included conducting additional monitoring and source investigations when a discharge from the MS4 is observed to exceed one or more NALs and/or SALs.

For this Order, however, the action levels of Provision C are to be used by the Copermittees to prioritize the actions to be implemented as part of the Water Quality Improvement Plan. Monitoring data collected by the Copermittees from MS4 outfalls will be compared with the NALs and SALs. Exceedances of the NALs and SALs will not require the Copermittees to immediately identify sources causing exceedances, but will provide some numeric indicator levels that can give the Copermittees a way to measure the relative severity of a pollutant contributing to receiving water quality impacts.

NALs and SALs must be included in the Water Quality Improvement Plans to be used by the Copermittees in directing and focusing their water quality improvement strategies. The Copermittees are expected to utilize the NALs and SALs to help focus their implementation efforts on addressing pollutants that have the most significant potential or observed impacts to receiving waters. The NALs and SALs will be used as part of the MS4 discharges assessments required under Provision D.4.b. The NALs and SALs may also be used by the Copermittees as the numeric goals to be achieved in MS4 discharges and/or receiving waters as the Water Quality Improvement Plans are implemented.

More specific and detailed discussions of the requirements of Provision C are provided below.

Provision C.1 (Non-storm Water Action Levels) requires the Copermittees to incorporate NALs into the Water Quality Improvement Plan for pollutants and/or constituents that are causing or contributing, or may be causing or contributing, to the highest priority water quality conditions identified in the Water Quality Improvement Plan related to non-storm water discharges from the MS4s. NALs generally must be consistent with the water quality objectives found within the Basin Plan.

The NALs have been included to ensure that the Copermittees are implementing and complying with several requirements of the MS4 permit. The federal CWA requires permits for municipal storm sewer systems to “*effectively prohibit non-storm water discharges into the storm sewers.*” The federal NPDES regulations, which were promulgated to implement the CWA requirements for discharges from municipal storm sewers, require a program to address illicit discharges, which are non-storm water discharges. Provision A.1.b prohibits “[n]on-storm water discharges into MS4s” unless the non-storm water discharge authorized by a separate NPDES permit. The NALs will be used as part of the illicit discharge detection and elimination program required pursuant to Provision E.2, as well as part of the MS4 discharges assessments required pursuant to Provision D.4.b.

Provision A.1.a prohibits non-storm water discharges from the MS4 from “*causing, or threatening to cause, a condition of pollution, contamination, or nuisance (as defined in CWC section 13050), in waters of the state.*” In addition, pursuant to Provision A.2.a, non-storm water discharges “*must not cause or contribute to the violation of water quality standards in any receiving waters.*”

Ideally, the Copermittees’ jurisdictional runoff management programs will eliminate all non-storm water discharges entering the MS4s within their jurisdictions. The complete elimination of non-storm water discharges to the Copermittees’ MS4s would be in compliance with the CWA requirements for non-storm water discharges, as well as the prohibitions and limitations of Provisions A.1.a and A.2.a.

The federal regulations, however, also refer to several non-storm water discharge categories that must be addressed as illicit discharges if they are found to be a source of pollutants. The federal regulations thus identify some non-storm water discharges that are not required to be addressed as illicit discharges if they are not a source of pollutants (e.g. non-storm water discharges specified in Provisions E.2.a.(1)-(5)). Thus, these regulations imply that some non-storm water discharges into and from the MS4 may occur even if non-storm water discharges are “effectively” prohibited by the Copermittees.

If the source of a non-storm water discharge is identified as a category of non-storm water specified in Provisions E.2.a.(1)-(5), the NALs can be used to determine the category of non-storm water discharges is a source of pollutants. For other non-storm water discharges not specified in Provisions E.2.a.(1)-(5), the CWA requires those discharges to be “*effectively*” prohibited by removing the discharge to the MS4 through enforcement of the Copermittees’ legal authority established under “*ordinance, order or similar means*” to prohibit illicit discharges to the MS4s.

If there are non-storm water discharges that are not required to be addressed as illicit discharges, those discharges must comply, at a minimum, with the discharge prohibitions and receiving water limitations of Provision A. Thus, the non-storm water discharges from the MS4 must be at levels that will not cause or contribute to a condition of pollution, contamination, or nuisance (Provision A.1.a), and must not cause or contribute to a violation of water quality standards in receiving waters (Provision A.2.a) to be consistent with the discharge prohibitions and receiving water limitations of Provisions A.1.a and A.2.a.

Furthermore, the San Diego Region has predominantly intermittent and ephemeral rivers and streams which vary in flow volume and duration at spatial and temporal scales. For most of these river and stream systems, non-storm water discharges from the MS4 are likely to be the most significant or the only source contributing to surface flows present within the receiving water, especially during the dry season.

Therefore, because of the prohibitions and limitations of Provision A.1.a and A.2.a, and the likelihood that non-storm water discharges from the MS4 are the most significant or only source contributing to surface flows present within the receiving water, NALs generally must be consistent with the water quality objectives found within the Basin Plan. Non-storm water discharges that are meeting the NALs would not be expected to cause or contribute to an exceedance of water quality objectives in receiving waters, which would be consistent with the discharge prohibitions and receiving water limitations of Provisions A.1.a and A.2.a.

Exceedances of the NALs would then provide an indication of the relative severity of a pollutant in non-storm water discharges from the MS4 contributing to potential or observed receiving water quality impacts. The relative severity or significance of a pollutant in non-storm water discharges from the MS4 will provide the Copermittees a valuable source of information that can be used to identify priority water quality conditions within a Watershed Management Area and within each Copermittee’s jurisdiction.

Tables C-1 through C-4 under Provision C.1.a specify numeric NALs for several parameters or pollutant constituents for non-storm water discharges from the MS4 to several water body types. The NALs for MS4 discharges given under Provision C.1.a are based on the water quality objectives for inland surface waters in the Basin Plan, and the water quality objectives for ocean waters in the Ocean Plan. The NALs for

most of the metals were calculated based on the State Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP). The NALs provided in Tables C-1 through C-4 must be included in the Water Quality Improvement Plans required to be developed pursuant to Provision B.

Provision C.1.b requires the Copermittees to identify NALs for pollutants and/or constituents, not specified in Provision C.1.a, which are causing or contributing, or may be causing or contributing, to the highest priority water quality conditions of the Watershed Management Area related to non-storm water discharges from the MS4s. The NALs must be based on the water quality objectives in the Basin Plan. The NALs identified under Provision C.1.b must be included in the Water Quality Improvement Plan.

The San Diego Water Board recognizes that some of the NALs required pursuant to Provisions C.1.a and C.1.b may be exceeded more frequently than not. Thus, Provision C.1.c has been included in the Order to provide the Copermittees the option to develop secondary NALs that are set at levels greater than the levels required pursuant to Provisions C.1.a and C.1.b to further refine the prioritization and assessment of water quality improvement strategies for addressing non-storm water discharges to and from the MS4s, as well as the detection and elimination of non-storm water and illicit discharges to and from the MS4.

Provision C.2 (Storm Water Action Levels) requires the Copermittees to incorporate SALs into the Water Quality Improvement Plan for pollutants and/or constituents causing or contributing, or may be causing or contributing, to the highest priority water quality conditions identified in the Water Quality Improvement Plan related to storm water discharges from the MS4s.

The SALs have been included to ensure that the Copermittees are implementing and complying with several requirements of the MS4 permit. Provision A.1.a prohibits storm water discharges from the MS4 from *“causing, or threatening to cause, a condition of pollution, contamination, or nuisance (as defined in CWC section 13050), in waters of the state.”* In addition, pursuant to Provision A.2.a, storm water discharges *“must not cause or contribute to the violation of water quality standards in any receiving waters.”*

Provision A.3.a, however, implicitly acknowledges that compliance with Provisions A.1.a and A.2.a cannot be achieved immediately for discharges of storm water from the MS4 by applying the MEP standard. Thus, Provision A.4 requires the Copermittees to implement an iterative approach to demonstrate that MEP is being achieved. This approach is supported by USEPA.

The federal CWA requires permits for municipal storm sewer systems to *“require controls to reduce the discharge of pollutants [in storm water] to the maximum extent*

practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.” MEP is an ever-evolving, flexible, and advancing concept. As knowledge about controlling storm water runoff and discharges evolves, so does the knowledge which constitutes MEP. Reducing the discharge of storm water pollutants from the MS4 to the MEP requires the Copermittees to assess their jurisdictional runoff management programs and revise activities, control measures, BMPs, and measurable goals, as necessary to meet MEP. The SALs provide the Copermittees measurable goals that may be used to demonstrate the achievement of MEP for reducing pollutants in storm water discharges from the MS4. The SALs will be used as part of the MS4 discharges assessments required under Provision D.4.a.

In June of 2006, the State Water Board’s Blue Ribbon Storm Water Panel released its report titled “*The Feasibility of Numerical Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities.*” In the recommendations, the Blue Ribbon panel proposed storm water effluent limitations which are computed using statistical based population approaches. The SALs specified in Table C-5 under Provision C.2.a were developed from a regional subset of nationwide Phase I MS4 data by using USEPA Rain Zone 6 (arid west) data.²⁸ Additionally, utilization of regional data is appropriate due to the addition of data into the nationwide Phase I MS4 monitoring dataset in February 2008. This additional data increased the number of USEPA Rain Zone 6 samples to more than 400, and included additional monitoring events within Southern California.

Utilizing data from USEPA Rain Zone 6 resulted in SALs which closely reflect the environmental conditions experienced in the San Diego Region. The localized subset of data includes sampling events from multiple Southern California locations including Orange, San Diego, Riverside, Los Angeles, and San Bernardino Counties. The dataset includes samples taken from highly built-out impervious areas and from storm events representative of Southern California conditions.

The SALs for cadmium, copper, lead and zinc require the measurement of hardness and to provide more specificity in the assessment of samples with SALs for total metal concentrations. While USEPA Rain Zone 6 data include a large sample size for concentrations of total metals, the impact the concentration will have on receiving waters will vary with receiving water hardness. Since it is the goal of the SALs, through the iterative process and MEP standard, to have MS4 storm water discharges meet all applicable water quality objectives, the hardness of the receiving water should be used when assessing the total metal concentration of a sample.

Thus, when there is an exceedance of a SAL for a metal, the Copermittee must determine if that exceedance is above the existing applicable water quality objectives

²⁸ Data used to develop SAL were obtained from <http://rpitt.eng.ua.edu/Research/ms4/mainms4.shtml>

based upon the hardness of the receiving water. The water quality objectives Copermittees must use to assess total metal SAL exceedances are the California Toxic Rule (CTR) and USEPA National Recommended Water Quality Criteria for Freshwater Aquatic Life 1 hour maximum concentrations. The 1 hour maximum concentration is to be used for comparison since it is expected to most replicate the impacts to waters of the State from the first flush following a precipitation event.

The statistically calculated SALs given in Table C-5 are at levels greater than the water quality objectives in the Basin Plan or Ocean Plan. Because the objective of the CWA is to “*to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters*”, meaning eventually pollutants in storm water discharges must be reduced to a level that cannot cause or contribute to an exceedance of water quality objectives in receiving waters, over time the SALs are expected to be reduced to a level that is based on the water quality objectives rather than statistical calculations. The San Diego Water Board will review the SALs as more data for discharges of storm water from the MS4s are collected, and revise them as conditions improve and the MEP standard advances. For the Water Quality Improvement Plans required under this Order, the SALs identified under Provision C.2.a must be included.

Provision C.2.b requires the Copermittees to identify SALs for pollutants and/or constituents, not specified in Provision C.2.a, which are causing or contributing, or may be causing or contributing, to the highest priority water quality conditions of the Watershed Management Area related to storm water discharges from the MS4s. The SALs identified under Provision C.2.b must be included in the Water Quality Improvement Plan.

The San Diego Water Board recognizes that some of the SALs required pursuant to Provisions C.2.a and C.2.b may be exceeded more frequently than not. Thus, Provision C.2.c has been included in the Order to provide the Copermittees the option to develop secondary SALs that are set at levels greater than the levels required pursuant to Provisions C.2.a and C.2.b to further refine the prioritization and assessment of water quality improvement strategies for reducing pollutants in storm water discharges from the MS4s.

D. Monitoring and Assessment Program Requirements

Purpose: Provision D includes minimum monitoring and assessment requirements that must be developed and implemented by the Copermittees as part of the Water Quality Improvement Plans. Implementation of the monitoring and assessment requirements of Provision D will allow the Copermittees to demonstrate that the requirements of the CWA to effectively prohibit non-storm water discharges to the MS4 and reduce pollutants in storm water discharges from the MS4 to the MEP are being achieved. Implementation of the monitoring and assessment requirements of Provision D will also allow the Copermittees and the San Diego Water Board to track improvements to the water quality in the San Diego Region. The monitoring and assessment program requirements are necessary to implement, as well as ensure the Copermittees are in compliance with, the requirements of the Order.

Discussion: The San Diego Water Board recognized that changes to the monitoring and assessment requirements of the Fourth Term Permit were necessary to improve the usefulness and usability of monitoring data collected by the Copermittees to support their jurisdictional storm water programs more efficiently and with increased effectiveness. The data collected are needed to better inform the Copermittees' understanding of the physical, chemical, and biological condition of the receiving waters and the quality of the MS4 discharges. The monitoring program needs to provide opportunities for the Copermittees to integrate regional monitoring efforts into municipal storm water monitoring requirements to provide a cost-effective approach to monitoring and avoid duplication of efforts.

The requirements in Provision D were largely recommended by the Copermittees as an outcome of the San Diego Water Boards Focused Meeting process. The monitoring and assessment program requirements now require collection of more specific information necessary for each Copermittee to adapt its jurisdictional runoff management program in such a way that focuses resources on a watershed's highest priority water quality conditions. The monitoring and assessment program will require the Copermittees to collect data that can be utilized to answer both watershed level management questions (e.g. Are the chemical, physical, and biological conditions of a receiving water protective, or likely protective of beneficial uses?), and specific jurisdictional runoff management program activity questions (e.g. Are the water quality improvement strategies of the jurisdictional program effectively eliminating non-storm water discharges to the MS4?).

The monitoring data collected and assessment information that will be reported to the San Diego Water Board are necessary to determine if the Copermittees are complying with the prohibitions and limitations of Provision A. The required monitoring and assessments that must be reported to the San Diego Water Board will be utilized for three purposes:

- (1) Inform the Copermittees, San Diego Water Board, and the public on the progress of the Copermittees' efforts to effectively prohibit non-storm water discharges to the MS4 and reduce pollutants in storm water discharges from the MS4 to the MEP;
- (2) Inform the Copermittees, San Diego Water Board, and the public on the condition of water bodies receiving discharges from the Copermittees' MS4, and the progress of the Copermittees' water quality improvement implementation efforts toward improving the receiving water quality; and
- (3) Inform the Copermittees, the San Diego Water Board, and the public on the effectiveness of the Water Quality Improvement Plan toward achieving (1) and (2).

The monitoring and assessment information reported pursuant to Provision F is also expected to be key to the iterative approach and adaptive management process required under Provision A.4 and implemented through the Water Quality Improvement Plan required under Provision B. As required by Provision A.4, the iterative approach and adaptive management process is required if the Copermittees cannot meet the discharge prohibitions and receiving water limitations of Provisions A.1.a, A.1.c, and/or A.2.a under the present conditions.

Provision D provides the minimum monitoring and assessment requirements that must be included in each Water Quality Improvement Plan to be developed and implemented by the Copermittees. The Copermittees, however, are not limited to the requirements of Provision D and may include additional methods to track progress toward improving water quality in a Watershed Management Area.

More specific and detailed discussions of the requirements of Provision D are provided below.

Provision D.1 (Receiving Water Monitoring Requirements) specifies the minimum receiving water monitoring that the Copermittees must conduct within the Watershed Management Area and include as part of the Water Quality Improvement Plan.

Provision D.1 establishes minimum monitoring requirements that must be conducted by the Copermittees within each Watershed Management Area. Provision D.1 requires the Copermittees to collect and develop the data and information necessary to determine potential impacts to the beneficial uses in the receiving waters due to discharges from the MS4s. The monitoring required under Provision D.1 will also provide the data that will allow the Copermittees to gauge the effectiveness and progress of its Water Quality Improvement Plan implementation efforts toward improving the quality of receiving waters.

The receiving water monitoring requirements of Provision D.1 are focused primarily on monitoring the conditions and response of the receiving waters to the Copermittees' collective implementation efforts to reduce receiving water impacts that may be caused by the discharges from the MS4s. The preference of the San Diego Water Board is for the Copermittees to spend their resources achieving tangible and observable improvements in receiving water conditions instead of collecting samples and analyzing data that has consistently indicated that receiving water conditions are degraded and require improvement. In general, the ability to measure potential improvements in receiving water conditions due to any actions implemented by the Copermittees as part of the Water Quality Improvement Plan may require several years before a response can be observed. Thus, the frequency of collecting receiving water monitoring data has been kept to a minimum.

During the transitional period between adoption of this Order and San Diego Water Board acceptance of a Water Quality Improvement Plan, the Copermittees must conduct receiving water monitoring in accordance with Provision D.1.a. This approach to collecting receiving water data is different from what was required in the Fourth Term Permits, but one that truly embraces the concept of an integrated, cost-effective, streamlined receiving water monitoring approach.

Provision D.1.a requires Copermittees to continue performing the receiving water monitoring programs required in Order Nos. R-2007-0001, R9-2009-002, and R9-2010-0016; plus participation in: hydromodification management plan monitoring approved by the San Diego Water Board, monitoring plans as part of load reduction plans (either Bacteria Load Reduction Plans or Comprehensive Load Reduction Plans) for TMDLs in Attachment E of the Order, Storm Water Monitoring Coalition Regional Monitoring, Southern California Bight Regional Monitoring, Sediment Quality Monitoring, and ASBS Monitoring as applicable to a Watershed Management Area.

Provision D.1.a also provides an opportunity for the Copermittees to use third party data to meet receiving water monitoring requirements where feasible. Allowing the Copermittees to use the data currently collected through its participation in existing regional receiving water programs and that of third parties provides an efficiency of resources in obtaining the data necessary to inform the Copermittees and the San Diego Water Board about the physical, chemical, and biological conditions of the receiving waters, which can also help to focus the receiving water monitoring during the implementation of the Water Quality Improvement Plan. Once a Water Quality Improvement Plan is developed for a Watershed Management Area in compliance with Provision B of this Order, the transitional period is over and Copermittees are required to conduct receiving water monitoring according to the requirements of Provisions D.1.b-e.

Provision D.1.b requires each Copermittee to identify at least one long term receiving water monitoring station to be representative of receiving water quality within each Watershed Management Area. Long term receiving water monitoring stations can be

located at any existing mass loading stations, temporary watershed assessment stations, bioassessment stations, and stream assessment stations previously established by the Copermittees. The requirements under Provision D.1.b. are consistent with 40 CFR 122.26(d)(2)(iii)(D), which specifies that a “*monitoring program for representative data collection for the term of the permit*” may include “*instream locations.*” For each Watershed Management Area, at least one long term watershed monitoring station is required to be established and monitored. The Copermittees may choose to establish additional long term monitoring stations where necessary to support the implementation and adaptation of the Water Quality Improvement Plan.

Provision D.1.b. requires the Copermittees to locate the long term receiving water monitoring station at one of these existing receiving water monitoring stations to provide the Copermittees an opportunity to experience monitoring cost savings while continuing to collect the necessary data to assess the status and trends of receiving water quality conditions in 1) coastal water, 2) enclosed bays, harbors, estuaries, and lagoons, and 3) streams under both dry weather and wet weather conditions. Ideally these stations will continue to be monitored as part of the receiving water monitoring for each Watershed Management Area to maintain a consistent set of locations and a period of data that can be built upon with the monitoring required under this Order.

The receiving water monitoring requirements are separated into monitoring required during dry weather conditions pursuant to Provision D.1.c, and wet weather conditions pursuant to Provision D.1.d.

At each long term monitoring station the Copermittees must conduct at least three dry weather monitoring events as required pursuant to Provision D.1.c and at least three wet weather monitoring events as required pursuant to Provision D.1.d per permit term. Provisions D.1.c and D.1.d require the Copermittees to monitor priority water quality conditions identified in the Water Quality Improvement Plan, constituents listed as causing impairment of receiving waters in the Watershed Management Area, applicable NALs, toxicity, constituents listed in Tables D-2 and D-3, and constituents for implementation plans (e.g. Bacteria Load Reduction Plans and Comprehensive Load Reduction Plans). Required toxicity monitoring was changed to reflect an updated understanding of the unique challenges associated with sampling storm water for toxicity. Copermittees are required to sample storm water for toxicity during each dry weather and each wet weather event pursuant to Provision D.1.c.(4) and D.1.d.(4). Required toxicity monitoring is now consistent with the State Water Resources Control Board Policy for Toxicity Assessment and Control (Draft June 2012) and recently adopted MS4 permits for Caltrans and Los Angeles Water Board. Receiving water monitoring efforts in this Order have been streamlined to redirect resources to monitoring efforts that better support pollutant reduction solutions with an increasing emphasis on MS4 outfall monitoring, source identification and source abatement activities.

In addition to the receiving water monitoring requirements under Provisions D.1.b-d, Provision D.1.e requires the Copermittees participate in and/or conduct other types of receiving water monitoring. As recommended and requested by the Copermittees, Provision D.1.e.(1) requires the Copermittees to participate in existing regional monitoring, as applicable to each Watershed Management Area. Existing regional monitoring includes monitoring conducted by the Storm Water Monitoring Coalition and for the Southern California Bight. Participation in and use of monitoring data collected from these existing regional water quality monitoring programs provide the Copermittees a greater opportunity for efficiency in the use of their resources to manage their storm water programs and those controllable discharges under their authority. Provision D.1.e.(1)(c) requires the south Orange County MS4 Copermittees to participate in “unified regional beach water quality monitoring.” This monitoring replaces requirements to conduct “core monitoring” of beach water quality, as provided for in Appendix III of the 2012 California Ocean Plan.

Several different public agencies currently conduct routine, ongoing beach water quality monitoring in south Orange County in accordance with several different sets of requirements. The monitoring programs implemented to meet those requirements overlap temporally and spatially. These monitoring programs are partially but not fully integrated. In November 2010, the State Water Board adopted Resolution No. 2010-0053, which directed regional water boards to work with dischargers to modify beach water quality monitoring programs required by regional board-issued permits in order to eliminate redundancies and incorporate beach water quality monitoring required by beach water quality statutes, where appropriate.

In April 2012, the San Diego Water Board requested that its staff review beach water quality monitoring conducted in south Orange County. To assist in responding to that request, staff of the Board convened a workgroup that included representatives of the three public agencies that currently conduct almost all of the routine, ongoing beach water quality monitoring in south Orange County, i.e., South Orange County Wastewater Authority (SOCWA), Orange County Public Works, and Orange County Health Care Agency (OCHCA). The workgroup also included other interested parties, including representatives of the Sierra Club and Surfrider Foundation. In December 2012, the San Diego Water Board adopted Resolution No. R9-2012-0069, which endorsed the San Diego Water Board staff report entitled “A Framework for Monitoring and Assessment in the San Diego Region,” dated November 2012.

The unified program is consistent with and will meet or exceed the minimum requirements for beach water quality monitoring and related public notification and reporting established by State law, including the California Ocean Plan. The unified program is consistent with State Water Board Resolution No. 2010-0053. The unified program is also consistent with and will help implement, “A Framework for Monitoring and Assessment in the San Diego Region,” which emphasizes the need for question-driven, beneficial use-oriented monitoring and assessment. The primary purpose of

the unified program will be to answer the question “Does beach water quality meet standards for the beneficial use of water contact recreation?”

The unified program is intended to be protective; it will help protect the health of swimmers, surfers, and others who use south Orange County beach waters for water contact recreational activities. The unified program is also intended to be reasonable; it will eliminate duplicative monitoring and will include triggers for public notification and additional sampling at all sampling stations year-round. The unified program is intended to be equitable; responsibility for implementation of the unified program will be shared and the responsible agencies will jointly make arrangements to implement the program and will have the flexibility to jointly make short and/or long term changes in those arrangements.

The San Diego Water Board Executive Officer issued a written directive on December 5, 2014, pursuant to California Water Code section 13383, for SOCWA and the south Orange County MS4 Copermittees to implement the unified program in cooperation with OCHCA. The Executive Officer may make revisions to the unified program, provided that the unified program, as revised, continues to be consistent with and meet the requirements of State law, including the California Ocean Plan, for beach water quality monitoring and related public notification and reporting. Following a thirty day public comment period, and subject to a request for a hearing before the San Diego Water Board, any such revision shall take effect as specified in a written directive issued by the Executive Officer pursuant to California Water Code sections 13383. The program and any Executive Officer issued revisions to the program are subject to California Water Code section 13320 right of review from the date of issuance.

The unified program will supersede the existing routine, ongoing, beach water quality monitoring programs in south Orange County that are conducted in accordance with the existing requirements of the NPDES permits for discharges from the SOCWA ocean outfalls and the south Orange County MS4s. The requirement to participate in “regional monitoring” of beach water quality replaces requirements to conduct “core monitoring” of beach water quality, as provided for in Appendix III of the 2012 California Ocean Plan.

The State Water Resources Control Board adopted the Water Quality Control Plan for Enclosed Bays and Estuaries of California – Part 1 Sediment Quality which became effective August 25, 2009 (Sediment Quality Monitoring Policy). Provision D.1.e.(2) requires any Copermittees with MS4 discharges to an enclosed bay or estuary to monitoring the sediments in the enclosed bay or estuary receiving water in accordance with the sediment quality monitoring procedures as prescribed in the Sediment Quality Monitoring Policy.

The State Water Board adopted Resolution No. 2012-0012 which approved exceptions to the California Ocean Plan for selected discharges into Areas of Special Biological

Significance (ASBS), including special protections for beneficial uses. State Board Resolution No. 2012-0012 became effective on March 20, 2012, and Attachment B to the Resolution established limitations on point source storm water discharges to ASBS. Copermittees with MS4s that discharge to an ASBS must monitor its discharge to assure compliance with State Board Resolution No. 2012-0012 as required pursuant to Provision D.1.e.(3).

The San Diego Water Board is currently developing a regional monitoring strategy to assess the conditions of receiving waters in the San Diego Region. The monitoring requirements of Provision D.1 are expected to be incorporated or serve as a foundation of this regional monitoring strategy, but may require some modifications. When the San Diego Water Board develops an alternative regional monitoring strategy, the Copermittees will be required to participate in the development and implementation of the alternative regional monitoring program pursuant to Provision D.1.f.

Provision D.2 (MS4 Outfall Discharge Monitoring Requirements) specifies the minimum MS4 outfall discharge monitoring requirements that the Copermittees must incorporate and implement as part of the Water Quality Improvement Plan.

The dry weather MS4 outfall discharge monitoring requirements are included under Provisions D.2.a.(2) and D.2.b. The dry weather MS4 outfall discharge monitoring requirements are part of the “*program, including a schedule, to detect and remove (or require the discharger to the municipal separate storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer*” required by 40 CFR 122.26(d)(2)(iv)(B), which is expected to achieve compliance with the CWA section 402(p)(3)(B)(ii) statutory requirement for municipal storm water permits to require the Copermittees to “*effectively prohibit non-storm water discharges into the storm sewers.*” The dry weather MS4 outfall discharge monitoring data collection requirements are based on requirements under 40 CFR 122.26(d)(1)(iv)(D) and 122.26(d)(2)(iv)(B)(3).

The dry weather MS4 outfall discharge monitoring requirements are designed to provide wide spatial and temporal coverage of each jurisdiction to better understand the extent and magnitude of non-storm water discharges to receiving waters, and make a distinction between persistent and transient non-storm water flows. This information is expected to allow each Copermittee to focus its resources on eliminating and controlling the highest priority threats to receiving water quality, as well as integrating other elements of the storm water programs (e.g. complaint call response) and third party data to efficiently and effectively assist in efforts to eliminate non-storm water discharges.

The dry weather MS4 outfall discharge monitoring requirements of Provision D.2.a.(2) and D.2.b are separated into monitoring required before and after the San Diego Water Board accepts the Copermittees’ Water Quality Improvement Plan. Outfall

monitoring conducted prior to acceptance of the Water Quality Improvement Plan is referred to in the Order as Transitional MS4 Outfall Discharge Monitoring. Provision D.2.a.(2) includes the transitional dry weather MS4 outfall discharge monitoring requirements.

The requirements under Provision D.2.a.(2) are based on the requirements under 40 CFR 122.26(d)(1)(iv)(D), (d)(1)(v)(B) and (d)(2)(iv)(B), which include the requirements for a monitoring program to identify, detect, and eliminate illicit connections and illegal discharges to the MS4s. The federal regulations (40 CFR 122.26(d)(1)(iv)(D)) require the monitoring program to include “*a field screening analysis for illicit connections and illegal dumping [that]...[a]t a minimum, include[s] a narrative description, for either each field screening point or major outfall, of visual observations made during dry weather periods.*” The federal regulations (40 CFR 122.26(d)(1)(v)(B)) require the monitoring program to include “*inspection procedures and methods for detecting and preventing illicit discharges, and describe areas where this program has been implemented.*” Furthermore, the monitoring program is required by federal regulations (40 CFR 122.26(d)(2)(iv)(B)) to include “*a schedule, to detect and remove (or require the discharger to the municipal separate storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer.*”

Dry weather transitional MS4 outfall discharge monitoring requires each Copermittee to field screen (inspect) its major MS4 outfalls to classify the MS4 outfall locations as having persistent dry weather flows, transient dry weather flows, or no dry weather flows. To account for the variance in size of the 39 jurisdictions covered under this Order, the Copermittees recommended a tiered approach to the number of major MS4 outfalls that must be inspected. Provision D.2.a.(2)(a) provides a tiered approach to the number of major MS4 outfalls that must be visually inspected per jurisdiction as well as a minimum frequency each Copermittee must inspect each major MS4 outfall per year. This tiered approach is based on the total number of major MS4 outfalls within a Copermittees jurisdiction within each Watershed Management Area.

Based on the field screening, each Copermittee is required to make a determination whether any observed flowing, pooled, or ponded waters are transient or persistent flows. Based on this field screening information, other jurisdictional program information, and third party information, each Copermittee is required to prioritize the MS4 outfalls within its jurisdiction for follow up investigation and elimination of the non-storm water discharge, as part of its illicit discharge detection and elimination program required pursuant to Provision E.2. In accordance with the requirements of Provision E.2, each Copermittee is required to immediately investigate obvious illicit discharges (e.g. outfall discharges with unusual color, unusual odor, or high flows).

This approach allows a Copermittee to use all of its resources, as well as leverage resources and information provided by third parties, to effectively eliminate non-storm water discharges from its MS4 outfalls. If the source of the non-storm water discharge cannot be immediately eliminated, the Copermittee uses the persistent flow or

transient flow classification along with other programmatic implementation data to prioritize the MS4 outfalls for future investigation. In accordance with the adaptive management approach deployed throughout this Order, Provision D.2.a.(2)(c) requires each Copermittee to update its MS4 outfall discharge monitoring station inventory, compiled pursuant to Provision D.2.a.(1), with any new information on the classification of whether the MS4 outfall produces persistent flow, transient flow, or no dry weather flow. The requirement of Provision D.2.a.(2)(c) assures that each Copermittee is collecting data that can be used to demonstrate compliance with the CWA requirement that each Copermittee must implement a program to “*effectively prohibit non-storm water discharges into the [MS4]*” and with the requirements under 40 CFR 122.26(d)(1)(iv)(D), (d)(1)(v)(B) and (d)(2)(iv)(B).

Provision D.2.b describes the dry weather MS4 outfall discharge monitoring required to be incorporated and implemented as part of the Water Quality Improvement Plan. Dry weather MS4 outfall discharge monitoring must be performed by each Copermittee to identify non-storm water and illicit discharges within its jurisdiction pursuant to Provision E.2.c, and to prioritize the dry weather MS4 discharges that will be investigated and eliminated pursuant to Provision E.2.d. The emphasis of the dry weather MS4 outfall discharge monitoring required pursuant to Provision D.2.b is consistent with the requirements under 40 CFR 122.26(d)(1)(iv)(D), (d)(1)(v)(B) and (d)(2)(iv)(B).

Provision D.2.b.(1) requires each Copermittee to continue field screening its major MS4 outfalls and identifying those with persistent flows and transient flows, as conducted during the transitional period (i.e. before the Water Quality Improvement Plan was developed). However, each Copermittee now has the flexibility to adjust the field screening monitoring frequencies and locations for the MS4 outfalls in its inventory, as needed, to identify and eliminate sources of non-storm water persistent flow discharges in accordance with the highest priority water quality conditions identified in the Water Quality Improvement Plan. In order to ensure a minimum number of outfalls are inspected, Provision D.2.b.(1) requires the number of visual inspections be equal to the number of visual inspections required in the tiered inspection program pursuant to Provision D.2.a.(2)(a).

Provision D.2.b.(2)(b) requires each Copermittee to monitor a minimum of 5 major MS4 outfalls with persistent flows identified as the highest priorities within a Copermittee’s jurisdiction, within each Watershed Management Area. In other words, Copermittees located in more than one Watershed Management Area must identify at least 5 major MS4 outfalls with persistent flows in its jurisdiction in each Watershed Management Area. If a Copermittee is located in more than one Watershed Management Area, and they have less than 5 major MS4 outfalls with persistent flows per jurisdictional area per Watershed Management Area, all of the major MS4 outfalls must be identified as high priority dry weather persistent flow MS4 outfalls. The Copermittees identified as Responsible Copermittees by a TMDL in Attachment E of

the Order may need to monitor more than 5 dry weather major MS4 outfall locations to determine compliance with the requirements of the TMDL(s).

Monitoring must occur at the highest priority outfall locations at least semi-annually until the non-storm water discharges have been eliminated for three consecutive dry weather monitoring events; identified to be authorized by a separate NPDES Permit; or reprioritized to a lower priority. Persistent flow MS4 outfall monitoring stations that have been removed must be replaced with the next highest prioritized MS4 major outfall in the Copermittee's jurisdiction within the Watershed Management Area, unless there are no remaining qualifying major MS4 outfalls within the Copermittees jurisdiction. The Copermittees must continually update their dry weather persistent flow MS4 outfall discharge monitoring locations with the next highest priority non-storm water flow that have yet to be eliminated until all persistent and transient flows are eliminated or its threat reduced.

Non-storm water persistent flow MS4 outfall discharge monitoring data collected during each semi-annual monitoring event, must be collected and analyzed according to the requirements of Provision D.2.b.(2)(b)–(e). These monitoring requirements are consistent with the requirements under 40 CFR 122.26(d)(1)(iv)(D), (d)(1)(v)(B) and (d)(2)(iv)(B).

The wet weather MS4 outfall discharge monitoring requirements are included under Provisions D.2.a.(3) and D.2.c. The wet weather MS4 outfall discharge monitoring requirements are necessary for the Copermittees to implement a “*management program...to reduce the discharge of pollutants to the maximum extent practicable, using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate*” required by 40CFR 122.26(d)(2)(iv), which is expected to achieve compliance with the CWA section 402(p)(3)(B)(iii) statutory requirement for municipal storm water permits to require “*controls to reduce the discharge of pollutants [in storm water] to the maximum extent practicable.*” The wet weather MS4 outfall discharge monitoring data collection requirements are based on requirements under 40 CFR 122.26(d)(2)(iii), 122.26(d)(2)(iii)(A) and 122.26(d)(2)(iii)(A)(1)–(4), and 40 CFR 122.21(g)(7)(i)–(ii).

The wet weather MS4 outfall discharge monitoring requirements of Provision D.2.a.(3) and D.2.c are separated into monitoring required before and after the San Diego Water Board accepts the Copermittees' Water Quality Improvement Plan. Outfall monitoring conducted prior to acceptance of the Water Quality Improvement Plan is referred to in the Order as Transitional MS4 Outfall Discharge Monitoring. Provision D.2.a.(3) includes the transitional wet weather MS4 outfall discharge monitoring requirements.

Until the wet weather MS4 outfall discharge monitoring requirements of Provision D.2.c are incorporated into a Water Quality Improvement Plan that is accepted by the San Diego Water Board, the Copermittees must comply with the requirements of

transitional wet weather MS4 outfall monitoring requirements pursuant to Provision D.2.a.(3). Provision D.2.a.(3) requires the Copermittees in each Watershed Management Area to sample, at least five of the major MS4 outfalls inventoried pursuant to Provision D.2.a.(1) once per wet season for the monitoring data required to be collected pursuant to Provision D.2.a.(3)(c)-(e). Provision D.2.a.(3) further requires at least one major MS4 outfall monitoring station be located in each Copermittee's jurisdiction within the Watershed Management Area.

At a minimum, the five sampling locations chosen must be representative of storm water discharges from residential, commercial, industrial, and typical mixed-use land uses present within a Watershed Management Area. The San Diego Water Board expects the Copermittees to extrapolate from these data to similar land uses throughout the Watershed Management Area to better inform the Water Quality Improvement Plan development process by prioritizing drainages for implementation of storm water control efforts required pursuant to Provision E.

Provision D.2.c describes the wet weather MS4 outfall discharge monitoring required to be included and implemented as part of the Water Quality Improvement Plan. Provision D.2.c provides the Copermittees the flexibility to adjust the wet weather MS4 outfall discharge monitoring locations and frequencies in the Watershed Management Area, as needed, to identify sources of pollutants in storm water discharges from MS4s in accordance with the highest priority water quality conditions identified in the Water Quality Improvement Plan.

Although Provision D.2.c.(1) allows the Copermittees to adaptively manage the wet weather MS4 outfall discharge monitoring locations and frequencies, the provision requires a minimum of at least five wet weather outfall stations to be monitored. Provision D.2.c.(2) further allows the Copermittees to modify the monitoring frequency at each wet weather MS4 outfall station to meet the goals of the Water Quality Improvement Plan as long as the monitoring frequency occurs at least once per year and is at an appropriate frequency to identify sources of pollutants in storm water discharges, guide pollutant source identification efforts, or determine compliance with the requirements of the applicable TMDLs in Attachment E to the Order.

The wet weather MS4 outfall discharge monitoring requirements of Provisions D.2.c.(3) and D.2.c.(4) are the same as the transitional wet weather MS4 outfall discharge monitoring. In contrast, the requirements of Provision D.2.c.(5) are focused on collecting analytical data specific to the highest priority water quality conditions in the Watershed Management Area identified in the Water Quality Improvement Plan. The wet weather MS4 outfall discharge monitoring data collection requirements are consistent with the requirements under 40 CFR 122.26(d)(2)(iii), 122.26(d)(2)(iii)(A) and 122.26(d)(2)(iii)(A)(1)-(4), and 40 CFR 122.21(g)(7)(i)-(ii).

Provision D.3 (Special Studies) requires the Copermittees to develop special studies that will be conducted for each Watershed Management Area and the entire San

Diego Region. Data collected pursuant to Provision D.3 is to be used by the Copermittees to improve the effectiveness of the strategies implemented by the jurisdictional runoff management programs toward achieving the numeric goals identified in the Water Quality Improvement Plans and ultimately achieve compliance with the discharge prohibitions and receiving water limitations of Provisions A.1.a, A.1.c, and A.2.a, which is consistent with the requirements of Provision A.4.

Special studies are often necessary to fill data gaps or provide more refined information that allow the Copermittees to better manage the generation or elimination of pollutants and discharges to and from the MS4. In the Fourth Term Permits, the Copermittees have been required to implement special studies as directed by the San Diego Water Board. The special studies required by this Order provide the Copermittees more flexibility to identify and implement special studies that will be most useful to improving the effectiveness of their jurisdictional runoff management programs.

Provision D.3.a.(1) requires the Copermittees to develop and conduct at least two special studies per Watershed Management Area, to be determined by the Copermittees. One of the two special studies may be accomplished through participation in a Regional Special Study required under Provision D.3.a.(2). The requirements provide the Copermittees great latitude in identifying and developing the special studies. Watershed Management Area special studies are required, at a minimum, to: (a) relate in some way to the highest water quality priorities identified by the Copermittees in the Water Quality Improvement Plan, (b) be conducted within the Watershed Management Area, and (c) include some form of participation (e.g. contribution of funds, personnel services, project management) by all the responsible Copermittees within the Watershed Management Area.

Examples of Watershed Management Area special studies might include, but are not limited to: (1) focused pollutant source identification studies, (2) BMP effectiveness and/or comparison studies, (3) pilot tests for new or emerging pollutant control methods, (4) receiving water pollutant or stressor source identification and/or mitigation studies, or (5) pollutant fate and transport studies. The Watershed Management Area special studies are expected to provide data that can be utilized by the Copermittees to improve the Water Quality Improvement Plan or implementation of the Copermittees' jurisdictional runoff management programs to address the highest priority water quality conditions.

Provision D.3.a.(2) requires the Copermittees to develop at least one special study that will be conducted for the entire San Diego region. The regional special study is expected to provide data that can be utilized by the Copermittees to improve the Water Quality Improvement Plan or implementation of the Copermittees' jurisdictional runoff management programs to identify or address regional water quality concerns and priorities.

An example of a regional special study would be to develop and establish allowable exceedance frequencies of the bacteria water quality objectives for several types of water bodies, during different wet and dry weather conditions the San Diego region. The special study would be related to bacteria, which is a priority for the San Diego region due to the adoption of “*Bacteria TMDL Project I – Beaches and Creeks in the San Diego Region.*” The study results could be used to inform the Copermittees and the San Diego Water Board about the indicator bacteria water quality objective exceedance frequencies that occur in natural or reference watersheds.

Provision D.4 (Assessment Requirements) specifies the assessments that the Copermittees are required to perform, based on the monitoring data collected, and will be reported as part of the Annual Report for the Water Quality Improvement Plan implementation. Provision D.4 requires the Copermittees assess the progress of the water quality improvement strategies in the Water Quality Improvement Plan toward achieving compliance with Provisions A.1.a, A.1.c, and A.2.a.

Provision D.4 specifies the assessments that Copermittees must perform for each Watershed Management Area to assess the effectiveness of each Copermittee’s jurisdictional runoff management program and the Water Quality Improvement Plan. The effectiveness of each Copermittee’s jurisdictional runoff management program and Water Quality Improvement Plan is measured through these types of assessments: (a) Receiving Waters Assessments (b) MS4 Outfall Discharges Assessments, (c) Special Studies Assessments, and (d) Integrated Assessment of Water Quality Improvement Plan.

Provision D.4.a requires the Copermittees to assess the status of receiving water conditions annually during the transitional monitoring period (during development of the Water Quality Improvement Plan) and after acceptance of the Water Quality Improvement Plan. The monitoring data collected pursuant to Provision D.1 will be evaluated, among other information, to assess the condition of a Watershed Management Area’s streams, coastal waters, enclosed bays, harbors, estuaries, and lagoons. The focus of the receiving waters assessments is to measure progress toward the objective of the CWA to “*restore and maintain the chemical, physical, and biological integrity of the Nation’s waters*” as the Water Quality Improvement Plan and each Copermittee’s jurisdictional runoff management program are implemented within a Watershed Management Area. Provision D.4.a is consistent with 40 CFR 122.42(c)(7) which requires the Copermittees to annually report the “[i]dentification of water quality improvements or degradation.”

Provision D.4.b includes the MS4 outfall discharges assessment requirements. The focus of MS4 outfall discharges assessments is to determine if the Copermittees’ are implementing programs that comply with the requirements of the CWA for MS4 permits to “*effectively prohibit non-stormwater discharges into the storm sewers*” and “*require controls to reduce the discharge of pollutants [in storm water] to the maximum extent practicable.*” The monitoring data collected pursuant to Provisions D.2 will be

evaluated, among other information, to assess the effectiveness of the transitional MS4 outfall field screening monitoring, the implementation of the Water Quality Improvement Plan and each Copermittee's jurisdictional runoff management program. The MS4 outfall discharge assessments consist of Non-Storm Water Discharges Reduction Assessments and Storm Water Pollutant Discharges Reduction Assessments.

The Non-Storm Water Discharges Reduction Assessments are how each Copermittee will demonstrate that its jurisdictional runoff management program implementation efforts are achieving the CWA requirement to "*effectively prohibit non-stormwater discharges into the storm sewers.*" Provision D.4.b.(1) requires each Copermittee to assess and report on its illicit discharge detection and elimination program required pursuant to Provision E.2 to reduce and effectively prohibit non-storm water and illicit discharges into the MS4 within its jurisdiction. The Non-Storm Water Discharges Reduction Assessments include specific assessment requirements applicable to each Copermittee.

As each Copermittee collects and analyzes the data collected pursuant to dry weather MS4 outfall discharges monitoring requirements of Provisions D.2.a.(2) and D.2.b, Provision D.4.b.(1) requires each Copermittee to assess the progress, assess the effectiveness of its current actions, and identify modifications necessary to increase the effectiveness of its actions toward reducing and eliminating non-storm water and illicit discharges to its MS4. The findings from these assessments are expected to be utilized by the Copermittee as part of its procedures to prioritize the non-storm water discharges that will be addressed by its Illicit Discharge Detection and Elimination program required pursuant to Provision E.2.

The assessment requirements of Provision D.4.a.(1) are consistent with 40 CFR 122.26(d)(2)(iv)(B) and 122.26(d)(2)(iv)(B)(3) which require "*procedures...to investigate portions of the separate storm sewer system that, based on the results of the field screen, or other appropriate information [emphasis added], indicate a reasonable potential of contain illicit discharges or other sources of non-storm water*" as part of a "*program...to detect and remove...illicit discharges and improper disposal into the storm sewer.*" The assessment requirements of Provision D.4.a.(1) are also consistent with 40 CFR 122.42(c)(1) requires the Copermittees to annually report the "*status of implementing the components of the storm water management program that are established as permit conditions.*"

The Storm Water Pollutant Discharges Reduction Assessment is how the Copermittees in each Watershed Management Area will demonstrate that their jurisdictional runoff management program implementation efforts are achieving the CWA requirement to "*reduce the discharge of pollutants [in storm water] to the maximum extent practicable.*" Provision D.4.b.(2) requires the Copermittees in each Watershed Management Area to assess and report the progress of the Copermittees' efforts to reduce pollutants in storm water discharges from the MS4s to the MEP. The

Storm Water Pollutant Discharges Reduction Assessments include specific assessment requirements during both the transitional monitoring period and after acceptance of the Water Quality Improvement Plan applicable to the Watershed Management Area and each Copermittee.

As the Copermittees collect and analyze the data collected pursuant to wet weather MS4 outfall discharges monitoring requirements of Provisions D.2.a.(3) and D.2.c, Provision D.4.b.(2) requires the Copermittees to assess runoff conditions during the transitional period, and the progress of the Water Quality Improvement Plan strategies toward reducing pollutants in storm water from the MS4 to the MEP. The findings from these assessments are expected to be utilized by the Copermittees to identify any modifications to the wet weather MS4 outfall discharge monitoring locations and frequencies necessary to identify sources of pollutants in storm water discharges from the MS4s, as well as focus, modify, and improve the water quality improvement strategies implemented by each Copermittee within its jurisdiction to reduce pollutants in storm water discharges to the MEP.

The assessment requirements of Provision D.4.b.(2) are consistent with 40 CFR 122.26(d)(2)(iii)(B) which requires “[e]stimates of the annual pollutant load of the cumulative discharges to waters of the United States from all identified municipal outfalls...during a storm event...accompanied by a description of the procedures for estimating constituent loads and concentrations, including any modeling, data analysis, and calculation methods.” The assessment requirements of Provision D.4.a.(2) are consistent with 40 CFR 122.26(d)(2)(v) which requires that each Copermittee assesses the “*estimated reductions in loadings of pollutants from discharges of municipal storm sewer constituents from municipal storm sewer systems expected as the result of the municipal storm water quality management program.*” The assessment requirements of Provision D.4.b.(2) are also consistent with 40 CFR 122.42(c)(1) requires the Copermittees to annually report the “*status of implementing the components of the storm water management program that are established as permit conditions.*”

Provision D.4.c includes the special studies assessment requirements. Performing special studies are how the Copermittees will address data gaps identified during the development of and updates to the Water Quality Improvement Plan. The relevant findings from the special studies assessments are expected to be incorporated as part of the applicable receiving water assessments, MS4 outfall discharge assessments, and integrated water quality improvement assessments required in Provision D.4.a, D.4.b, and D.4.d, respectively.

The assessment requirements in Provision D.4.d are part of the iterative approach and adaptive management process required by Provision A.4. The Copermittees are required to integrate the data collected pursuant to Provisions D.4.a-c, and information collected during the implementation of the jurisdictional runoff management programs required pursuant to Provision E to re-evaluate the Water Quality Improvement Plan.

The monitoring data collected pursuant to Provisions D.1 and D.2, and the results of the assessment required pursuant to Provisions D.4.a-c, will be used to determine whether the Water Quality Improvement Plan and each Copermittee's jurisdictional runoff management program are effective, or require modifications or improvements to become more effective to achieve the requirements of the CWA. The assessments required by Provision D.4.d are consistent with 40 CFR 122.42(c)(1) which requires that the Copermittees to report the *"[t]he status of implementing the components of the storm water management program that are established as permit conditions."*

E. Jurisdictional Runoff Management Programs

Purpose: Provision E includes the requirements for the jurisdictional runoff management programs to be implemented by each of the Copermittees. Compliance with the requirements for the jurisdictional runoff management programs will allow the Copermittees to demonstrate that they are implementing programs to effectively prohibit non-storm water discharges to the MS4 and reduce pollutants in storm water discharges from the MS4 to the MEP. The jurisdictional runoff management program document prepared by each Copermittee will also provide the details for implementing the water quality improvement strategies identified in the Water Quality Improvement Plan specifically within its jurisdiction.

Discussion: Implementation of the jurisdictional runoff management program requirements under Provision E is how the Copermittees “*effectively prohibit non-stormwater discharges into the storm sewer,*” and outlines the “*controls to reduce the discharge of pollutants to the maximum extent practicable*” consistent with the federal regulations under 40 CFR 122.26. The jurisdictional runoff management program is part of the “*comprehensive planning process*” that is required pursuant to 40 CFR 122.26(d)(2)(iv). Where the Water Quality Improvement Plan is the “*comprehensive planning process*” on a Watershed Management Area scale, requiring “*intergovernmental coordination,*” the jurisdictional runoff management program document is the “*comprehensive planning process*” on a jurisdictional scale that should be coordinated with the other Copermittees in the Watershed Management Area to achieve the goals of the Water Quality Improvement Plan.

The jurisdictional runoff management program requirements are included to provide each Copermittee criteria that can be used to demonstrate that its storm water management program is implementing the “*comprehensive planning process*” within its jurisdiction to “*effectively prohibit non-stormwater discharges into the storm sewers,*” and to identify and implement the most effective “*controls to reduce the discharge of pollutants to the maximum extent practicable*” in accordance with the performance standards given in the CWA.

Provision E includes the requirements for each of the components that must be included in the Copermittee’s jurisdictional runoff management program document that will be implemented by the Copermittee within its jurisdiction. Implementation of the components of each Copermittee’s jurisdictional runoff management program must incorporate the water quality improvement strategies identified by each Copermittee in the Water Quality Improvement Plans, described pursuant to Provision B.3.b.(1)(a).

More specific and detailed discussions of the requirements of Provision E are provided below.

Provision E.1 (Legal Authority Establishment and Enforcement) requires each Copermitee to establish and enforce sufficient legal authority to control discharges to the MS4 within its jurisdiction.

Pursuant to 40 CFR 122.26(d)(1)(ii) and 40 CFR 122.26(d)(2)(i), each Copermitee must have sufficient “*legal authority to control discharges to the municipal separate storm sewer system*” and be able to demonstrate that it can “*operate pursuant to legal authority established by statute, ordinance or series of contracts.*” Provision E.1.a describes the minimum legal authorities each Copermitee must establish for itself within its jurisdiction to control discharges to its MS4. The requirements of Provision E.1.a are consistent with the requirements set forth in 40 CFR 122.26(d)(2)(i)(A)-(F).

The certification statement required from each Copermitee by Provision E.1.b is included to provide the San Diego Water Board additional documentation that each Copermitee has established the legal authorities consistent with Provision E.1.a and 40 CFR 122.26(d)(2)(i)(A)-(F), and the Copermitee can “*operate pursuant to legal authority established by statute, ordinance or series of contracts.*”

Provision E.2 (Illicit Discharge Detection and Elimination) requires each Copermitee to implement an illicit discharge detection and elimination program to effectively prohibit non-storm water discharges to the MS4 by actively detecting and eliminating illicit discharges and disposal into its MS4.

Provision E.2 establishes the minimum requirements that each Copermitee must implement within its jurisdiction to effectively prohibit non-storm water discharges from entering its MS4. The federal CWA requires permits for municipal storm sewer systems to “*effectively prohibit non-storm water discharges into the storm sewers.*” The federal regulations (40CFR122.26(d)(2)(i)(B)) require each Copermitee to establish the legal authority to prohibit illicit discharges to its MS4s. Under 40 CFR 122.26(d)(2)(iv)(B), each Copermitee must implement a “*program...to detect and remove...illicit discharges and improper disposal into the storm sewer.*” The federal NPDES regulations, under 40 CFR 122.26(b)(2), define illicit discharges as “*any discharge to a municipal separate storm sewer that is not composed entirely of storm water.*” Thus, non-storm water discharges are not authorized to enter the MS4 and are considered to be illicit discharges, unless authorized by a separate NPDES permit.

The Phase I Final Rule clarifies that non-storm water discharges through an MS4 are not authorized under the CWA (55 FR 47995):

“Today’s rule defines the term “illicit discharge” to describe any discharge through a municipal separate storm sewer system that is not composed entirely of storm water and that is not covered by an NPDES permit. Such illicit discharges are not authorized under the Clean Water Act. Section 402(p)(3)(B) requires that permits for discharges from municipal separate storm sewers require the municipality to “effectively prohibit” non-storm water discharges from the municipal separate storm

sewer... Ultimately, such non-storm water discharges through a municipal separate storm sewer must either be removed from the system or become subject to an NPDES permit.”

The federal NPDES requirements for the program to address illicit discharges must include “*inspections, to implement and enforce an ordinance, orders, or other similar means to prevent illicit discharges to the MS4.*” The federal NPDES regulations also reference several categories of “*non-storm water discharges or flows [which] shall be addressed where such discharges are identified...as sources of pollutants to waters of the United States.*” The Phase I Final Rule (55 FR 48037) further clarified the requirements of 40 CFR 122.26(d)(2)(iv)(B)(1) as follows:

“EPA is clarifying that section 402(p)(3)(B) of the CWA (which requires permits for municipal separate storm sewers to 'effectively' prohibit non-storm water discharges) does not require permits for municipalities to prohibit certain discharges or flows of nonstorm water to waters of the United States through municipal separate storm sewers in all cases.”

In previous iterations of the municipal storm water permits for the San Diego Region, these categories were simply listed and referred to as categories of non-storm water discharges “not prohibited” unless identified as a source of pollutants. The Copermittees have often referred to these categories as “exempt” discharges. In both cases, however, the language is inconsistent with the federal CWA and NPDES regulations. And, the clarification provided in the Phase I Final Rule does not specifically state that such discharges are “not prohibited” or “exempt” or in any way authorized. The federal NPDES regulations do, however, state that specific categories of non-storm water discharges must be “*addressed*” if identified as “*sources of pollutants to waters of the United States.*”

The language of Provision E.2.a has been revised to be fully consistent with the language of the CWA and the requirements of the federal regulations under 40 CFR 122.26(d)(2)(iv)(B)(1). Provision E.2.a requires each Copermittee to address all types of non-storm water discharges into its MS4 as illicit discharges, unless the discharge is authorized by a separate NPDES permit, or identified as a category of non-storm water discharges or flows that must be addressed pursuant to Provisions E.2.a.(1) through E.2.a.(5). Only non-NPDES-permitted non-storm water discharges identified as a category of non-storm water discharges under Provisions E.2.a.(1) through E.2.a.(5) and not identified as a source of pollutants do not have to be addressed as illicit discharges. Categories of non-storm water discharges that meet the requirements of Provisions E.2.a.(1) through E.2.a.(5) do not have to be addressed by the Copermittee as illicit discharges.

Several of the non-storm water categories listed in 40 CFR 122.26(d)(2)(iv)(B)(1) have not been included in Provisions E.2.a.(1) through E.2.a.(5), including: street wash water, landscape irrigation, irrigation water, and lawn watering. Because these are no

longer included within the categories listed under Provisions E.2.a.(1) through E.2.a.(5), the Copermittees must prohibit these types of non-storm water discharges from entering the MS4. This is consistent with the clarification of 40 CFR 122.26(d)(2)(iv)(B)(1) in the Phase I Final Rule (55 FR 48037), which states:

“[T]he Director may include permit conditions that either require municipalities to prohibit or otherwise control any of these types of discharges where appropriate.”

Street wash water is a category of non-storm water discharges that was removed when the Third Term Permits were issued. Street wash water is a source of several pollutants (e.g., metals, oil and grease, petroleum hydrocarbons, chlorinated solvents, sediment) which are generated during the street washing process. The removal of this category requires the Copermittees to prohibit this type of non-storm water discharge from entering the MS4.

The landscape irrigation, irrigation water, and lawn watering categories, collectively referred to hereafter as “over-irrigation” discharges, were removed from the list of non-storm water discharge categories in the Fourth Term Orange County and Riverside County Permits. Non-storm water discharges resulting from over-irrigation have been found to be a source of several types of pollutants (e.g., nutrients, bacteria, pesticides, sediment) in receiving waters. The San Diego Water Board and the Copermittees have identified categories of non-storm water discharges associated with over-irrigation as a source of pollutants and conveyance of pollutants to the MS4 and waters of the United States in the following documents:

- **SmartTimer/Edgescape Evaluation Program (SEEP) Grant Application**

The State Water Board allocated grant funding to the SEEP project grant application submitted in 2006, which targeted irrigation runoff by retrofitting areas of existing development and documenting the conservation and runoff improvements. The basis of this grant project is that over-irrigation (landscape irrigation, irrigation water and lawn watering) into the MS4 is a source and conveyance of pollutants. In addition, the grant application indicated that this alteration of natural flows is impacting the beneficial uses of waters of the state and U.S. Results from the study indicate that that over-irrigation (landscape irrigation, irrigation water and lawn watering) into the MS4 is a source and conveyance of pollutants. The results of this study can be applied broadly to any area where over-irrigation takes place. The grant application included the following statements:

“Irrigation runoff contributes flow & pollutant loads to creeks and beaches that are 303(d) listed for bacteria indicators.”

“Regional program managers agree that the reduction and/or elimination of irrigation-related urban flows and associated pollutant loads may be key to successful attainment of water quality and beneficial use goals as outlined in

the San Diego Basin Plan and Bacteria TMDL over the long term.”

“Elevated dry-weather storm drain flows, composed primarily ... of landscape irrigation water wasted as runoff, carry pollutants that impair recreational use and aquatic habitats all along Southern California’s urbanized coastline. Storm drain systems carry the wasted water, along with landscape derived pollutants such as bacteria, nutrients and pesticides, to local creeks and the ocean. Given the local Mediterranean climate, excessive perennial dry season stream flows are an unnatural hydrologic pattern, causing species shifts in local riparian communities and warm, unseasonal contaminated freshwater plumes in the near-shore marine environment.”

- **2006-2007 Orange County Watershed Action Plan Annual Reports**

The Watershed Action Plan Annual Reports for the 2006-2007 reporting period were submitted by the County of Orange, Orange County Flood Control District and Copermittees within the San Juan Creek, Laguna Coastal Streams, Aliso Creek, and Dana Point Coastal Streams Watersheds. San Juan Creek, Laguna Coastal Streams, Aliso Creek and Dana Point Coastal Streams are all currently 303(d) listed as impaired for indicator bacteria within their watersheds and/or in the Pacific Ocean at the discharge points of their watersheds. The Orange County Copermittees, within their Watershed Action Strategy Table for fecal indicator bacteria included the following:

“Support programs to reduce or eliminate the discharge of anthropogenic dry weather nuisance flow throughout the...watershed. Dry weather flow is the transport medium for bacteria and other 303(d) constituents of concern.”

Additionally, they state that *“conditions in the MS4 contribute to high seasonal bacteria propagation in-pipe during warm weather. Landscape irrigation is a major contributor to dry weather flow, both as surface runoff due to over-irrigation and overspray onto pavements; and as subsurface seepage that finds its way into the MS4.”*

- **Fiscal Year 2008 Carlsbad Watershed Urban Runoff Management Program Annual Report**

The Carlsbad Watershed Urban Runoff Management Program Annual Report for Fiscal Year 2008 was submitted by the Carlsbad Watershed Copermittees (Cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista, and the County of San Diego). In the Annual Report, the Carlsbad Watershed Copermittees stated the following:

“The Carlsbad Watershed Management Area (WMA) collective watershed

strategy identifies bacteria, sediment, and nutrients as high priority water quality pollutants in the Agua Hedionda (904.3 – bacteria and sediment), Buena Vista (904.2 – bacteria), and San Marcos Creek (904.5 – nutrients) Hydrologic Areas. Bacteria, sediment, and nutrients have been identified as potential discharges from over-irrigation.”

- **2007-2008 San Diego Bay Watershed Urban Runoff Management Program Annual Report**

The San Diego Bay Watershed Urban Runoff Management Program 2007-2008 Annual Report was submitted by the San Diego Bay Watershed Copermittees (Cities of Chula Vista, Coronado, Imperial Beach, La Mesa, Lemon Grove, National City, and San Diego, the County of San Diego, the Port of San Diego, and the San Diego County Airport Authority). In Appendix D of the Annual Report, titled “Likely Sources of Pollutants,” the San Diego Bay Watershed Copermittees identified over-irrigation of lawns as a pollutant generating activity from business and/or residential land uses for bacteria, pesticides, and sediment.

- **Copermittee Public Education Materials**

The Orange County Public Works *Tips for Landscape & Gardening* public education brochure states: “*Fertilizers, pesticides and other chemicals that are left on yards or driveways can be blown or washed into storm drains that flow to the ocean. Overwatering lawns can also send materials into storm drains.*”

The Riverside County Flood Control and Water Conservation District *Landscape and Garden* public education brochure states: “*Soil, yard wastes, over-watering and garden chemicals become part of the urban runoff mix that winds its way through streets, gutters and storm drains before entering lakes, rivers, streams, etc. Urban runoff pollution contaminates water and harms aquatic life!*”

- **Los Peñasquitos Lagoon Sedimentation/Siltation TMDL Technical Report**

The Los Peñasquitos Lagoon Sedimentation/Siltation TMDL technical report was prepared for the City of San Diego and USEPA in October 2010. The technical report was included as a technical supporting document attached to the Sediment TMDL for Los Peñasquitos Lagoon staff report prepared by the San Diego Water Board, dated June 13, 2012. Under the Source Assessment section, the technical report states the following:

“Dry weather loading is dominated by nuisance flows from urban land use activities such as car washing, sidewalk washing, and lawn over-irrigation, which pick up and transport sediment into receiving waters.”

These documents confirm that non-storm water discharges associated with over-irrigation are a source of pollutants and should be addressed as illicit discharges to the MS4. Prohibiting non-storm water discharges associated with over-irrigation, however, is not a new requirement for the Copermittees because it is also consistent with and required by the Water Conservation in Landscaping Act (AB 1881, Laird).

The Water Conservation in Landscaping Act required the Department of Water Resources (DWR) to prepare a Model Water Efficient Landscape Ordinance for use by local agencies (e.g. the Copermittees). All local agencies were required to adopt a water efficient landscape ordinance by January 1, 2010. Local agencies could adopt the Water Efficient Landscape Ordinance developed by DWR, or an ordinance considered at least as effective as the Model Ordinance. The Water Efficient Landscape Ordinance includes a requirement that local agencies prohibit runoff from irrigation (§ 493.2):

“Local agencies shall prevent water waste resulting from inefficient landscape irrigation by prohibiting runoff from leaving the target landscape [emphasis added] due to low head drainage, overspray, or other similar conditions where water flows onto adjacent property, non-irrigated areas, walks, roadways, parking lots, or structures. Penalties for violation of these prohibitions shall be established locally.”

Furthermore, non-storm water discharges from over-irrigation not only transport and discharge pollutants to receiving waters, but are also a likely source of the dry weather flows causing changes to habitat within and along the receiving water bodies. Examples of habitat changes from the dry weather flows include perennialization of ephemeral streams, and conversion of saltwater and brackish water marsh habitats to freshwater marsh habitats (e.g. Los Peñasquitos Lagoon). Both of these examples have resulted in the promotion of invasive species in several areas of the San Diego Region.

The removal of the over-irrigation discharges categories does not require the Copermittees to strictly prohibit lawn and landscape irrigation, but does require the prohibition of excessive irrigation water that results in non-storm water discharges to the MS4. Non-storm water discharges to the MS4 from over-irrigation must be addressed as illicit discharges by the Copermittees pursuant to the requirements of Provision E.2.

The remaining non-storm water categories listed in 40 CFR 122.26(d)(2)(iv)(B)(1) are listed under Provisions E.2.a.(1) through E.2.a.(5) and generally fall into four categories: (1) non-storm water discharges subject to existing San Diego Water Board waste discharge requirements and NPDES permits; (2) non-storm water discharges generally not expected to be a source of pollutants to receiving waters; (3) non-storm water discharges likely to contain pollutants requiring some form of control to address the pollutants prior to discharging to the MS4; and (4) non-storm water discharges or flows associated with firefighting.

Provisions E.2.a.(1) and E.2.a.(2) include several categories of non-storm water discharges listed in 40 CFR 122.26(d)(2)(iv)(B)(1) for which the San Diego Water Board already has developed general waste discharge requirements and NPDES permits to address the discharges. The Copermittees are only required to address these types of non-storm water discharges as illicit discharges if the Copermittees or the San Diego Water Board identifies these non-storm water discharges not having coverage under the applicable NPDES permit.

Provision E.2.a.(3) includes several categories of non-storm water discharges listed in 40 CFR 122.26(d)(2)(iv)(B)(1) which are generally not expected to be a source of pollutants to receiving waters, many of which originate from what are typically natural, uncontrollable sources. The Copermittees are only required to address these types of non-storm water discharges as illicit discharges if the Copermittees or the San Diego Water Board identifies these non-storm water discharges as a source of pollutants to receiving waters. Because many of these sources are generally uncontrollable, enforcing a prohibition may not be a possibility for the Copermittees. The Copermittees would be able to address these non-storm water discharges by preventing these non-storm water discharges from entering the MS4. This could potentially be achieved by sealing their MS4 structures so the discharges cannot enter the MS4.

Provision E.2.a.(4) includes several categories of non-storm water discharges listed in 40 CFR 122.26(d)(2)(iv)(B)(1) that are likely to contain pollutants requiring some form of control to address the pollutants prior to discharging to the MS4. At this time, an outright prohibition of these types of non-storm water discharges does not yet appear to be warranted. Thus, Provision E.2.a.(4) includes several requirements for the Copermittees to control the pollutants from these types of non-storm water discharges. This is consistent with the clarification of the federal regulations in the Phase I Final Rule (55 FR 48037), which states the San Diego Water Board has the authority to require the Copermittees to “*control any of these types of discharges where appropriate.*”

Unlike non-storm water discharges from over-irrigation, these types of non-storm water discharges are not expected to occur in close proximity to each other or very frequently. Provided these types of non-storm water discharges are controlled as required in Provision E.2.a.(4), the Copermittees would only be required to address these types of non-storm water discharges as illicit discharges if the Copermittee or the San Diego Water Board identifies these non-storm water discharges as a source of pollutants to receiving waters.

Provision E.2.a.(5) includes specific requirements for fire fighting discharges and flows. The requirements for non-storm water discharges and flows associated with fire fighting have been separated into requirements for: a) non-emergency fire fighting discharges and flows, and b) emergency fire fighting discharges and flows.

The San Diego Water Board has found that discharges from building fire suppression system maintenance (e.g. fire sprinklers) contain waste and potentially a significant source of pollutants to receiving waters. As such, the San Diego Water Board is requiring these discharges be addressed as illicit discharges by the Copermittees. Thus, the discharges to the MS4 are to be prohibited via ordinance, order or similar means. For other non-emergency firefighting discharges and flows (i.e. flows from controlled or practice blazes, firefighting training, and maintenance activities not associated with building fire suppression systems), the Copermittees are required to develop and implement a program to address pollutants in these non-storm water discharges and flows. This is consistent with the clarification of the federal regulations in the Phase I Final Rule (55 FR 48037), which states the San Diego Water Board has the authority to require the Copermittees to “*control any of these types of discharges where appropriate.*”

For emergency firefighting discharges and flows, the Phase I Final Rule (55 FR 48037) has clarified the requirements of 40 CFR 122.26(d)(2)(iv)(B)(1) pertaining to emergency firefighting flows and discharges, which states:

“In the case of firefighting it is not the intention of these rules to prohibit in any circumstances the protection of life and public or private property through the use of water or other fire retardants that flow into separate storm sewers.”

Thus, the requirements have been made to be consistent with the guidance provided by the Phase I Final Rule. The Order recommends that the Copermittees develop and encourage implementation of BMPs to reduce or eliminate the discharge of pollutants from emergency firefighting flows to the MS4s and receiving waters. The Order does not include any requirements that should be interpreted as requiring the implementation of BMPs for emergency firefighting flows to the MS4s and receiving waters.

The Copermittees are expected to review the dry weather MS4 outfall discharge monitoring data they collect to determine if and when there are non-storm water discharges to or from their MS4s that are a source of pollutants to receiving waters. If the Copermittees identify one of the types of non-storm water discharges listed in Provisions E.2.a.(1) through E.2.a.(4) as a source of pollutants to receiving waters based on the review and evaluation of monitoring data, Provision E.2.a.(6) requires the Copermittees to prohibit those categories of discharges from entering the MS4 through ordinance, order or similar means. In addition, Provision E.2.a.(6) clarifies that the San Diego Water Board may identify categories of non-storm water discharges or flows listed under Provisions E.2.a.(1) through E.2.a.(4) that must be prohibited.

Provision E.2.a.(6) also provides the Copermittees an option to propose controls to be implemented for the category of non-storm water discharges as part of the Water Quality Improvement Plan instead of prohibiting the category of non-storm water

discharges. If the Water Quality Improvement Plan is accepted by the San Diego Water Board with the proposed controls, the Copermittees will not be required to prohibit the category of non-storm water discharges to their MS4s as long as the controls are implemented. This is consistent with the clarification of 40 CFR 122.26(d)(2)(iv)(B)(1) in the Phase I Final Rule (55 FR 48037), which states the San Diego Water Board may “*require municipalities to prohibit or otherwise control any of these types of discharges where appropriate.*”

Finally, Provision E.2.a.(7) has been included in the requirements for non-storm water discharges to clarify that any non-storm water discharges to the Copermittee’s MS4, even those identified pursuant to Provisions E.2.a.(1) through E.2.a.(4), must be reduced or eliminated, unless a non-storm water discharge is identified as a discharge authorized by a separate NPDES permit. Provision E.2.a.(7) is consistent with the requirements of CWA section 402(p)(3)(B)(ii) and 40 CFR 122.26(d)(1)(v)(B), as clarified in the Phase I Final Rule (55 FR 47995) that “[u]ltimately, such non-storm water discharges through a municipal separate storm sewer must either be removed from the system or become subject to an NPDES permit.” However, the reduction or elimination of those non-storm water discharges are expected to be achieved as feasible, in accordance with the priorities in the Water Quality Improvement Plan and when the resources are available to the Copermittee.

Consistent with 40 CFR 122.26(d)(2)(iv)(B) and 122.26(d)(2)(iv)(B)(1), each Copermittee must implement a “*program...to prevent illicit discharges to the municipal storm sewer system*” and “*detect...illicit discharges and improper disposal into the storm sewer.*” Provision E.2.b requires each Copermittee to implement measures to prevent and detect illicit discharges and connections to its MS4 as part of its illicit discharge detection and elimination program.

As part of the program to prevent and detect illicit discharges to the MS4, 40 CFR 122.26(d)(2)(iv)(B)(2) requires “*procedures to conduct on-going field screening activities during the life of the permit, including areas or locations that will be evaluated by such field screens.*” As part of the procedures, each Copermittee is required to maintain an updated map of its entire MS4 and the corresponding drainage areas within its jurisdiction. Having knowledge about where inlets, access points, connections with other MS4s, and outfalls are located is necessary for each Copermittee to track, identify, and eliminate illicit discharges and connections. Thus, Provision E.2.b.(1) of the Order specifies that the map must include the segments of the storm sewer system owned, operated, and maintained by the Copermittee, and include locations of all known inlets, connections with other MS4s, and outfalls to the Copermittee’s MS4. The remaining requirements of Provision E.2.b are consistent with the requirements of 40 CFR 122.26(d)(2)(iv)(B)(3)-(7) related to implementing measures to prevent and detect illicit discharges and connections to the MS4.

Provision E.2.c requires each Copermittee to conduct field screening and monitoring of MS4 outfalls and other portions of its MS4 within its jurisdiction to detect non-storm

water and illicit discharges and connections to the MS4. Field screening is a required element of the program to detect and eliminate illicit discharges and connections to the MS4, pursuant to 40 CFR 122.26(d)(2)(iv)(B)(2). The field screening requirement will be implemented through the dry weather MS4 outfall discharge monitoring required under Provisions D.2.a.(2) and D.2.b.(1).

Provision E.2.d specifies the measures each Copermittee must implement to eliminate illicit discharges and connections to its MS4. Elimination of illicit discharges and connections to the MS4 is consistent with the requirement of 40 CFR 122.26(d)(2)(iv)(B) *“to detect and remove [emphasis added]...illicit discharges and improper disposal into the storm sewer”* and will achieve the CWA requirement for MS4 permits to *“effectively prohibit non-storm water discharges into the storm sewers.”*

Generally, each Copermittee is responsible for prioritizing its efforts to eliminate non-storm water and illicit discharges or connections to its MS4 based on field screening and monitoring data, NALs, illicit discharge investigation records, and the known or suspected sources. Sources of non-storm water and illicit discharges or connections must be eliminated by enforcing the legal authority established by each Copermittee pursuant to Provision E.1.

Provision E.3 (Development Planning) requires each Copermittee to use its land use and planning authority to implement a development planning program to control and reduce the discharge of pollutants in storm water from new development and significant redevelopment to the MEP. Proper implementation of the development planning program will also contribute toward effectively prohibiting non-storm water discharges from development projects to the MS4.

Pursuant to 40 CFR 122.26(d)(2)(iv), each Copermittee is required to implement a *“management program...to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and other such provisions where applicable.”* As part of the management program, 40 CFR 122.26(d)(2)(iv)(A)(2) requires *“planning procedures including a comprehensive master plan to develop, implement and enforce controls to reduce the discharge of pollutants from municipal storm sewers which receive discharges from areas of new development and significant redevelopment.”*

Land development generally alters the natural conditions of the land by removing vegetative cover, compacting soil, and/or placement of concrete, asphalt, or other impervious surfaces. These impervious surfaces concentrate urban pollutants (such as pesticides, petroleum hydrocarbons, heavy metals, and pathogens) that are otherwise not found in high concentrations in the natural environment. Pollutants that accumulate on impervious surfaces are not easily biodegraded nor subject to natural treatment processes.

Impervious surfaces greatly affect the natural hydrology of the land because they do not allow natural infiltration and treatment of storm water runoff to take place. Instead, storm water runoff from impervious surfaces is typically directed through pipes, curbs, gutters, and other hardscape into receiving waters, with little treatment, at significantly increased volumes and accelerated flow rates over what would occur naturally. The increased pollutant loads, storm water volume, discharge rates and velocities, and discharge durations from the MS4 adversely impact stream habitat by causing accelerated, unnatural erosion and scouring within creek bed and banks. Placement of impervious surfaces also encapsulates “good” sediment (such as sand, gravel, rocks and cobbles) that would normally replenish creek beds and banks to help stabilize them. Collectively, these changes to natural hydrologic processes are termed hydrograph modification, or hydromodification.

Hydromodification, which is caused by both altered storm water flow and altered sediment flow regimes, is largely responsible for degradation of creeks, streams, and associated habitats in the San Diego Region. In an ongoing study by the Stormwater Monitoring Coalition to assess the health of streams throughout Southern California, researchers found that three of the four highest risk stressors to creeks (percent sands and fines present, channel alteration, and riparian disturbance) were related to physical habitat.²⁹ Researchers studying flood frequencies in Riverside County have found that increases in watershed imperviousness of only 9-22 percent can result in increases in peak flow rates for the two-year storm event of up to 100 percent.³⁰ Such changes in runoff have significant impacts on channel morphology.

In addition, a technical report issued by the Southern California Coastal Water Research Project (SCCWRP) stated that “[r]ecent studies indicate that California’s intermittent and ephemeral streams are more susceptible to the effects of hydromodification than streams from other parts of the United States. Physical degradation of stream channels in the central and eastern United States can initially be detected when watershed impervious cover approaches 10 percent, although biological effects (which may be more difficult to detect) may occur at lower levels. In contrast, initial response of streams in the semi-arid portions of California appears to occur between 3 and 5 percent impervious cover.”³¹ These studies highlight the extent to which impacts originating from impervious surfaces created by land development are responsible for the degradation of creek and stream habitat.

This is consistent with what USEPA has noted, that “[m]ost stormwater runoff is the result of the man-made hydrologic modifications that normally accompany development. The addition of impervious surfaces, soil compaction, and tree and

²⁹ Assessing the Health of Southern California Streams, Stormwater Monitoring Coalition, Fact Sheet

³⁰ Schueler and Holland, 2000. Storm Water Strategies for Arid and Semi-Arid Watersheds (Article 66). The Practice of Watershed Protection.

³¹ Stein, E. and Zaleski, S., 2005. Technical Report 475, Managing Runoff to Protect Natural Streams: The Latest Development on Investigation and Management of Hydromodification in California. December 30, 2005.

*vegetation removal result in alterations to the movement of water through the environment. As interception, evapotranspiration, and infiltration are reduced and precipitation is converted to overland flow, these modifications affect not only the characteristics of the developed site but also the watershed in which the development is located. Stormwater has been identified as one of the leading sources of pollution for all waterbody types in the United States. Furthermore, the impacts of stormwater pollution are not static; they usually increase with more development and urbanization.*³²

Reducing the impact from the increased pollutant loads and flows generated by impervious surfaces within a watershed is essential to protecting and restoring the integrity of the receiving waters. Provision E.3 includes the minimum “*management practices, control techniques and system, design and engineering methods, and other such provisions where applicable*” to be included in the “*planning procedures...to reduce the discharge of pollutants...from areas of new development and significant redevelopment.*” The requirements of Provision E.3 will 1) minimize the generation and discharge of pollutants in storm water from the MS4, and 2) minimize the potential of storm water discharges from the MS4 from causing altered flow regimes and excessive downstream erosion in receiving waters.

The requirements of Provision E.3.a include the minimum “*management practices, control techniques and system, design and engineering methods, and other such provisions where applicable*” to be included in the “*planning procedures...to reduce the discharge of pollutants...from areas of new development and significant redevelopment*” applicable to all development projects, regardless of size or purpose of development. In general, all development projects must implement onsite BMPs to remove pollutants from runoff prior to its discharge to any receiving waters, as close to the pollutant generating source as possible, and structural BMPs must not be constructed within waters of the U.S.

Furthermore, the onsite BMPs must be designed and implemented with measures to avoid the creation of nuisance or pollution associated with vectors (e.g. mosquitos, rodents, and flies). If not properly designed or maintained, certain BMPs implemented or required by municipalities may create a habitat for vectors. Monitoring studies conducted by the California Department of Public Health (CDPH) have documented that mosquitoes opportunistically breed in structural storm water BMPs, particularly those that hold standing water for over 96 hours. Certain site design features that hold standing water may similarly produce mosquitos.

Structural BMPs and site design features should incorporate design, construction, and maintenance principles to promote drainage within 96 hours to minimize standing water available to mosquitos. Nuisances and public health impacts resulting from

³² USEPA, 2007. Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices, December 2007.

vector breeding can be prevented with close collaboration and cooperative effort between municipalities and local vector control agencies and the CDPH during the development and implementation of storm water runoff management programs. The CDPH also has issued guidance for BMP implementation that will minimize potential nuisances and public health impacts resulting from vector breeding.³³

All development projects are required to implement source control BMPs that will minimize the generation of pollutants. Additionally, each development project must implement, where applicable and feasible, low impact development (LID) BMPs to mimic the natural hydrology of the site and retain and/or treat pollutants in storm water runoff prior to discharging to and from the MS4.

The LID Center defines LID as “a comprehensive land planning and engineering design approach with a goal of maintaining and enhancing the pre-development hydrologic regime of urban and developing watersheds.”³⁴ LID designs seek to control storm water at the source, using small-scale integrated site design and management practices to mimic the natural hydrology of a site, retain storm water runoff by minimizing soil compaction and impervious surfaces, and disconnect storm water runoff from conveyances to the storm drain system.

LID BMPs may utilize interception, storage, evaporation, evapotranspiration, infiltration, and filtration processes to retain and/or treat pollutants in storm water before it is discharged from a site. Because of these numerous options, the San Diego Water Board expects that every development project will be able to implement some form of LID BMPs. Examples of LID BMPs include using permeable pavements, rain gardens, rain barrels, grassy swales, soil amendments, and native plants.

Provision E.3.a also includes requirements for all development projects to, where feasible, landscape with native and/or low water use plants to minimize the discharge of non-storm water discharges associated with excessive irrigation, as well as harvest (i.e., storage) and use precipitation to promote the concept of utilizing storm water as a resource.

While all development projects are subject to the requirements of Provision E.3.a, Provision E.3.b identifies Priority Development Projects that exceed given size thresholds and/or fit under specific use categories. Priority Development Projects are required to incorporate specific performance criteria for structural BMPs into the project plan to reduce the generation of pollutants, and address potential impacts from hydromodification.

³³ California Department of Public Health, 2012. Best Management Practices for Mosquito Control in California. (<http://www.cdph.ca.gov/HealthInfo/discond/Documents/BMPforMosquitoControl07-12.pdf>)

³⁴ www.lowimpactdevelopment.org

The Priority Development Project categories are based on the requirements of the Fourth Term Permits for Orange County and Riverside County (Order Nos. R9-2009-0002 and R9-2010-0016, respectively), and do not differ significantly from the Fourth Term Permit for San Diego County. Furthermore, the Priority Development Project categories are consistent with Santa Ana Water Board Order Nos. R8-2009-0030 and R8-2010-0033 (Orange County and Riverside County MS4 Permits, respectively), and Los Angeles Water Board Order No. R4-2010-0108 (Ventura County MS4 Permit).

Because of the impact of relatively small increases in watershed impervious surfaces to receiving waters, Provision E.3.b.(1)(c)(iv) has been updated to include large driveways that are 5,000 square feet or more. The San Diego Water Board finds that large driveways can exacerbate altered flow regimes if not properly controlled.

Provision E.3.b.(3) describes projects that are exempt from Priority Development Project status. These include new or retrofit paved sidewalks, bicycle lanes, or trails that are designed and constructed to direct runoff to vegetated areas or be hydraulically disconnected from paved areas. The exemptions have been provided to encourage these types of projects because they provide multiple environmental benefits, such as promoting walking rather than driving, which will in turn improve air quality. Additionally, retrofitting of existing alleys, streets, or roads are exempt from Priority Development Project status if they are constructed using USEPA Green Streets guidance.³⁵ By doing so, retrofitting of these types of projects is encouraged. The San Diego Water Board recognizes that there are spatial constraints associated with these projects, and implementation of structural BMPs are not always feasible.

For development projects identified as Priority Development Projects, the requirements of Provision E.3.c are the minimum “*management practices, control techniques and system, design and engineering methods, and other such provisions where applicable*” to be included in the “*planning procedures...to reduce the discharge of pollutants...from areas of new development and significant redevelopment.*” Provisions E.3.c.(1)-(3) describe the performance criteria for the structural BMPs that must be implemented for each Priority Development Project defined by Provision E.3.b.

Provision E.3.c.(1) describes the storm water pollutant control BMP requirements that must be implemented by all Priority Development Projects. The purpose of Provision E.3.c.(1) is to reduce pollutants in storm water runoff to the MEP from Priority Development Projects before it is discharged to the MS4. Of all the available treatment processes available, retention of storm water, and therefore capture of the pollutants in the storm water, will achieve 100 percent pollutant removal efficiency for the volume of storm water retained. No other method of treatment can achieve 100 percent pollutant removal efficiency. Thus, retention of as much storm water onsite is

³⁵ “Managing Wet Weather with Green Infrastructure – Municipal Handbook: Green Streets” (USEPA, 2008).

the most effective way to reduce pollutants in storm water discharges to, and consequently from the MS4, and controls pollutants in storm water discharges from a site to the MEP.

Under Provision E.3.c.(1)(a), retention of the pollutants in the runoff produced from the 85th percentile storm event (“design capture volume”) is the design standard to which Priority Development Projects must comply. Since the 85th percentile storm event has previously been used as the numeric design standard for treatment control BMPs, this same size storm event is used as the numeric design standard for storm water retention. This is the MEP standard recognized by the San Diego Water Board and is consistent with the Fourth Term Permits for Orange County and Riverside County (Order Nos. R9-2009-0002 and R9-2010-0016, respectively), as well as Santa Ana Water Board Order Nos. R8-2009-0030 and R8-2010-0033 (Orange County and Riverside County MS4 Permits, respectively), Los Angeles Water Board Order No. R4-2010-0108 (Ventura County MS4 Permit), and Los Angeles Water Board Order No. R4-2012-0175 (Los Angeles County MS4 Permit).

The 85th percentile storm event is the event that has a precipitation total greater than or equal to 85 percent of all storm events over a given period of record in a specific area or location. For example, to determine what the 85th percentile storm event is in a specific location, all 24 hour storms that have recorded values over a 30 year period would be tabulated and a 85th percentile storm would be determined from this record (i.e. 15 percent of the storms would be greater than the number determined to be the 85th percentile storm). Most jurisdictions in the San Diego Region have already developed isopleth maps that can provide this type of information. The 85th percentile storm might be determined to be a number such as 1.0 inch, and this would be multiplied by the total area of the project footprint producing runoff to calculate the design capture volume. The Priority Development Project designer would then select a system of BMPs that would retain (i.e. intercept, store, infiltrate, evaporate, or evapotranspire) the pollutants contained in the design capture volume onsite.

Retention BMPs are necessary to capture and retain pollutants generated from a Priority Development Project. In a recent study performed by SCCWRP in the Los Angeles Region, they found “*that the magnitude of constituent load associated with storm water runoff depends, at least in part, on the amount of time available for pollutant build-up on land surfaces. The extended dry period that typically occurs in arid climates such as southern California maximizes the time for constituents to build-up on land surfaces, resulting in proportionally higher concentrations and loads during initial storms of the season.*”³⁶ This implies that the “first flush” of a rainy season and the first storm events after long antecedent dry periods tend to have the highest pollutant loads. Capturing and retaining the pollutant loads of the “first flush” of a rainy

³⁶ Stein, E.D., Tiefenthaler, L.L., and Schiff, K.C., 2007. Technical Report 510, Sources, Patterns and Mechanisms of Storm Water Pollutant Loading from Watershed and Land Uses of the Greater Los Angeles Area, California, USA. March 20, 2007.

season and the first storm events after long antecedent dry periods will reduce a significant portion of the pollutants in storm water discharged to and from the MS4.

The San Diego Water Board, however, acknowledges that in some situations retention of the full design capture volume onsite may not be technically feasible. In this event, the Copermittee may allow the Priority Development Project to use biofiltration BMPs to treat 1.5 times the design capture volume not reliably retained onsite, or biofiltration BMPs with a flow-thru design that has a total volume, including pore spaces and pre-filter detention volume, sized to hold at least 0.75 times the portion of the design capture volume not reliably retained onsite.

The 1.5 multiplier is based on the finding in the Ventura County Technical Guidance Manual that biofiltration of 1.5 times the design capture volume not retained onsite will provide approximately the same pollutant removal as retention of the design capture volume on an annual basis.³⁷ This standard is consistent with the Los Angeles Water Board's Los Angeles County and Ventura County municipal storm water permits (Order Nos. R4-2012-0175 and R4-2010-0108, respectively). The flow-thru design of 0.75 times the portion of the design capture volume not reliably retained onsite is consistent with the San Diego Water Board's [Fourth Term Permits for Orange County and Riverside County municipal storm water permits](#) (Order Nos. R9-2009-0002 and R9-2010-0016, respectively). In either case, the biofiltration BMPs must be designed with an appropriate hydraulic loading rate to maximize storm water retention and pollutant removal, as well as to prevent erosion, scour, and channeling within the BMP. Each Copermittee is required to update its BMP Design Manual to provide guidance for hydraulic loading rates and other biofiltration design criteria necessary to maximize storm water retention and pollutant removal.

The San Diego Water Board further recognizes that, in addition to not being technically feasible, retention of the full design capture storm onsite may be cost prohibitive, or may not provide as much water quality benefit to the Watershed Management Area as would implementing BMPs elsewhere in the watershed. Thus, Provision E.3.c.(1)(b) allows for the use of a combination of onsite retention BMPs, and the implementation of an Alternative Compliance Program described in Provision E.3.c.(3). Provision E.3.c.(3) is discussed in more detail below.

If the full design capture volume is not retained onsite either because biofiltration is not technically feasible, or a Copermittee grants a Priority Development Project permission to utilize the Alternative Compliance Program, then the pollutants in the portion of the design capture volume that are not reliably retained onsite must still be reduced to the MEP. Thus, flow-thru treatment control BMPs are required to be implemented on Priority Development Projects in addition to the retention BMPs. The requirements of Provisions E.3.c.(1)(a)(ii)[a]-[c] include the performance standards for flow-thru

³⁷ Ventura Countywide Stormwater Management Program. 2011. Ventura Technical Guidance Manual, Manual Update, 2011.

treatment control BMPs, consistent with the Fourth Term Permits in the San Diego Region.

Whereas the purpose of the requirements under Provision E.3.c.(1) is to reduce pollutants in storm water runoff to the MEP, the purpose of the requirements under Provision E.3.c.(2) is to maintain or restore more natural hydrologic flow regimes to prevent accelerated, unnatural erosion in downstream receiving waters, also to the MEP standard. Provision E.3.c.(2) describes hydromodification management BMP requirements that must be implemented by all Priority Development Projects.

The performance criteria for the implementation of hydromodification management BMPs on Priority Development Projects are consistent with the requirements in the Fourth Term Permits for Orange and Riverside Counties (Order Nos. R9-2009-0002 and R9-2010-0016, respectively). Modifications to the Orange County and Riverside County Hydromodification Management Plans (HMPs) will likely be minor, or may not be necessary. The HMP for San Diego County will likely require some minor modifications to incorporate the requirements of Provision E.3.c.(2) and become consistent with the Orange County and Riverside County HMPs. The San Diego Water Board does not, however, expect that it will be necessary for the San Diego County Copermittees to develop a new approach or significantly re-write the San Diego County HMP. This is because the premise of the hydromodification management BMP requirements, which are to control storm water runoff conditions (flow rates and durations) for Copermittee-defined range of flows, is unchanged from all Fourth Term Permits in the San Diego Region.

Provision E.3.c.(2)(a) requires that post-project runoff conditions mimic the *pre-development* runoff conditions, and not the *pre-project* runoff conditions. Fundamentally, the San Diego Water Board believes that using a hydrology baseline that approximates that of an undeveloped, natural watershed is the only way to facilitate the return of more natural hydrological conditions to already built-out watersheds, and ultimately improved stream health. On the other hand, using the *pre-project* hydrology as a baseline for redevelopment projects results in propagating the unnatural hydrology of urbanized areas. Propagating the urbanized flow regime does not support conditions for restoring degraded or channelized stream segments, and would forever sentence such streams to the degraded state. Furthermore, reducing the volume of storm water runoff associated with the urbanized flow regime will also result in reducing the discharge of pollutants into receiving waters, since storm water runoff from impervious surfaces contains untreated pollutants.

The San Diego Water Board understands that approximating the pre-development runoff condition associated with a redevelopment site is not necessarily straightforward because factors such as natural grade and native vegetation for the site cannot be precisely known. Therefore, the San Diego Water Board does not expect project designers to estimate historical conditions associated with redevelopment sites. Rather, the San Diego Water Board expects project designers and the Copermittees to

approximate pre-development runoff conditions using the parameters of a *pervious* area rather than an *impervious* area. This means that for redevelopment sites, approximating pre-development runoff conditions equates to using existing onsite grade and assuming the infiltration characteristics of the underlying soil. A redevelopment Priority Development Project must not use runoff coefficients of concrete or asphalt to estimate pre-development runoff conditions. Rather, redevelopment projects must use available information pertaining to existing underlying soil type (such as soil maps published by the National Resource Conservation Service), onsite existing grade, and any other readily available pertinent information to estimate pre-development runoff conditions.

The San Diego Water Board understands, indeed asserts, that the pre-development hydrology of an area in question can only be roughly estimated and cannot be precisely known. However, using the hydrology of a natural condition, even if not precisely known, will provide significant benefit to receiving waters over using the hydrology associated with impervious (developed) surfaces. Therefore in order to achieve the goals of the Clean Water Act, which are to “*restore and maintain the chemical, physical, and biological integrity of the nation’s waters* [emphasis added],” the most appropriate standard to use for hydromodification management is the standard associated with the pre-development condition.

Provision E.3.c.(2)(b) requires Priority Development Projects to avoid known critical sediment yield areas or implement measures that would allow coarse sediment to be discharged to receiving waters, such that the natural sediment supply is unaffected by the project. This is necessary because the availability of coarse sediment supply is as much an issue for causing erosive conditions to receiving streams as are accelerated flows.

The San Diego Water Board recognizes that in some situations implementing the hydromodification management BMP requirements for flow control fully onsite may not be technically feasible, may be cost prohibitive, or may not provide any overall water quality benefits to the Watershed Management Area. Thus, Provision E.3.c.(2)(c) allows for the use of a combination of onsite hydromodification management BMPs for flow control and alternative compliance options described in Provision E.3.c.(3).

Provision E.3.c.(3) allows for alternative compliance in instances where the Copermittee determines that offsite measures will have a greater overall water quality benefit for the Watershed Management Area than if the Priority Development Project were to implement structural BMPs onsite. Consequently, watershed-specific structural BMP requirements are present in this Order in the form of allowable compliance offsite. The Alternative Compliance Program to Onsite Structural BMP Implementation Provision is intended to integrate with the Copermittees’ planning efforts in the Water Quality Improvement Plans.

The Alternative Compliance Program is an option for Priority Development Projects where the governing Copermittee has participated in the development of a Watershed Management Area Analysis as part of the Water Quality Improvement Plan (described in Provision B.3.b.(4)). Such an approach is consistent with the latest findings in hydromodification management by the scientific community. In a Technical Report entitled *Hydromodification Assessment and Management in California*,³⁸ the report states:

“An effective [hydromodification] management program will likely include combinations of on-site measures (e.g., low-impact development techniques, flow-control basins), in-stream measures (e.g., stream habitat restoration), floodplain and riparian zone actions, and off-site measures. Off-site measures may include compensatory mitigation measures at upstream locations that are designed to help restore and manage flow and sediment yield in the watershed.”

Consistent with the ideas brought forth in the report, in the Watershed Management Area Analysis of Provision B.3.b.(4), which is optional, the Copermittees will develop watershed maps that include as much detail about factors that affect the hydrology of the watershed as is available. Such factors included identification of areas suitable for infiltration, coarse sediment supply areas, and locating stream channel structures and constrictions. Once these factors are mapped and studied, the Copermittees can identify areas in the watershed where candidate projects may be implemented that are expected to improve water quality in the watershed by providing more opportunity for infiltration, slowing down storm water flows, or attenuation of pollutants naturally via healthy stream habitat. These candidate projects may be in the form of retrofitting existing development, rehabilitating degraded stream segments, identifying regional BMPs, purchasing land to preserve valuable floodplain functions, and any other project(s) that the Copermittees identify.

Under the Alternative Compliance Program, Priority Development Projects may be allowed to fund, partially fund, or implement a candidate project, in lieu of implementing structural BMPs onsite, if they enter into a voluntary agreement with the governing Copermittee permitting this arrangement. Project proponents may also propose an alternative project not previously identified by the Copermittees. In either case, whether a project proponent implements a candidate project identified by the Copermittees or a separate alternative compliance project, the governing Copermittee must determine that implementation of the project will have a greater overall water quality benefit for the Watershed Management Area than fully implementing structural BMPs onsite. [Determination of greater overall water quality benefits associated with alternative compliance projects would be accomplished by utilizing Water Quality Equivalency calculations developed pursuant to Provision E.3.c.\(3\)\(a\). Water Quality Equivalency calculations are necessary to establish a regional and technical basis for](#)

³⁸ 2012. ED Stein, F Federico, DB Booth, BP Bledsoe, C Bowles, Z Rubin, GM Kondolf, A Sengupta. Technical Report 667. Southern California Coastal Water Research Project. Costa Mesa, CA.

determining water quality benefits associated with alternative compliance projects, which can be consistently used by all Copermittees in the San Diego Region. Finally, if alternative compliance involves funding or implementing a project that is outside the jurisdiction of the governing Copermittee, then that Copermittee may enter into an inter-agency agreement with the appropriate jurisdiction.

Finally, Provision E.3.c.(2)(d) allows Priority Development Projects to be exempt from the hydromodification management BMP requirements if there is no threat of erosion to downstream receiving waters (i.e. the receiving stream is concrete lined from the point of discharge all the way to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean). If the Copermittees believe that more exemptions are warranted, then they must perform the optional Watershed Management Area Analysis of Provision B.3.b.(4). Additional exemptions other than those specified in this Order may be established on a watershed basis, provided the Copermittees perform the analysis, provide supporting rationale for the exemptions, and complete the Water Quality Improvement Plan approval process pursuant to Provision F.1.

To facilitate the transition to this Order from the Fourth Term Permits for Orange and Riverside County Copermittees, Provision E.3.c.(2)(e) allows two additional temporary exemptions from hydromodification management BMP implementation. The first temporary exemption allows relief from hydromodification management BMP implementation for Priority Development Projects discharging directly to an engineered channel conveyance system with a capacity to convey peak flows generated by the 10-year storm event all the way from the point of discharge to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean. Similar to the exemption allowed for concrete-lined channels, this exemption is premised on the concept that there is little threat of erosion to these types of engineered channel systems.

The second temporary exemption allows relief from hydromodification management BMP implementation for Priority Development Projects discharging directly to large river reaches with drainage areas larger than 100 square miles and a 100-year flow capacity in excess of 20,000 cubic feet per second. If this exemption is claimed, then properly sized energy dissipation is required at all discharge points associated with the Priority Development Project. This exemption is premised on the concept that large river reaches can essentially assimilate the accelerated flow rates associated with individual Priority Development Projects because they are inconsequential compared to the flow rate in the large river reach. Both of these exemptions are included in the Hydromodification Management Plan for San Diego County³⁹.

These temporary exemptions are allowed as a means to facilitate Orange and Riverside County Copermittees' transition to this Order from the Fourth Term Permits and are not meant to reside as permanent exemptions without additional rigorous

³⁹ Final Hydromodification Management Plan Prepared for County of San Diego, March 2011

technical analyses specific to each County. Therefore, these exemptions will no longer apply once the Copermittees' land development programs are fully updated to reflect the requirements of this Order, i.e., upon implementation of the BMP Design Manual pursuant to Provision F.2.b. If the Copermittees believe that these or other exemptions are warranted in the context of water quality improvement and stream restoration opportunities, then the Copermittees must perform the optional Watershed Management Area Analysis of Provision B.3.b.(4) and provide supporting rationale for the exemptions. The San Diego County Copermittees are also required to perform the optional Watershed Management Area Analysis to provide supporting rationale to justify use of these and other exemptions. Updated BMP Design Manuals including rationale to justify use of exemptions will be reviewed by the San Diego Water Board pursuant to Provision F.2.b.

Provisions E.3.c.(4) and E.3.c.(5) were included under the BMP requirements applicable to all development projects in the Fourth Term Permits for San Diego, Orange, and Riverside Counties (Order Nos. R9-2007-0001, R9-2009-0002, and R9-2010-0016, respectively). In this Order, the long-term BMP maintenance and infiltration and groundwater protection requirements apply to structural BMPs implemented by Priority Development Projects only.

Provision E.3.d requires the Copermittees to update their BMP Design Manual as needed to incorporate the requirements of Provision E.3. The BMP Design Manual is formerly known as the Standard Storm Water Mitigation Plan, or SSMP, and was renamed so that the title has a more accurate description of the document content. The contents of the BMP Design Manual are largely unchanged from the previous Standard Storm Water Mitigation Plans required under the Fourth Term Permits. The BMP Design Manual fulfills the 40 CFR 122.26(d)(2)(iv)(A)(2) requirement that the Copermittee's development planning program includes "*a comprehensive master plan to develop, implement and enforce controls to reduce the discharge of pollutants from municipal storm sewers which receive discharges from areas of new development and significant redevelopment.*"

As part of the "*planning procedures,*" 40 CFR 122.26(d)(2)(iv)(A)(2) requires the procedures to "*address controls to reduce pollutants in discharges from municipal separate storm sewers after construction is completed.*" The requirements applicable to the implementation and oversight of structural BMPs at Priority Development Projects are provided under Provision E.3.e.

Proper installation of the structural BMPs approved for a Priority Development Project is necessary to ensure that pollutants in storm water discharges will be reduced to the MEP after the project is completed. In addition to the proper installation of structural BMPs, the maintenance of structural BMPs on Priority Development Projects is necessary to ensure that pollutants in storm water discharges will continue to be reduced to the MEP. Provision E.3.e.(1) includes the minimum requirements that each

Copermittee must implement to ensure structural BMPs are properly installed and will be properly maintained.

The requirements under Provision E.3.e.(2)-(3) are necessary to demonstrate each Copermittee is implementing a program that complies with Provisions E.3.b-c and E.3.e.(1), and ensure structural BMPs at Priority Development Project will continue to be able to reduce pollutants in storm water discharges to the MEP.

Pursuant to 40 CFR 122.26(d)(1)(ii) and 40 CFR 122.26(d)(2)(i), each Copermittee must have sufficient *“legal authority to control discharges to the municipal separate storm sewer system.”* Where enforcement is necessary for any development projects to compel compliance with the requirements of Provision E.3 and ensure the pollutants in storm water discharges from the MS4 are reduced and continue to be reduced to the MEP, Provision E.3.f requires each Copermittee to enforce its legal authority established pursuant to Provision E.1, and in accordance with its Enforcement Response Plan required to be developed pursuant to Provision E.6.

Provision E.4 (Construction Management) requires each Copermittee to implement a construction management program to control and reduce the discharge of pollutants in storm water from construction sites to the MEP. Proper implementation of the construction management program will also contribute toward effectively prohibiting non-storm water discharges from construction sites to the MS4.

Pursuant to 40 CFR 122.26(d)(2)(iv), each Copermittee is required to implement a *“management program...to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and other such provisions where applicable.”* As part of the management program, 40 CFR 122.26(d)(2)(iv)(D) requires *“a program to implement and maintain structural and non-structural best management practices to reduce pollutants in storm water runoff from construction sites to the municipal storm sewer system.”*

Construction sites can be significant sources of sediment, trash, and other pollutants to receiving waters. Although sediment is naturally occurring in the natural environment, the discharge of sediment under unnatural conditions is problematic to receiving waters. Fine sediment in creeks causes high turbidity that interferes with the functionality of native flora and fauna in local creeks. For example, turbidity interferes with both photosynthesis of water-philic plants, as well as successful foraging and reproduction of benthic macroinvertebrates. Sediment can also make it difficult for fish to breathe because it clogs fish gills. Other pollutants such as heavy metals or pesticides can adhere to sediment and are transported to receiving waters during storm events, where they dissolve in the water column and become bioavailable to aquatic organisms. Sediment is recognized as a major stressor to surface waters and is responsible for the impairment of several lagoons and creeks in the San Diego Region.

Provision E.4 includes requirements that each Copermittee must implement to minimize the discharge of sediment and other pollutants from construction sites to the MS4 within its jurisdiction. The requirements under Provision E.4 are consistent with the Fourth Term Permits for San Diego, Orange, and Riverside Counties. Therefore, Copermittees are expected to implement the requirements seamlessly, with minimal changes to their existing construction management programs. The Copermittees, however, are given more flexibility to run their programs as needed to maximize efficiency, and also to be consistent with the Water Quality Improvement Plan for the Watershed Management Area.

As part of the construction management program, 40 CFR 122.26(d)(2)(iv)(D)(1) requires “*procedures for site planning which incorporate consideration of potential water quality impacts.*” Provision E.4.a describes the minimum elements each Copermittee is required to include as part of the construction site planning and project approval process. The construction site planning and approval process is based primarily on ensuring each project had an adequate site-specific pollution control, construction BMP, and/or erosion and sediment control plan that will be implemented to minimize the discharge of pollutants in storm water to the MEP, and minimize impacts to receiving waters.

The requirements under Provision E.4.b provide the data and information necessary to identify “*priorities for inspecting sites and enforcing control measures*” required pursuant to 40 CFR 122.26(d)(2)(iv)(D)(3). Under Provision E.4.b, each Copermittee must identify construction sites that are considered a high threat to downstream surface waters. Designation of “high threat to water quality” construction sites will necessitate the Copermittees to develop criteria to identify such sites. Provision E.4.b.(2) describes a list of factors that must be considered when the Copermittee considers threat to water quality. For example, a Copermittee must identify sites as “high threat to water quality” if it is located within a hydrologic subarea where sediment is known or suspected to contribute to the highest priority water quality conditions, according to the Water Quality Improvement Plan. This ensures that construction management program implementation is compatible with the Copermittee’s identified highest priority water quality conditions.

Pursuant to 40 CFR 122.26(d)(2)(iv)(D)(2) each Copermittee is required describe “*requirements for nonstructural and structural best management practices*” at construction sites. Provision E.4.c includes the types of construction site BMPs that the Copermittees must implement, or require the implementation of, at each construction site to reduce pollutants in storm water discharges to the MEP.

Each Copermittee is expected to require the implementation of appropriate BMPs given specific site conditions, the season and likelihood of rain events, and construction phase (i.e. grading vs. vertical construction). This means that throughout the life of the project construction, the appropriate BMPs will vary, especially if the

construction of the project spans multiple wet seasons. As opposed to describing specific minimum BMPs that must be implemented, the Order describes major BMP categories that should be considered for each site.

Each Copermittee is expected to use its 20 years of storm water experience and knowledge to require implementation of appropriate BMPs from the various categories at each construction site within its jurisdiction. For example, the San Diego Water Board expects that each site will be required to implement erosion control and sediment control. The San Diego Water Board also expects each Copermittee to require implementation of active/passive sediment treatment systems at sites where other BMPs have been tried and are known to be inadequate, and discharges of sediment are causing or contributing to water quality impairment downstream. Each Copermittee is granted flexibility in specifying the minimum level of BMP requirements at each site, but the San Diego Water Board expects each site to be capable of controlling pollutants in storm water discharges to the MEP and preventing illicit discharges.

The requirements under Provision E.4.d are necessary to demonstrate that each Copermittee is implementing a program that complies with Provisions E.4.a and E.4.c and ensure BMPs at construction sites will reduce pollutants in storm water discharges to the MEP.

Provision E.4.d does not include minimum required inspection frequencies for construction sites. Each Copermittee must use its experience and knowledge to specify an appropriate inspection frequency for both high priority and lower priority sites in their jurisdictional runoff management program documents, and in accordance with the Water Quality Improvement Plan. Appropriate inspection frequencies may vary by Copermittee, but the San Diego Water Board expects that the stated frequency will be adequate for each Copermittee to properly oversee the construction sites within its jurisdiction, confirm BMPs are implemented to reduce pollutants in storm water discharges from construction sites to the MEP, and make needed changes to its program on an ongoing basis as necessary.

Pursuant to 40 CFR 122.26(d)(1)(ii) and 40 CFR 122.26(d)(2)(i), each Copermittee must have sufficient “*legal authority to control discharges to the municipal separate storm sewer system.*” Where enforcement is necessary for any development projects to compel compliance with the requirements of Provision E.4 and ensure the pollutants in storm water discharges from the MS4 are reduced and continue to be reduced to the MEP, Provision E.4.e requires each Copermittee to enforce its legal authority established pursuant to Provision E.1, and in accordance with its Enforcement Response Plan required to be developed pursuant to Provision E.6.

Provision E.5 (Existing Development Management) requires each Copermittee to implement an existing development management program to control and reduce the discharge of pollutants in storm water from areas of existing development to the MEP.

Proper implementation of the existing development management program will also contribute toward effectively prohibiting non-storm water discharges from areas of existing development to the MS4.

Pursuant to 40 CFR 122.26(d)(2)(iv), each Copermittee is required to implement a “*management program...to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and other such provisions where applicable.*” Within 40 CFR 122.26(d)(2)(iv)(A) and (C), the management program is required to reduce impacts on receiving waters and reduce pollutants in storm water discharges to the MEP from commercial and residential areas, industrial facilities, and municipal facilities.

Commercial and residential areas, industrial facilities, and municipal facilities must be addressed by each Copermittee with the existing development management program required under Provision E.5. All other areas within each Copermittee’s jurisdiction should be either undeveloped open space, or areas that are being developed or under construction. Areas being developed or under construction will be addressed by the Copermittee under the requirements of Provision E.3 (Development Planning) or Provision E.4 (Construction Management).

Areas of existing development typically include impervious surfaces such as sidewalks, driveways, roads, and rooftops, which generate and concentrate pollutants (such as pesticides, petroleum hydrocarbons, heavy metals, and pathogens) that are otherwise not found in high concentrations in the natural environment. Pollutants that accumulate on impervious surfaces are not easily biodegraded or not subject to natural treatment processes. When it rains, these pollutants are transported in storm water runoff from these impervious surfaces into receiving waters, resulting in poor water quality and degradation of beneficial uses.

In addition to the generation of pollutants, areas of existing development have generally altered the natural conditions of the land and removed vegetative cover, reduced the perviousness of the surface, and reduced the capacity of storm water that can be intercepted, captured, stored, infiltrated, evaporated, and/or evapotranspired. The alteration of the natural conditions and the impervious surfaces associated with areas of existing development causes water quality problems due to the alteration of natural flow regimes within the watersheds; resulting in hydromodification of channels, streams, and habitats that exist within or adjacent to the areas of existing development.

Thus, storm water discharges from areas of existing development are responsible for poor water quality, degraded habitats, and hydromodified channels throughout the developed portions of the watersheds in the San Diego Region. To improve the health and functionality of the receiving waters in a Watershed Management Area, land use practices and the amount of impervious surfaces in areas of existing development must change to reduce the various impacts caused by hydromodification and

pollutants from storm water runoff generated in developed areas. Each Copermittee must be aggressive to address pollutant sources and runoff from areas of existing development to be able to reduce pollutants in storm water discharges from the MS4 to the MEP.

There is some overlap in the requirements under Provision E.5 with the requirements under Provisions E.2 (Illicit Discharge Detection and Elimination), E.3 (Development Planning), and E.4 (Construction Management). Illicit discharges frequently originate from areas of existing development. New development projects, when completed will become some type of residential, commercial, industrial or municipal existing development. Redevelopment projects are, by definition, redeveloping areas of existing development. And, redevelopment projects become construction sites located in areas of existing development. Much of the data and information collected, inspections performed, and enforcement actions taken for the requirements under Provisions E.2 to E.4 may also be utilized by the existing development management program. The requirements under Provision E.5, however, are focused primarily on reducing pollutants generated in areas of existing development that can be transported in storm water runoff and discharged to and from the MS4.

The requirements under Provision E.5 build upon existing program elements being implemented by the Copermittees. Provision E.5 is generally consistent with the existing development requirements of the Fourth Term Permits for Orange and Riverside Counties (Order Nos. R9-2009-0002 and R9-2010-0016, respectively), but modified to provide more flexibility to implement the programs so resources can be better focused toward addressing the highest priority water quality conditions identified in the Water Quality Improvement Plans.

For a Copermittee to properly manage areas of existing development, having knowledge of what development exists within its jurisdiction is essential. Provision E.5.a requires each Copermittee to maintain a watershed-based inventory of all the existing development within its jurisdiction. This requirement is necessary for each Copermittee to implement the requirements of Provision E.5.b-e.

As opposed to just maintaining separate inventories based on the type of site, each Copermittee must maintain a watershed-based inventory that includes all types of existing development within its jurisdiction. By utilizing a watershed-based inventory, the Copermittees within a Watershed Management Area can combine their inventories and review the inventories by watershed in addition to by jurisdiction. Pollutant sources and strategies for abatement can then be evaluated on a watershed level, as opposed to evaluating sources and strategies strictly by type of site.

Provision E.5.a includes the information that must be included in the inventory. Provision E.5.a.(1) specifies what facilities or areas must be included in the inventory. A commercial type of existing development may be identified in the inventory as a facility (e.g. individual building, individual business) or an area (e.g. shopping center,

commercial zone). An industrial type of existing development must be identified in the inventory by facility (e.g. individual industrial entity). A municipal type of existing development must be identified in the inventory by facility, with a list of specific municipal facilities that must be included in the inventory. A residential type of existing development must be identified by areas to be designated by the Copermittee. For each of the facilities and areas identified in the Copermittee's inventory developed pursuant to Provision E.5.a.(1), Provision E.5.a.(2) specifies the information that must be included in the description for the facility or area.

Provision E.5.a.(3) requires each Copermittee to maintain an updated map showing the location of inventoried existing development, watershed boundaries, and water bodies. This requirement was included because this information is expected to help the Copermittees in a Watershed Management Area identify and prioritize sources of pollutants and/or stressors in areas of existing development that contribute toward the highest priority water quality conditions identified in the Water Quality Improvement Plans.

Knowledge of the existing development that are likely to be sources of pollutants contributing to the highest priority water quality conditions is expected to be a key element in the Copermittees' development of the water quality improvement strategies that will be included in the Water Quality Improvement Plans. The strategies described in the Water Quality Improvement Plans will direct efforts within the existing development management programs implemented by each Copermittee.

Pursuant to 40 CFR 122.26(d)(2)(iv)(A) each Copermittee is required describe "*structural and source control measures to reduce pollutants*" in storm water runoff discharged from areas of existing development. Provision E.5.b includes the BMP implementation and maintenance requirements that the each Copermittee must require at areas of existing development to reduce pollutants in storm water discharges to the MEP. The San Diego Water Board, however, recognizes that BMP implementation and maintenance for residential areas will require much more education and encouragement through less authoritative measures than for commercial, industrial and municipal facilities and areas. Thus, the BMP implementation and maintenance requirements have been separated between requirements under Provision E.5.b.(1) for commercial, industrial and municipal facilities and areas, and Provision E.5.b.(2) for residential areas.

Most of the requirements in Provision E.5.b are consistent with the related requirements in the Fourth Term Permits. The level of specificity, however, has been changed to allow each Copermittee the flexibility to implement its program to achieve maximum efficiency, and to perform functions that will address the highest priority water quality conditions identified in the Water Quality Improvement Plans.

Each Copermittee is expected to require the implementation of appropriate BMPs to address the expected pollutants from each facility or area. The Third and Fourth Term

Permits described specific minimum BMPs that must be implemented at various sites. This Order, however, requires each Copermittee to designate minimum BMPs themselves and require implementation. Consistent with the Fourth Term Permits, each Copermittee is required to maintain, or require the maintenance of, all BMPs as needed.

The BMP implementation and maintenance requirements include a schedule of operation and maintenance activities for the MS4 and related structures (such as catch basins, storm drain inlets, and detention basins), as well as public streets and roads. Public streets and roads specifically include public unpaved roads. The San Diego Water Board identified, through investigations and complaints, sediment discharges from unpaved roads as a significant source of water quality problems in the San Diego Region. Inspection activities conducted by the San Diego Water Board since the Third Term Permits have found a lack of source control for many unpaved roads within the jurisdiction of the Copermittees.

Unpaved roads are a source of sediment that can be discharged in runoff to receiving waters, especially during storm events. Erosion of unpaved roadways occurs when soil particles are loosened and carried away from the roadway base, ditch, or road bank by water, wind, traffic, or other transport means. Exposed soils, high runoff velocities and volumes, sandy or silty soil types, and poor compaction increase the potential for erosion.

Road construction, culvert installation, and other maintenance activities can disturb the soil and drainage patterns to streams in undeveloped areas, causing excess runoff and thereby erosion and the release of sediment. Poorly designed unpaved roads can act as preferential drainage pathways that carry runoff and sediment into natural streams, impacting water quality. In addition, other public works activities along unpaved roads have the potential to significantly affect sediment discharge and transport within streams and other waterways, which can degrade the beneficial uses of those waterways.

USEPA also recognizes that discharges from unpaved roads pose a significant potential threat to water quality. USEPA guidance⁴⁰ emphasizes the threat of unpaved roads to water quality:

“Dirt and gravel roads are a major potential source of these pollutants [sediment] and pollutants that bind to sediment such as oils, nutrients, pesticides, herbicides, and other toxic substances. Many roads have unstable surfaces and bases. Roads act like dams, concentrating flows that accelerate erosion of road materials and roadsides. Both unstable surfaces and accelerated erosion then lead to sediment and dust.”

⁴⁰ USEPA, 2006. Environmentally Sensitive Maintenance for Dirt and Gravel Roads. Gesford and Anderson, USEPA-PA-2005.

There are several guidance documents, developed by the USEPA,⁴¹ the US Forest Service,⁴² the University of California,⁴³ and others, that include design and construction specifications and BMPs that are readily available for implementation by public entities. Implementing design and other source control BMPs for unpaved roads in the region is necessary to reduce and minimize the impacts of sediment discharged during storm events from unpaved roads to the MS4s and receiving waters.

Provision E.5.c describes existing development site inspection frequency, content, and tracking that each Copermittee must incorporate into their existing development management programs. The requirements under Provision E.5.c are necessary to demonstrate each Copermittee is implementing a program that complies with Provision E.5.b and ensure BMPs implemented in areas of existing development will reduce pollutants in storm water discharges to the MEP. Provision E.5.c has been modified to include a minimum of once every 5 years for all inventoried facilities and areas of existing development, utilizing one or more methods of inspection.

In addition to onsite inspections, the methods of inspection have been expanded to include drive-by inspections. Inspections may be performed by the Copermittee's municipal and contract staff, or by volunteer monitoring or patrol programs. Volunteer monitoring or patrol programs are not expected to enforce the Copermittee's ordinances, or to inspect areas or facilities where members of the public are not allowed access. Volunteer monitoring or patrol programs must be trained by the Copermittee, and are only expected to collect visual observations. By utilizing drive-by inspections and volunteer monitoring or patrol programs, the Copermittees will be able to maximize and efficiently use their resources to identify and address sources of pollutants in areas of existing development.

The municipal and contract staff of each Copermittee must annually perform onsite inspections of an equivalent of at least 20 percent of the commercial, industrial, and municipal facilities and areas in its inventoried existing development pursuant to Provision E.5.c.(1)(a)(iv). An "equivalent" of at least 20 percent means if any commercial, industrial, or municipal facilities or areas require multiple onsite inspections during any given year, those additional inspections may count toward the total annual inspection requirement. Linear municipal facilities (i.e. MS4 linear channels, sanitary sewer collection systems, streets, roads and highways) in the Copermittee's existing development inventory are not subject to the inspection frequency requirement of Provision E.5.c.(1)(a)(iv).

⁴¹ Ibid

⁴² US Forest Service, 1996. Forest Service Specifications for Construction of Roads & Bridges. EM-7720-100. Revised August 1996.

⁴³ University of California Division of Agriculture and Natural Resources, 2007. Rural Roads: A Construction and Maintenance Guide of California Landowners. Publication 8262.

The inspection content specified in Provision E.5.c.(2)(a) includes the information required to be collected during an inspection by any method. The inspection content specified in Provision E.5.c.(2)(b) includes additional information that must be collected when a Copermittee's municipal or contract staff perform an onsite inspection. Provision E.5.c.(3) specifies the information that each Copermittee must maintain in its existing development inspection records.

Pursuant to 40 CFR 122.26(d)(1)(ii) and 40 CFR 122.26(d)(2)(i), each Copermittee must have sufficient "*legal authority to control discharges to the municipal separate storm sewer system.*" Where enforcement is necessary to compel compliance with the requirements of Provision E.5 and ensure the pollutants in storm water discharges from the MS4 are reduced and continue to be reduced to the MEP, Provision E.5.d requires each Copermittee to enforce its legal authority established pursuant to Provision E.1, and in accordance with its Enforcement Response Plan required to be developed pursuant to Provision E.6.

Provisions E.5.e.(1)-(2) specifically require the Copermittee to identify areas of existing development as candidates for retrofitting, and streams, channels, and/or habitats as candidates for rehabilitation. Provisions E.5.e.(1)-(2) are based on the retrofitting requirements of the Fourth Term Permits for Orange and Riverside Counties, but modified to also include identifying projects to rehabilitate channels within areas of existing development. The requirements have also been modified to be more focused on utilizing these types of projects for addressing the highest priority water quality conditions identified in the Water Quality Improvement Plans.

Interest and opportunity to retrofit areas of existing development and rehabilitate channels located in areas of existing development has been observed in several programs the San Diego Water Board oversees (e.g., CWA Section 401 Water Quality Certification program, supplemental environmental projects, and grant programs). Each jurisdiction has miles and miles of streets that could be retrofitted to become green streets. Reshaping landscaped areas from convex to concave configurations can detain storm water instead of directing runoff as quickly as possible to the MS4. Retrofit projects could also include simply replacing impervious surfaces with permeable surfaces.

Retrofitting projects do not necessarily have to be expensive. Retrofitting projects could be as simple as redirecting downspouts from roofs to pervious or landscaped areas instead of to hardscaped areas discharging directly to the MS4, providing rain barrels to harvest storm water from downspouts for use at a later time, or planting more trees in areas with little vegetation to provide canopy that can intercept storm water. The San Diego Water Board encourages the Copermittees to identify simple, low-cost retrofitting opportunities that can be easily implemented, in addition to other more expensive retrofitting and channel rehabilitation projects.

Rehabilitation of channels, streams, and/or habitat will require more significant planning and resources to implement. There are, however, also abundant opportunities to rehabilitate channels, streams and/or habitats in or adjacent to areas of existing development. Each Watershed Management Area likely has several creeks and stream reaches that have been undergrounded, artificially hardened, or hydromodified that could be rehabilitated to be more sustainably configured, which would slow down storm water flows and potentially have more assimilative capacity for pollutants while still being supportive of designated beneficial uses.

The San Diego Water Board recognizes that it may be infeasible to implement retrofitting or channel rehabilitation projects within certain areas of a Copermittee's jurisdictions. For such areas, the Copermittee must instead identify, develop, and implement regional retrofitting and channel rehabilitation projects (i.e. projects that can retain and/or treat storm water from one or more areas of existing development) adjacent to and/or downstream of the areas of existing development.

Provisions E.5.e.(1)-(2) do not require the implementation of retrofitting and rehabilitation projects, but do require the Copermittee to develop a program with strategies to facilitate the implementation of these types of projects in areas of existing development. The strategies are expected to include allowing and encouraging Priority Development Projects to implement retrofitting types of projects as a means of compliance with the structural BMP performance criteria requirements of Provisions E.3.c.(1) and E.3.c.(2).

Provision E.6 (Enforcement Response Plans) requires each Copermittee to develop an Enforcement Response Plan as part of its jurisdictional runoff management program document. Proper implementation of the Enforcement Response Plans is necessary to effectively prohibit non-storm water discharges to the MS4, and reduce the discharge of pollutants in storm water from the MS4 to the MEP.

Pursuant to 40 CFR 122.26(d)(1)(ii) and 40 CFR 122.26(d)(2)(i), each Copermittee must have sufficient "*legal authority to control discharges to the municipal separate storm sewer system*" and be able to demonstrate that it can "*operate pursuant to legal authority established by statute, ordinance or series of contracts*" to control the discharge of non-storm water and pollutants in storm water to and from its MS4. Pursuant to 40 CFR 122.26(d)(2)(i)(E) each Copermittee is specifically required to have the legal authority to "*[r]equire compliance with conditions in ordinances, permits, contracts or orders.*"

The requirements under Provision E.6 are necessary to demonstrate that each Copermittee can enforce its legal authority to "*effectively prohibit non-stormwater discharges*" and "*reduce the discharge of pollutants to the maximum extent practicable*" as well as "*[r]equire compliance with conditions in ordinances, permits, contracts or order.*"

The Enforcement Response Plan required under Provision E.6 will serve as a reference for the Copermittee and the San Diego Water Board to determine if consistent enforcement actions are being implemented to achieve timely and effective compliance from all public and private entities that are not in compliance with the Copermittee's ordinances, permits, or other requirements. The Enforcement Response Plan must contain clear direction for the Copermittee to take immediate enforcement action, when appropriate and necessary, in their illicit discharge detection and elimination, development planning, construction management, and existing development management programs.

If the entities subject to the Copermittee's legal authority do not implement appropriate corrective actions in a timely manner, or if violations repeat, the Copermittee must take progressively stricter responses to enforce its legal authority and achieve compliance with its ordinances, permits, or other requirements to *"effectively prohibit non-stormwater discharges"* and *"reduce the discharge of pollutants to the maximum extent practicable."*

Provision E.7 (Public Education and Participation) requires each Copermittee to implement a public education and participation program. Proper implementation of the public education and participation program as part of its jurisdictional runoff management program will contribute toward effectively prohibiting non-storm water discharges to the MS4, and toward the reduction of pollutants in storm water from the MS4 to the MEP.

Provision E.7 establishes the minimum requirements that each Copermittee must implement to engage members of the public as part of its jurisdictional runoff management program. In the Fourth Term Permits, the public education program requirements and the public participation requirements were included as separate jurisdictional runoff management program components. In this Order, the public education requirements have been consolidated with the public participation requirements, as both sets of requirements are related to the engagement of the public by each Copermittee. Engagement of the public is critical for the success of each Copermittee's jurisdictional runoff management program.

The Copermittees have been implementing public education programs for the last 20 years, which are now well established. The specificity of expected public education program elements of the Fourth Term Permits has been removed. For the most part, the public education program requirements in Provision E.7.a have been reduced to a set of requirements that are specifically included in the federal regulations under 40 CFR 122.26(d)(2)(iv)(A)(6), 122.26(d)(2)(B)(6) and 122.26(d)(2)(D)(4), which should already be incorporated into each Copermittee's existing public education program. Each Copermittee is expected to utilize the information and data collected from the monitoring and assessments conducted within the Watershed Management Area, and from its inventories and inspections to best direct its public education program

resources toward addressing the highest priority water quality conditions identified within the Water Quality Improvement Plan.

According to 40 CFR 122.26(d)(2)(iv), public participation is required to be included as part of the “*comprehensive planning process*”, which includes the development and implementation of the Water Quality Improvement Plan and jurisdictional runoff management programs. The requirements under Provision E.7.b specify the opportunities that the public must be provided to be involved in the “*comprehensive planning process*”, as required by to 40 CFR 122.26(d)(2)(iv).

Provision E.8 (Fiscal Analysis) requires each Copermittee to secure the resources and provide an analysis of the resources that will be necessary to implement the requirements of the Order. Adequate fiscal resources are necessary for a jurisdictional runoff management program to effectively prohibit non-storm water discharges to the MS4, and reduce pollutants in storm water from the MS4 to the MEP.

According to 40 CFR 122.26(d)(2)(vi), each Copermittee is responsible for providing “a *fiscal analysis of the necessary capital and operation and maintenance expenditures necessary to accomplish the activities*” required by this Order, including “a *description of the source of funds that are proposed to meet the necessary expenditures, including legal restrictions on the use of such funds.*” The fiscal analysis requirements of Provision E.8 are consistent with 40 CFR 122.26(d)(2)(vi).

The San Diego Water Board has chosen not to require a description of fiscal benefits realized from implementation of the jurisdictional runoff management programs. This is a recommendation from the National Association of Flood and Stormwater Management Agencies.⁴⁴ For instance, the fiscal analysis requirements do not address city-wide fiscal benefits of protection (e.g., public health, tourism, property values, economic activity, beneficial uses, etc.), even though many costs currently reported to the San Diego Water Board are for related activities. This type of assessment may help Copermittees improve the allocation of resources and it may help the Copermittees secure adequate funding for the program. Qualitative assessments, however, could be overly subjective and most Copermittees likely lack the ability to provide accurate quantitative assessments. The San Diego Water Board encourages the Copermittees to consider means for conducting assessments of fiscal benefits derived from the programs. Such assessments could be conducted on a regional scale similar to studies of program costs conducted by the State Water Board.⁴⁵

⁴⁴ National Association of Flood and Stormwater Management Agencies. 2006. *Guidance for Municipal Stormwater Funding*. Prepared under a grant provided by the USEPA.

⁴⁵ State Water Board, 2005. NPDES Stormwater Cost Survey.

F. Reporting

Purpose: Provision F includes the requirements for the documents and reports that the Copermittees must prepare and provide to the San Diego Water Board. The documents prepared by the Copermittees and provided to the San Diego Water Board and made available to the public will provide the documentation that the Copermittees are complying with the requirements of the Order.

Discussion: Provision F requires the Copermittees to prepare several documents and reports that must be provided to the San Diego Water Board and made available to the public. The reporting requirements have been significantly reduced compared to the Fourth Term Permit reporting requirements. The reduction in reporting requirements was recommended by the San Diego County Copermittees in the Report of Water Discharge submitted in June 2011.

More specific and detailed discussions of the requirements of Provision F are provided below.

Provision F.1 (Water Quality Improvement Plans) requires the Copermittees in each Watershed Management Area to develop and submit a Water Quality Improvement Plan in accordance with the requirements of Provision B.

Of all the requirements of Provision F, the Water Quality Improvement Plans will likely be the documents requiring the most significant effort to develop. The content of the Water Quality Improvement Plans, however, is expected to include content that should already have been developed for the Watershed Plans and several elements that are included in the Monitoring and Reporting Programs required under the Fourth Term Permits.

Because the Water Quality Improvement Plan is part of the “*comprehensive planning process which involves public participation*,” Provision F.1 includes requirements to give multiple opportunities to the public to provide input on the content of the plans.

Provision F.1.a.(1) specifies the elements that the Copermittees must include in the public participation process for the development of the Water Quality Improvement Plans. In order for the public to be aware of the opportunities to provide input, Provision F.1.a.(1)(a) requires the Copermittees to develop a publicly available and noticed schedule of the opportunities for the public to participate and provide comments during the development of the Water Quality Improvement Plan. These opportunities are when the public can provide the data, information, and recommendations that the Copermittees can consider during the development of the Water Quality Improvement Plans.

The San Diego Water Board recognizes, however, that the Copermittees cannot be expected to incorporate all the data, information, and recommendations that the public may provide into the Water Quality Improvement Plans. The Copermittees will have to review the data, information, and recommendations received and make some decisions on what to incorporate into the Water Quality Improvement Plans. Before the Copermittees finalize their decisions, members of the public should be allowed to review the Copermittees' decisions. Thus, Provision F.1.a.(1)(b) requires the Copermittees to form a Water Quality Improvement Consultation Panel (Panel).

The Panel will consist of a member from the environmental community and a member from the development community familiar with the Watershed Management Area. A representative from the San Diego Water Board staff will also be part of the Panel. The Copermittees may choose to include additional members, but the Panel is only required to include three panel members.

The Panel will serve as an additional public participation and input mechanism during the development of the Water Quality Improvement Plans. The knowledge and expertise from these Panel members are expected to provide the Copermittees valuable direction during their decision-making process. The Copermittees will review the content of their planned submittals with the Panel members to receive recommendations. If the Panel provides recommendations, the Copermittees must consider revisions to the Water Quality Improvement Plan submittals.

The San Diego Water Board recognizes that the development of multiple Water Quality Improvement Plans concurrently may limit the ability of the public to review and provide comments to the Copermittees. Thus, Provision F.1.a.(1)(c) requires the Copermittees to coordinate the schedules for the public participation process among the Watershed Management Areas to provide the public time and opportunity to participate during the development of the Water Quality Improvement Plans.

Provision F.1.a.(2) requires the Copermittees to develop and submit the first Water Quality Improvement Plan component, in accordance with the requirements of Provision B.2, which includes the identification of the priority water quality conditions and potential water quality improvement strategies. The public must be provided an opportunity to provide data, information and recommendations to be utilized in the development and identification of the priority water quality conditions and potential water quality improvement strategies for the Watershed Management Area. The Copermittees must consult with the Panel and consider making revisions. The Copermittees may submit the requirements of Provision B.2 as early as 6 months and no later than 12 months after the commencement of coverage under this Order. After the requirements of Provision B.2 are submitted to the San Diego Water Board, the public will be provided another opportunity to provide comments.

Provision F.1.a.(3) requires the Copermittees to develop and submit the second Water Quality Improvement Plan component, in accordance with the requirements of

Provision B.3, which includes the identification of the numeric goals for the highest priority water quality conditions identified for the Watershed Management Area, and the strategies that will be implemented to achieve the potential numeric goals. The Copermittees may also develop the Optional Watershed Management Area Analysis, in accordance with the requirements of Provision B.3.b.(4), as part of this submittal. The public must be provided an opportunity to provide data, information and recommendations to be utilized in the development and identification of the numeric goals and water quality improvement strategies for the Watershed Management Area. The Copermittees must consult with the Panel and consider making revisions. The Copermittees may submit the requirements of Provision B.3 as early as 9 months and no later than 18 months after the commencement of coverage under this Order. After the requirements of Provision B.3 are submitted to the San Diego Water Board, the public will be provided another opportunity to provide comments.

Finally, Provision F.1.b describes the process for the submittal and implementation of the Water Quality Improvement Plans. The complete Water Quality Improvement Plans are required to be submitted by the Copermittees within 24 months after the commencement of coverage under this Order. The San Diego Water Board will provide the public an opportunity to provide comments on each complete Water Quality Improvement Plan.

The San Diego Water Board will review each Water Quality Improvement Plan and the public comments received to determine if the Copermittees have submitted a Water Quality Improvement Plan that meets the requirements of Provision B. If a Water Quality Improvement Plan does not meet the requirements of Provision B, the Copermittees will be considered out of compliance and directed in writing by the San Diego Water Board Executive Officer to correct the deficiencies.

When a Water Quality Improvement Plan meets the requirements of Provision B, the San Diego Water Board will determine whether to hold a public hearing or to limit public input to submittal of written comments before accepting the Water Quality Improvement Plan. Implementation of the Water Quality Improvement Plan must begin within 30 days of acceptance.

The San Diego Water Board expects that any deficiencies in the Water Quality Improvement Plan will be identified either in the public comments or during the review by the San Diego Water Board before implementation begins. In the event any deficiencies are identified after the implementation of the Water Quality Improvement Plan, Provision F.1.b.(7) clarifies that the San Diego Water Board maintains the right to require the Copermittees to correct any deficiencies that may be identified.

Provision F.2 (Updates) requires the Copermittees to update specific documents that the Copermittees will utilize to implement the requirements of this Order.

Each Copermittee is required to continue implementing a jurisdictional runoff management program, as required under Provision E. Implementation of each Copermittee's jurisdictional runoff management program is directed by its jurisdictional runoff management program document. Provision F.2.a requires each Copermittee to update its jurisdictional runoff management program document to be consistent with the requirements of Provision E concurrent with the submittal of the Water Quality Improvement Plan.

Likewise, each Copermittee must continue to require new development and redevelopment projects to implement BMPs to control pollutants in storm water runoff. The control of pollutants in storm water runoff from development and redevelopment projects within each Copermittee's jurisdiction is guided and directed by its BMP Design Manual, formerly known as a Standard Storm Water Mitigation Plan (SSMP). Provision F.2.b requires each Copermittee to update its BMP Design Manual to be consistent with the requirements of Provision E.3 concurrent with the submittal of the Water Quality Improvement Plan.

In general, the requirements of the Order should not necessitate a complete rewrite of each Copermittee's jurisdictional runoff management program document or BMP Design Manual, as was required by the Third Term Permits. The jurisdictional runoff management program and BMP Design Manual requirements of this Order are not significantly different than the requirements of the Fourth Term Permits. Thus, only sections of the Order which are new or have been significantly changed should warrant revisions to specific sections of the Copermittee's jurisdictional runoff management program document and BMP Design Manual.

Finally, the Water Quality Improvement Plans are expected to require updates as the iterative approach and adaptive management process included in the Water Quality Improvement Plan, as required under Provision B.5, is implemented by the Copermittees. Provision F.2.c.(1) requires the Copermittees to implement a public participation process for the proposed updates, review the proposed updates with the Panel, and submit the updates to the Water Quality Improvement Plan as part of the Annual Reports required under Provision F.3.b.

Also, because TMDLs are likely to be developed, adopted and approved during the term of the Order, Provision F.2.c.(2) has been included to expedite the incorporation of TMDLs into the Copermittees' Water Quality Improvement Plans as part of the update process, potentially before the Order is re-opened to incorporate the requirements of the new TMDLs.

Provision F.3 (Progress Reporting) requires the Copermittees to report on the progress of implementing the Water Quality Improvement Plans.

The requirements of Provision F.3 are to report the progress toward improving water quality that the Copermittees are achieving with the implementation of the Water

Quality Improvement Plans and each Copermittee's jurisdictional runoff management program. The Progress Report Presentations required under Provision F.3.a are included to provide the Copermittees an opportunity to communicate directly with the San Diego Water Board and the public. The Progress Report Presentations will also provide the members of the San Diego Water Board and members of the public an opportunity to become more acquainted with the Copermittees and their projects and programs to address non-storm water and storm water discharges into and from their MS4s.

The Annual Report requirements of Provision F.3.b are a consolidation of several reporting requirements from the Fourth Term Permits, including the Jurisdictional Runoff Management Program Annual Reports, the Watershed Annual Reports, and the Monitoring and Reporting Program Annual Reports. Furthermore, the Annual Report requirements are consistent with the requirements under 40 CFR 122.42(c).

Pursuant to 40 CFR 122.42(c), "[t]he operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer that has been designated by the Director...must submit an annual report", which must include the following:

- (1) *The status of implementing the components of the storm water management program that are established as permit conditions [40 CFR 122.42(c)(1)];*
- (2) *Proposed changes to the storm water management programs that are established as permit conditions [40 CFR 122.42(c)(2)];*
- (3) *Revisions, if necessary, to the assessment of controls and fiscal analysis [40 CFR 122.42(c)(3)];*
- (4) *A summary of data, including monitoring data, that is accumulated throughout the reporting year [40 CFR 122.42(c)(4)];*
- (5) *Annual expenditures and budget for year following each annual report [40 CFR 122.42(c)(5)];*
- (6) *A summary describing the number and nature of enforcement actions, inspections, and public education programs [40 CFR 122.42(c)(6)];*
- (7) *Identification of water quality improvements or degradation [40 CFR 122.42(c)(7)].*

Under the Fourth Term Permits, each Copermittee is responsible for submitting a Jurisdictional Runoff Management Program Annual Report; the Copermittees in each designated watershed are responsible for submitting a Watershed Annual Report; and the Copermittees from each county are responsible for submitting a Monitoring and Reporting Program Annual Report.

There are 39 Copermittees in the San Diego Region, each required to prepare and submit a Jurisdictional Runoff Management Program Annual Report. There are 9 designated watersheds in San Diego County, 6 designated watersheds in Orange County, and 1 designated watershed in Riverside County for a total of 16 designated watersheds, each requiring a Watershed Annual Report. There are 3 sets of Copermittees in 3 counties in the San Diego Region, requiring Copermittees from each county to prepare and submit a Monitoring and Reporting Program Annual Report. Thus each Copermittee is currently required to prepare, or participate in the preparation of at least 3 annual reports. In addition, the San Diego County Copermittees are required to prepare and submit a Regional Urban Runoff Management Plan Annual Report.

In total, there are 59 annual reports that are prepared by the Copermittees and submitted to the San Diego Water Board for the Fourth Term Permits. The preparation of these annual reports requires significant time and resources from each Copermittee, which could otherwise be expended on actions that could improve water quality within its jurisdiction. In turn, significant time and resources are required from the San Diego Water Board staff to review these reports, which could otherwise be expended on working directly with the Copermittees to improve their implementation efforts toward restoring and protecting water quality.

Until the Water Quality Improvement Plans are developed, there will be a transitional period during which the Copermittees will continue to implement their existing jurisdictional runoff management programs. There will also be a transitional period during which the Copermittees will implement the transitional monitoring and assessment requirements of Provision D. During the transitional period, the Copermittees will submit annual reports pursuant to the requirements of Provisions F.3.b.(1) and F.3.b.(2).

Provision F.3.b.(1) includes the transitional annual reporting requirements for each Copermittee's jurisdictional runoff management program. The reporting of the jurisdictional runoff management program implementation efforts have been reduced to a single 2-page form. Each Copermittee is required to complete and submit a Jurisdictional Runoff Management Program Annual Report Form (contained in Attachment D or a revised form accepted by the San Diego Water Board) no later than October 31 of each year for each jurisdictional runoff management program reporting period (i.e. July 1 to June 30) during the transitional period, until the first Water Quality Improvement Plan Annual Reports are required to be submitted. The Jurisdictional Runoff Management Program Annual Report Form will certify that each Copermittee has implemented its jurisdictional runoff management program in accordance with the requirements of Provision E. Each Copermittee may choose to continue to utilize and submit the jurisdictional runoff management program annual reporting format of its current Order until the first Water Quality Improvement Plan Annual Report is required to be submitted.

Provision F.3.b.(2) includes the transitional annual reporting requirements for the transitional monitoring and assessment program for each Watershed Management Area. The Copermittees in the Watershed Management Area are required to submit a Transitional Monitoring and Assessment Program Annual Report no later than January 31 for each complete transitional monitoring and assessment program reporting period (i.e. October 1 to September 30) during the transitional period, until the first Water Quality Improvement Plan Annual Reports are required to be submitted. The Transitional Monitoring and Assessment Program Annual Report is required to include the transitional period monitoring data collected pursuant to Provisions D.1.a and D.2.a, and the findings from the transitional period findings from the assessments required pursuant to Provisions D.4.a.(1)(a), D.4.b.(1)(a)(i), D.4.b.(2)(a)(i).

Provision F.3.b.(3) includes the Water Quality Improvement Plan Annual Report requirements. Only one Water Quality Improvement Plan Annual Report is required for each of the ten (10) Watershed Management Areas designated under Provision B.1, which is a significant reduction in the number of annual reports required to be prepared and submitted by the Copermittees. The Water Quality Improvement Plan Annual Report will document the Copermittees' efforts to implement the Water Quality Improvement Plan. Each Water Quality Improvement Plan Annual Report will be focused primarily on reporting the analysis of the monitoring data collected pursuant to Provisions D.1-D.3 during the reporting period, and the assessments that are required pursuant to Provision D.4 based on the data. The monitoring data analyses and the assessments that are provided in the Water Quality Improvement Plan Annual Report will be the core of the report. The reporting of the jurisdictional runoff management program implementation efforts have been reduced to a single 2-page form, and will no longer be the primary focus of the reporting requirements as in the Third and Fourth Term Permits.

Each Copermittee will continue to prepare and submit a Jurisdictional Runoff Management Program Annual Report Form as part of the Water Quality Improvement Plan Annual Report to certify that each Copermittee has implemented its jurisdictional runoff management program in accordance with the requirements of Provision E. Instead of reviewing a voluminous report from each Copermittee, as was required under the Third and Fourth Term Permits, the San Diego Water Board will conduct audits of each Copermittee's jurisdictional runoff management program to investigate and confirm the information provided by each Copermittee on its Jurisdictional Runoff Management Program Annual Report Form. The audits will allow the San Diego Water Board to become more familiar with the each Copermittee's jurisdictional runoff management program, and each Copermittee will become more informed about the expectations of the San Diego Water Board.

The reduction in the number and content of the Water Quality Improvement Plan Annual Reports should result in significant time, cost and resource savings for the Copermittees, as well as the San Diego Water Board. Those savings should offset a significant portion of any additional costs that may be incurred to develop the Water

Quality Improvement Plans and to implement the monitoring and assessment program requirements of Provision D.

The reporting period for the Water Quality Improvement Plan Annual Reports consists of two periods. Because the jurisdictional runoff management programs are typically budgeted and implemented during a fiscal year, the information provided on the Jurisdictional Runoff Management Program Annual Report Forms will cover the period from July 1 to June 30 of the following year.

The Water Quality Improvement Plan Annual Reports, however, are focused primarily on the monitoring data and the assessments based on the monitoring data. The monitoring data is collected during the monitoring year, which begins October 1 and ends September 30 of the following year. The monitoring year begins after the beginning of the fiscal year and ends after the end of the fiscal year. Therefore, to accommodate and capture the information collected during the fiscal year and the monitoring year, the Annual Report reporting period incorporates both periods.

Finally, Provision F.3.c requires the Copermittees to develop and submit a Regional Monitoring and Assessment Report. The Regional Monitoring and Assessment Report is similar to the Long Term Effectiveness Assessment required under the Fourth Term San Diego County Permit. The Regional Monitoring and Assessment Report is expected to utilize the entire body of data and information collected by the Copermittees during the term of this Order to assess improvements to water quality on a regional scale.

Provision F.4 (Regional Clearinghouse) requires the Copermittees to develop, update, and maintain an internet-based Regional Clearinghouse that can be used to store, disseminate, and share the Copermittees' documents, monitoring data, special studies, and any other data or information.

Most of the documents and data that are generated by the Copermittees can be provided in electronic format, and made available to the San Diego Water Board and the public on the internet. The San Diego Water Board has been gradually transitioning its document submittal requirements to electronic submittals. Provision F.4 has been included to further these efforts.

Provision F.4 has also been included to improve the exchange and availability of information among the Copermittees, as well as between the Copermittees and the San Diego Water Board. Provision F.4 will also make the information generated during the implementation of the Order more accessible to the public.

Provision F.5 (Report of Waste Discharge) requires the Copermittees to submit a Report of Waste Discharge to reapply for renewal of the Order prior to its expiration, in accordance with 40 CFR 122.21(d)(2) and CWC section 13376.

Because the ~~Orange County and~~ Riverside County Copermittees will not be subject to the requirements of this Order until they are notified of coverage, Provision F.5.a describes the process of submitting ~~a~~ their Reports of Waste Discharge pursuant to the requirements of their current permits to obtain coverage under this Order.

For the Copermittees subject to the requirements of this Order, Provision F.5.b requires the Copermittees to submit a Report of Waste Discharge 180 days in advance of the expiration of this Order. Provision F.5.b also describes the minimum information to be included in the Report of Waste Discharge, based on USEPA guidance "Interpretive Policy Memorandum on Reapplication Requirements for Municipal Separate Storm Sewer Systems," dated May 17, 1996.

Provision F.6 (Application for Early Coverage) describes the process that would allow the Orange County and/or Riverside County Copermittees to obtain coverage under this Order earlier than the expiration of their current Orders.

If the ~~Orange County and/or~~ Riverside County Copermittees choose to obtain coverage under this Order earlier than the expiration of their current Orders, the preparation and submittal of a Report of Waste Discharge, as required by the Fourth Term Permits, will not be necessary. The existing Order for the respective county will be rescinded upon the effective coverage date under this Order, except for enforcement purposes.

G. Principal Watershed Copermittee Responsibilities

Purpose: Provision G includes the requirements for the Principal Watershed Copermittee designated by the Copermittees in each Watershed Management Area.

Discussion: Unlike previous NPDES requirements, there will no longer be a single Principal Copermittee. Provision G.1 requires the Copermittees to designate a Principal Watershed Copermittee for each Watershed Management Area. There are ten (10) Watershed Management Areas in the San Diego Region, as defined in Table B-1 under Provision B.1 of the Order. An individual Copermittee should not be the Principal Watershed Copermittee for more than two (2) Watershed Management Areas. There could be up to ten (10) Principal Water Copermittees designated for the Watershed Management Areas in the San Diego Region.

Provision G.2 describes the minimum responsibilities of each Principal Watershed Copermittee. The primary responsibility of the Principal Watershed Copermittees is to serve as the liaison between the Copermittees in the Watershed Management Area and the San Diego Water Board on general permit issues. Ideally, the Principal Watershed Copermittee can represent the interests of all the Copermittees within a Watershed Management Area during discussions or meetings to facilitate communication with the San Diego Water Board. The Principal Watershed Copermittees are also responsible for facilitating and coordinating the implementation efforts of the Copermittees and submittals of required documents and reports.

The Principal Watershed Copermittee is responsible for facilitating the efforts of the Copermittees within the Watershed Management Area to develop the Water Quality Improvement Plan required under Provision B, and submit it for approval in accordance with Provision F.1. The Principal Watershed Copermittee is also responsible for coordinating the submittal of the document updates, Progress Report Presentations, and Annual Reports required from the Copermittees within each Watershed Management Area under Provisions F.2, F.3.a, and F.3.b. The Principal Watershed Copermittees are responsible for coordinating with each other to develop and submit the Regional Clearinghouse, Regional Monitoring and Assessment Report, and the Report of Waste Discharge required under Provisions F.3.c, F.4, and F.5.

The designated Principal Watershed Copermittee for each Watershed Management Area does not necessarily have to serve as the Principal Watershed Copermittee for the entire term of the Order. If the Copermittees in a Watershed Management Area choose to designate a new Principal Watershed Copermittee, the change may be submitted as part of the Annual Report required under Provision F.3.b, with an update to the Water Quality Improvement Plan in accordance with Provision F.2.c.

Provision G.3 specifies that the Principal Watershed Copermittee is not responsible for ensuring that the other Copermittees within the Watershed Management Area are in compliance with the requirements of this Order

H. Modification of Order

Purpose: Provision H provides the conditions under which modifications to Order No. R9-2013-0001, as amended, may occur.

Discussion: Provision H allows for modifications to Order No. R9-2013-0001, as amended, for bases in addition to modifications (minor and major) allowed under the federal regulations at ~~Minor modifications may be made by the San Diego Water Board Executive Officer without a public notice or public hearing. Minor modifications are defined under 40 CFR 122.62 and 122.63. Minor modifications under 40 CFR 122.63 potentially applicable to this Order are the following:~~

~~Correcting typographical errors;~~

~~Requiring more frequent monitoring or reporting by the Copermittees;~~

~~Changing an interim compliance date in a schedule of compliance, provided the new date is not more than 120 days after the date specified in the existing permit and does not interfere with attainment of the final compliance date requirement.~~

Modifications ~~that are not one of the above minor modifications will~~ to the Order require re-opening the Order (see Water Code section 13223), subject to the requirements of 40 CFR 122.44, 122.62 to 122.64, and 124.5, but only for the specific provisions subject to the modification. Proposed mModifications of the Order ~~that are not minor require a draft Order with the proposed modifications will be~~ made available for public review, a public notice and comment period, and a public hearing if requested. Comments on the provisions not subject to the proposed modifications are not required to be considered in the San Diego Water Board's responses to comments or during the public hearing.

Provision H.4 was included to specify that the Order will be re-opened for modifications if the State Water Board determines revisions to Provision A are warranted, an application for early coverage under the Order is received pursuant to Provision F.6, the Basin Plan is amended to modify an existing TMDL or incorporate a new TMDL, or the monitoring and assessment program requirements need to be updated or revised.

Provision H.5 was included to specify that the San Diego Water Board will re-open and consider modifications to this Order when the Orange County Copermittees or the Riverside County Copermittees submit a complete Report of Waste Discharge pursuant to the requirements of their current Orders

I. Standard Permit Provisions and General Provisions

Purpose: Provision I incorporates the standard permit provisions required to be included in all NPDES permits, as well as several other general provisions.

Discussion: Provision I refers to Attachment B to the Order. Attachment B expressly incorporates the conditions applicable to all NPDES permits as provided under 40 CFR 122.41(a)-(n), as well as the applicable conditions for MS4s and storm water discharges provided under 40 CFR 122.42(c) and 40 CFR 122.42(d), respectively. Attachment B also includes several general provisions that are typically included in or applicable to waste discharge requirements issued by the San Diego Water Board.

IX. ATTACHMENTS

The attachments to the Order are discussed below. The discussions describe the content of the attachments.

Attachment A – Discharge Prohibitions and Special Protections

Section 1 of Attachment A includes the Waste Discharge Prohibitions from the Basin Plan. They have been provided verbatim in their entirety.

Section 2 of Attachment A includes the “*Special Protections for Areas of Special Biological Significance, Governing Point Source Discharges of Storm Water and Nonpoint Source Waste Discharges*” applicable to permitted point source discharges of storm water, adopted under State Water Board Resolution No. 2012-0012, [as amended by Resolution No. 2012-0031](#). The terms, prohibitions, and special conditions (collectively referred to as special conditions) are established as limitations on point source storm water discharges. These special conditions provide Special Protections for marine aquatic life and natural water quality in ASBS, as required for State Water Quality Protection Areas pursuant to California Public Resources Code sections 36700(f) and 36710(f). These Special Protections were adopted by the State Water Board as part of the Ocean Plan General Exception.

Attachment B – Standard Permit Provisions and General Provisions

Conditions applicable to all NPDES permits, as required under 40 CFR 122.41, and conditions applicable to MS4s and storm water discharges, as required under 40 CFR 122.42(c) and 122.42(d), respectively are provided in Attachment B to the Order. They have been provided expressly in their entirety.

In addition to the standard provisions required to be incorporated into the Order and NPDES permit pursuant to 40 CFR 122.41 and 40 CFR 122.42, several other general provisions apply to this Order. These general provisions are typically included in or applicable to waste discharge requirements issued by the San Diego Water Board. Many of the general provisions were developed by the State Water Board. Where a general provision is derived from statute or regulation, a citation of the statute or regulation section is provided. General provisions that do not provide a citation are included under the authority provided CWC 13377.

Attachment C – Acronyms, Abbreviations and Definitions

The acronyms and abbreviations that are used in the Order are provided in Attachment C. Attachment C also includes definitions that may provide an explanation or description of the meaning or intent of specific terms or phrases included in the Order.

Attachment D – Jurisdictional Runoff Management Program Annual Report Form

An example of the Jurisdictional Runoff Management Program Annual Report Form required to be submitted by each Copermittee as part of the Annual Reports required under Provision F.3.b.(1)(e) is provided as Attachment D to the Order. An electronic version of the form will be available from the San Diego Water Board after the adoption of the Order.

The Jurisdictional Runoff Management Program Annual Report Form includes the minimum information necessary to demonstrate that the Copermittee is implementing and in compliance with the requirements of Provision E, and includes much of the information required to be reported pursuant to 40 CFR 122.42(c).

The information that must be provided on the Jurisdictional Runoff Management Program Annual Report Form is limited to the fiscal year, which begins July 1 and ends June 30 of the following year. The information expected to be provided by the Copermittees in each section of the Jurisdictional Runoff Management Program Annual Report Form is discussed below.

I. COPERMITTEE INFORMATION

The name of the Copermittee (e.g. name of city, county, or special district) and the contact information for the storm water program manager are provided under this section.

II. LEGAL AUTHORITY

The Copermittee must confirm whether or not the legal authorities under Provision E.1.a have been established for itself within its jurisdiction.

The Copermittee must also confirm whether or not a Principal Executive Officer, Ranking Elected Official, or Duly Authorized Representative has certified that the Copermittee obtained and maintains adequate legal authority, as required under Provision E.1.b. The certification statement required by Provision E.1.b is only required to be submitted with the first Annual Report required under Provision F.3.b.

III. JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM DOCUMENT UPDATE

The Copermittee must inform the San Diego Water Board whether or not an update to its jurisdictional runoff management program document was required or recommended by the San Diego Water Board during the reporting period. An update to the jurisdictional runoff management program is required under Provision F.2.a. The San Diego Water Board may recommend modifications to the jurisdictional runoff management program as part of the iterative approach and adaptive management process required under Provision B.5, which may result in an update that is necessary for the Copermittee's jurisdictional runoff management document.

If an update was required or recommended, the Copermittee must confirm whether or not the update was completed and made available on the Regional Clearinghouse within the reporting period. If no update was required or recommended, an answer is not required. If the answer is NO, meaning the required or recommended update was not completed and/or made available on the Regional Clearinghouse, the Copermittee must attach a

schedule for the completion of the update and/or posting of the updated document on the Regional Clearinghouse.

IV. ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

The Copermittee must confirm whether or not a program was implemented during the fiscal year to actively detect and eliminate illicit discharges and connections in accordance with the requirements under Provision E.2.

In addition to confirming that a program to detect and eliminate illicit discharges was implemented during the reporting period, the Copermittee is also required to report on several items related to the program. The information that must be reported is limited to the fiscal year for the Annual Report.

All non-storm water discharges are considered illicit discharges unless the source is identified as one of the categories on non-storm water discharges under Provisions E.2.a.(1)-(5). If a non-storm water discharge is identified as one of the categories on non-storm water discharges under Provisions E.2.a.(1)-(5), the discharge is a non-storm water discharge, but not an illicit discharge. If a non-storm water discharge is identified but not in one of the categories on non-storm water discharges under Provisions E.2.a.(1)-(5), the discharge is both a non-storm water discharge and an illicit discharge.

V. DEVELOPMENT PLANNING PROGRAM

The Copermittee must confirm whether or not a development planning program was implemented during the fiscal year in accordance with the requirements under Provision E.3.

The Copermittee must also inform the San Diego Water Board whether or not an update to its BMP Design Manual was required or recommended by the San Diego Water Board during the fiscal year. An update to the BMP Design Manual is required under Provision F.2.b. The San Diego Water Board may recommend modifications to the BMP Design Manual, which may result in an update that is necessary for Copermittee's the BMP Design Manual.

If an update was required or recommended, the Copermittee must confirm whether or not the update was completed and made available on the Regional Clearinghouse within the reporting period. If no update was required or recommended, an answer is not required. If the answer is NO, meaning the required or recommended update was not completed and/or made available on the Regional Clearinghouse, the Copermittee must attach a schedule for the completion of the update and/or posting of the updated document on the Regional Clearinghouse.

The Copermittee is also required to report on several items related to the program. For the development and redevelopment projects that are reviewed under the program, the Copermittee must report the total number projects submitted for review during the fiscal year. Of those projects, the Copermittee must report the number that are Priority Development Projects, as defined under Provision E.3.b.(1). The Copermittee must also report the number of Priority Development Projects that were approved and/or granted occupancy during the fiscal year, regardless of when the project was originally submitted for review. Any projects that were approved during the fiscal year and granted any

exemptions from the BMP Design Manual requirements and/or allowed to implement alternative compliance options in accordance with Provision E.3.c.(3) must be reported.

Finally, the Copermittee must also report on several items related to its oversight of permanent BMPs on Priority Development Projects within its jurisdiction, as required under Provision E.3.e. The information that must be reported is limited to the fiscal year for the Annual Report.

VI. CONSTRUCTION MANAGEMENT PROGRAM

The Copermittee must confirm whether or not a construction management program was implemented during the fiscal year in accordance with the requirements under Provision E.4.

The Copermittee is also required to report on several items related to its oversight construction projects within its jurisdiction. The information that must be reported is limited to the fiscal year for the Annual Report.

VII. EXISTING DEVELOPMENT MANAGEMENT PROGRAM

The Copermittee must confirm whether or not an existing development management program was implemented during the fiscal year in accordance with the requirements under Provision E.5.

The Copermittee is also required to report on several items related to its oversight in areas of existing development within its jurisdiction. The information that must be reported is limited to the fiscal year for the Annual Report. The information must also be separated into four categories of existing development: municipal, commercial, industrial, and residential.

VIII. PUBLIC EDUCATION AND PARTICIPATION

The Copermittee must confirm whether or not a public education program component was implemented during the fiscal year in accordance with the requirements under Provision E.7.a.

The Copermittee must also confirm whether or not a public participation program component was implemented during the fiscal year in accordance with the requirements under Provision E.7.b.

IX. FISCAL ANALYSIS

The Copermittee must confirm a summary of its fiscal analysis, conducted in accordance with the requirements under Provision E.8, has been attached to the form.

X. CERTIFICATION

A Principal Executive Officer, Ranking Elected Official, or Duly Authorized Representative must sign and certify the Jurisdictional Runoff Management Program Annual Report Form. The appropriate box must be checked to indicate the whether a Principal Executive Officer, Ranking Elected Official, or Duly Authorized Representative is signing the form.

Attachment E – Specific Provisions for Total Maximum Daily Loads Applicable to Order No. R9-2013-0001

Attachment E provides specific provisions for implementing the load allocations (LAs) and wasteload allocations (WLAs) of Total Maximum Daily Loads (TMDLs) adopted by the San Diego Water Board and approved by USEPA in which the Copermittees are identified as responsible for discharges subject to the requirements of the TMDLs. Federal regulations require that NPDES requirements incorporate water quality based effluent limitations (WQBELs) that must be consistent with the requirements and assumptions of any available WLAs,⁴⁶ which may be expressed as numeric effluent limitations, when feasible, and/or as a best management practice (BMP) program of expanded or better-tailored BMPs.⁴⁷ Where the TMDL includes WLAs that provide numeric pollutant load or pollutant parameter objectives, the WLA has been, where feasible, translated into numeric WQBELs.⁴⁸

For each TMDL in Attachment E, four sections are included:

- a. **Applicability:** This section provides the resolution under which the TMDL Basin Plan amendment was adopted and approved, with the applicable adoption and approval dates. This section also gives the effective date of the TMDL and where the TMDL is applicable (i.e. Watershed Management Area and water body). The Copermittees that are responsible for implementing the specific provisions are also given in this section.
- b. **Final TMDL Compliance Requirements:** For each TMDL, the final TMDL compliance requirements consist of the final TMDL compliance date(s), the final WQBELs, and the final TMDL compliance determination requirements. The final WQBELs are expressed in terms of receiving water limitations, effluent limitations, and/or best management practices (BMPs). The final WQBELs for the TMDLs are incorporated by reference into Provision A of the Order. The final WQBELs become enforceable when the final TMDL compliance dates have passed. Applicable BMPs within the final WQBELs must be incorporated into the Water Quality Improvement Plans. Compliance with the final WQBELs will be determined in accordance with the options provided under the final TMDL compliance determination requirements.
- c. **Interim TMDL Compliance Requirements:** If the final TMDL compliance date has not passed and there are interim TMDL compliance requirements, they are included in this section. If there are interim WQBELs with interim compliance dates, the interim WQBELs become enforceable when the corresponding interim compliance dates have passed. Compliance with the interim WQBELs will be determined in accordance with the options provided under the interim TMDL compliance determination requirements.
- d. **Specific Monitoring and Assessment Requirements:** If there are specific monitoring and assessment requirements that cannot be met with the monitoring and assessment program

⁴⁶ 40 CFR 122.44(d)(1)(vii)(B)

⁴⁷ 40 CFR 122.44(k)(2) and 40 CFR 122.44(k)(3)

⁴⁸ November ~~12, 2010~~ 26, 2014 Memorandum from the USEPA, Revisions to the November 22, 2002 Memorandum "Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLA"

requirements under Provision D of the Order, the additional requirements are included in this section.

The requirements of the TMDLs are based on and consistent with the assumptions and requirements of any available adopted and approved TMDLs that have been incorporated into the Basin Plan. Modifications to the requirements for the TMDLs in Attachment E cannot be made unless the TMDLs are modified in the Basin Plan.

A modification to any aspect of a TMDL in the Basin Plan requires a Basin Plan amendment. A Basin Plan amendment to modify a TMDL will require the San Diego Water Board to adopt a resolution to amend the Basin Plan, which includes a separate public process. When the San Diego Water Board adopts a Basin Plan amendment, it subsequently requires approval from the State Water Board, the Office of Administrative Law, and the USEPA before it becomes effective.

If and when the TMDLs are a modified in the Basin Plan, the San Diego Water Board will revise the requirements of the Order TMDL in accordance with the Basin Plan amendment. When a Basin Plan amendment to modify a TMDL becomes effective, the San Diego Water Board will modify the requirements of the Order TMDL pursuant to the requirements of Provision H.4 of the Order as soon as possible.

APPENDIX I
GENERAL INDUSTRIAL PERMIT

Appendix I - General Industrial Permit



NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

GENERAL PERMIT FOR
STORM WATER DISCHARGES
ASSOCIATED WITH INDUSTRIAL ACTIVITIES

ORDER
NPDES NO. CAS000001

This Order was adopted by the State Water Resources Control Board on:	April 1, 2014
This Order shall become effective on:	July 1, 2015
This Order shall expire on:	June 30, 2020

IT IS HEREBY ORDERED that as of July 1, 2015 this Order supersedes Order 97-03-DWQ except for Order 97-03-DWQ's requirement to submit annual reports by July 1, 2015 and except for enforcement purposes. As of July 1, 2015, a Discharger shall comply with the requirements in this Order to meet the provisions contained in Division 7 of the California Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act and regulations and guidelines adopted thereunder.

CERTIFICATION


I, Jeanine Townsend, Clerk to the Board, do hereby certify that this Order, including its fact sheet, attachments, and appendices is a full, true, and correct copy of an Order adopted by the State Water Resources Control Board, on April 1, 2014.

AYE: Chair Felicia Marcus
Vice Chair Frances Spivy-Weber
Board Member Tam M. Doduc
Board Member Steven Moore

NAY: None

ABSENT: Board Member Dorene D'Adamo

ABSTAIN: None



Jeanine Townsend
Clerk to the Board

TABLE OF CONTENTS

I. FINDINGS 1

II. RECEIVING GENERAL PERMIT COVERAGE 14

III. DISCHARGE PROHIBITIONS 19

IV. AUTHORIZED NON-STORM WATER DISCHARGES (NSWDS) 19

V. EFFLUENT LIMITATIONS 20

VI. RECEIVING WATER LIMITATIONS 21

VII. TOTAL MAXIMUM DAILY LOADS (TMDLS) 21

VIII. DISCHARGES SUBJECT TO THE CALIFORNIA OCEAN PLAN 22

IX. TRAINING QUALIFICATIONS 23

X. STORM WATER POLLUTION PREVENTION PLAN (SWPPP) 24

XI. MONITORING 37

XII. EXCEEDANCE RESPONSE ACTIONS (ERAS) 48

XIII. INACTIVE MINING OPERATION CERTIFICATION 56

XIV. COMPLIANCE GROUPS AND COMPLIANCE GROUP LEADERS 57

XV. ANNUAL COMPREHENSIVE FACILITY COMPLIANCE EVALUATION (ANNUAL EVALUATION) 59

XVI. ANNUAL REPORT 59

XVII. CONDITIONAL EXCLUSION - NO EXPOSURE CERTIFICATION (NEC) 60

XVIII. SPECIAL REQUIREMENTS - PLASTIC MATERIALS 64

XIX. REGIONAL WATER BOARD AUTHORITIES 66

XX. SPECIAL CONDITIONS 67

XXI. STANDARD CONDITIONS 69

TABLES

TABLE 1: Additional Analytical Parameters 41

TABLE 2: Parameter NAL Values, Test Methods, and Reporting Units 43

ATTACHMENTS AND APPENDICES

Attachment A Facilities Covered

Attachment B Acronyms

Attachment C Glossary

Attachment D Permit Registration Documents (PRDs)

Attachment E TMDL Implementation

Attachment F Effluent Limitation Guidelines (ELGs)

Attachment G Requirements for Dischargers Who Have Been Granted An Ocean Plan Exception for Discharges to Areas of Special Biological Significance (ASBS)

Attachment H Storm Water Sample Collection and Handling Instructions

Appendix 1 Storm Water Pollution Prevention Plan (SWPPP) Checklist

Appendix 2 No Exposure Certification (NEC) Conditional Exclusion Instructions

Appendix 3 Waterbodies with Clean Water Act section 303(d) Listed Impairments

I. FINDINGS

A. General Findings

The State Water Resources Control Board (State Water Board) finds that:

1. The Federal Clean Water Act (Clean Water Act) prohibits certain discharges of storm water containing pollutants except in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. (33 U.S.C. §§ 1311, 1342 (also referred to as Clean Water Act §§ 301, 402).) The United States Environmental Protection Agency (U.S. EPA) promulgates federal regulations to implement the Clean Water Act's mandate to control pollutants in storm water discharges. (40 C.F.R. § 122, et seq.) The NPDES permit must require implementation of Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges (NSWDs). The NPDES permit must also include additional requirements necessary to implement applicable water quality objectives or water quality standards (water quality standards, collectively).
2. On November 16, 1990, U.S. EPA promulgated Phase I storm water regulations in compliance with section 402(p) of the Clean Water Act. (55 Fed. Reg. 47990, codified at 40 C.F.R. § 122.26.) These regulations require operators of facilities subject to storm water permitting (Dischargers), that discharge storm water associated with industrial activity (industrial storm water discharges), to obtain an NPDES permit. Section 402(p)(3)(A) of the Clean Water Act also requires that permits for discharges associated with industrial activity include requirements necessary to meet water quality standards.
3. Phase II storm water regulations¹ require permitting for storm water discharges from facilities owned and operated by a municipality with a population of less than 100,000. The previous exemption from the Phase I permitting requirements under section 1068 of the Intermodal Surface Transportation Efficiency Act of 1991 was eliminated.
4. This Order (General Permit) is an NPDES General Permit issued in compliance with section 402 of the Clean Water Act and shall take effect on July 1, 2015, provided that the Regional Administrator of U.S. EPA has no objection. If the U.S. EPA Regional Administrator has an objection, this General Permit will not become effective until the objection is withdrawn.
5. This action to adopt an NPDES General Permit is exempt from the provisions of the California Environmental Quality Act (Pub. Resources Code, § 21000, et seq.) in accordance with section 13389 of the Water Code. (See *County of*

¹ U.S. EPA. Final NPDES Phase II Rule. <<http://cfpub.epa.gov/npdes/stormwater/swfinal.cfm>>. [as of February 4, 2014]

Los Angeles v. California State Water Resources Control Bd. (2006) 143 Cal.App.4th 985.)

6. State Water Board Order 97-03-DWQ is rescinded as of the effective date of this General Permit (July 1, 2015) except for Order 97-03-DWQ's requirement that annual reports be submitted by July 1, 2015 and except for enforcement purposes.
7. Effective July 1, 2015, the State Water Board and the Regional Water Quality Control Boards (Regional Water Boards) (Water Boards, collectively) will enforce the provisions herein.
8. This General Permit authorizes discharges of industrial storm water to waters of the United States, so long as those discharges comply with all requirements, provisions, limitations, and prohibitions in this General Permit.
9. Industrial activities covered under this General Permit are described in Attachment A.
10. The Fact Sheet for this Order is incorporated as findings of this General Permit.
11. Acronyms are defined in Attachment B and terms used in this General Permit are defined in Attachment C.
12. This General Permit regulates industrial storm water discharges and authorized NSWDS from specific categories of industrial facilities identified in Attachment A hereto, and industrial storm water discharges and authorized NSWDS from facilities designated by the Regional Water Boards to obtain coverage under this General Permit. This General Permit does not apply to industrial storm water discharges and NSWDS that are regulated by other individual or general NPDES permits
13. This General Permit does not preempt or supersede the authority of municipal agencies to prohibit, restrict, or control industrial storm water discharges and authorized NSWDS that may discharge to storm water conveyance systems or other watercourses within their jurisdictions as allowed by state and federal law.
14. All terms defined in the Clean Water Act, U.S. EPA regulations, and the Porter-Cologne Water Quality Control Act (Wat. Code, § 13000, et seq.) will have the same definition in this General Permit unless otherwise stated.
15. Pursuant to 40 Code of Federal Regulations section 131.12 and State Water Board Resolution 68-16, which incorporates the requirements of 40 Code of Federal Regulations section 131.12 where applicable, the State Water Board finds that discharges in compliance with this General Permit will not result in the lowering of water quality to a level that does not achieve water quality objectives and protect beneficial uses. Any degradation of water quality from existing high quality water to a level that achieves water quality objectives and

protects beneficial uses is appropriate to support economic development. This General Permit's requirements constitute best practicable treatment or control for discharges of industrial storm water and authorized non-storm water discharges, and are therefore consistent with those provisions.

16. Compliance with any specific limits or requirements contained in this General Permit does not constitute compliance with any other applicable permits.
17. This General Permit requires that the Discharger certify and submit all Permit Registration Documents (PRDs) for Notice of Intent (NOI) and No Exposure Certification (NEC) coverage via the State Water Board's Storm Water Multiple Application and Report Tracking System (SMARTS) website. (See Attachment D for an example of the information required to be submitted in the PRDs via SMARTS.) All other documents required by this General Permit to be electronically certified and submitted via SMARTS can be submitted by the Discharger or by a designated Duly Authorized Representative on behalf of the Discharger. Electronic reporting is required to reduce the state's reliance on paper, to improve efficiency, and to make such General Permit documents more easily accessible to the public and the Water Boards.
18. All information provided to the Water Boards shall comply with the Homeland Security Act and all other federal law that concerns security in the United States, as applicable.

B. Industrial Activities Not Covered Under this General Permit

19. Discharges of storm water from areas on tribal lands are not covered under this General Permit. Storm water discharges from industrial facilities on tribal lands are regulated by a separate NPDES permit issued by U.S. EPA.
20. Discharges of storm water regulated under another individual or general NPDES permit adopted by the State Water Board or Regional Water Board are not covered under this General Permit, including the State Water Board NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities.
21. Storm water discharges to combined sewer systems are not covered under this General Permit. These discharges must be covered by an individual permit. (40 C.F.R. § 122.26(a)(7).)
22. Conveyances that discharge storm water runoff combined with municipal sewage are not covered under this General Permit.
23. Discharges of storm water identified in Clean Water Act section 402(l) (33 U.S.C. § 1342(l)) are not covered under this General Permit.
24. Facilities otherwise subject to this General Permit but for which a valid Notice of Non-Applicability (NONA) has been certified and submitted via SMARTS, by the Entity are not covered under this General Permit. Entities (See Section XX.C.1 of this General Permit) who are claiming "No Discharge"

through the NONA shall meet the eligibility requirements and provide a No Discharge Technical Report in accordance with Section XX.C.

25. This General Permit does not authorize discharges of dredged or fill material regulated by the US Army Corps of Engineers under section 404 of the Clean Water Act and does not constitute a water quality certification under section 401 of the Clean Water Act.

C. Discharge Prohibitions

26. Pursuant to section 13243 of the Water Code, the State Water Board may specify certain conditions or areas where the discharge of waste, or certain types of waste, is prohibited.
27. With the exception of certain authorized NSWs as defined in Section IV, this General Permit prohibits NSWs. The State Water Board recognizes that certain NSWs should be authorized because they are not generated by industrial activity, are not significant sources of pollutants when managed appropriately, and are generally unavoidable because they are related to safety or would occur regardless of industrial activity. Prohibited NSWs may be authorized under other individual or general NPDES permits, or waste discharge requirements issued by the Water Boards.
28. Prohibited NSWs are referred to as unauthorized NSWs in this General Permit. Unauthorized NSWs shall be either eliminated or permitted by a separate NPDES permit. Unauthorized NSWs may contribute significant pollutant loads to receiving waters. Measures to control sources of unauthorized NSWs such as spills, leakage, and dumping, must be addressed through the implementation of Best Management Practices (BMPs).
29. This General Permit incorporates discharge prohibitions contained in water quality control plans, as implemented by the Water Boards.
30. Direct discharges of waste, including industrial storm water discharges, to Areas of Special Biological Significance (ASBS) are prohibited unless the Discharger has applied for and the State Water Board has granted an exception to the State Water Board's 2009 Water Quality Control Plan for Ocean Waters of California as amended by State Water Board Resolution 2012-0056 (California Ocean Plan)² allowing the discharge.

² State Water Resources Control Board. Ocean Standards Web Page.

<http://www.waterboards.ca.gov/water_issues/programs/ocean/>. [as of February 4, 2014].

State Water Resources Control Board. Water Quality Control Plan for Ocean Waters of California 2009.

<http://www.waterboards.ca.gov/water_issues/programs/ocean/docs/2009_cop_adoptedeffective_usepa.pdf>. [as of February 4, 2014].

State Water Resources Control Board. Resolution 2012-0056.

<http://www.swrcb.ca.gov/board_decisions/adopted_orders/resolutions/2012/rs2012_0056.pdf>. [as of February 4, 2014].

D. Effluent Limitations

31. Section 301(b) of the Clean Water Act and 40 Code of Federal Regulations section require NPDES permits to include technology-based requirements at a minimum, and any more stringent effluent limitations necessary for receiving waters to meet applicable water quality standards. Clean Water Act section 402(p)(3)(A) requires that discharges of storm water runoff from industrial facilities comply with Clean Water Act section 301.
32. This General Permit requires control of pollutant discharges using BAT and BCT to reduce and prevent discharges of pollutants, and any more stringent effluent limitations necessary for receiving waters to meet applicable water quality standards.
33. It is not feasible for the State Water Board to establish numeric technology based effluent limitations for discharges authorized by this General Permit at this time. The rationale for this determination is discussed in detail in the Fact Sheet of this General Permit. Therefore, this General Permit requires Dischargers to implement minimum BMPs and applicable advanced BMPs as defined in Section X.H (collectively, BMPs) to comply with the requirements of this General Permit. This approach is consistent with U.S. EPA's 2008 Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (2008 MSGP).
34. 40 Code of Federal Regulations section 122.44(d) requires that NPDES permits include Water Quality Based Effluent Limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality standards for receiving waters.
35. Where numeric water quality criteria have not been established, 40 Code of Federal Regulations section 122.44(d)(1)(vi) provides that WQBELs may be established using U.S. EPA criteria guidance under section 304(a) of the Clean Water Act, a proposed state criteria or policy interpreting narrative criteria supplemented with other relevant information, and/or an indicator parameter.
36. This General Permit requires Dischargers to implement BMPs when necessary, in order to support attainment of water quality standards. The use of BMPs to control or abate the discharge of pollutants is authorized by 40 Code of Federal Regulations section 122.44(k)(3) because numeric effluent limitations are infeasible and implementation of BMPs is reasonably necessary to achieve effluent limitations and water quality standards, and to carry out the purposes and intent of the Clean Water Act. (40 C.F.R. § 122.44(k)(4).)

E. Receiving Water Limitations

37. This General Permit requires compliance with receiving water limitations based on water quality standards. The primary receiving water limitation requires that industrial storm water discharges and authorized NSWDS not

cause or contribute to an exceedance of applicable water quality standards. Water quality standards apply to the quality of the receiving water, not the quality of the industrial storm water discharge. Therefore, compliance with the receiving water limitations generally cannot be determined solely by the effluent water quality characteristics. If any Discharger's storm water discharge causes or contributes to an exceedance of a water quality standard, that Discharger must implement additional BMPs or other control measures in order to attain compliance with the receiving water limitation. Compliance with water quality standards may, in some cases, require Dischargers to implement controls that are more protective than controls implemented solely to comply with the technology-based requirements in this General Permit.

F. Total Maximum Daily Loads (TMDLs)

38. TMDLs relate to the maximum amount of a pollutant that a water body can receive and still attain water quality standards. A TMDL is defined as the sum of the allowable loads of a single pollutant from all contributing point sources (the waste load allocations) and non-point sources (load allocations), plus the contribution from background sources. (40 C.F.R. § 130.2(i).) Discharges addressed by this General Permit are considered to be point source discharges, and therefore must comply with effluent limitations that are "consistent with the assumptions and requirements of any available waste load allocation for the discharge prepared by the state and approved by U.S. EPA pursuant to 40 Code of Federal Regulations section 130.7. (40 C.F.R. § 122.44 (d)(1)(vii).) In addition, Water Code section 13263, subdivision (a), requires that waste discharge requirements implement any relevant water quality control plans. Many TMDLs contained in water quality control plans include implementation requirements in addition to waste load allocations. Attachment E of this General Permit lists the watersheds with U.S. EPA-approved and U.S. EPA-established TMDLs that include requirements, including waste load allocations, for Dischargers covered by this General Permit.

39. The State Water Board recognizes that it is appropriate to develop TMDL-specific permit requirements derived from each TMDL's waste load allocation and implementation requirements, in order to provide clarity to Dischargers regarding their responsibilities for compliance with applicable TMDLs. The development of TMDL-specific permit requirements is subject to public noticing requirements and a corresponding public comment period. Due to the number and variety of Dischargers subject to a wide range of TMDLs, development of TMDL-specific permit requirements for each TMDL listed in Attachment E will severely delay the reissuance of this General Permit. Because most of the TMDLs were established by the Regional Water Boards, and because some of the waste load allocations and/or implementation requirements may be shared by multiple Dischargers, the development of TMDL-specific permit requirements is best coordinated at the Regional Water Board level.

40. State and Regional Water Board staff will develop proposed TMDL-specific permit requirements (including monitoring and reporting requirements) for each of the TMDLs listed in Attachment E. After conducting a 30-day public comment period, the Regional Water Boards will submit to the State Water Board proposed TMDL-specific permit requirements for adoption by the State Water Board into this General Permit by July 1, 2016. The Regional Water Boards may also include proposed TMDL-specific monitoring requirements for inclusion in this General Permit, or may issue Regional Water Board orders pursuant to Water Code section 13383 requiring TMDL-specific monitoring. The proposed TMDL-specific permit requirements shall have no force or effect until adopted, with or without modification, by the State Water Board. Consistent with the 2008 MSGP, Dischargers are not required to take any additional actions to comply with the TMDLs listed in Attachment E until the State Water Board reopens this General Permit and includes TMDL-specific permit requirements, unless notified otherwise by a Regional Water Board.
41. The Regional Water Boards shall submit to the State Water Board the following information for each of the TMDLs listed in Attachment E:
- a. Proposed TMDL-specific permit, monitoring and reporting requirements applicable to industrial storm water discharges and NSWDS authorized under this General Permit, including compliance schedules and deliverables consistent with the TMDLs. TMDL-specific permit requirements are not limited by the BAT/BCT technology-based standards;
 - b. An explanation of how the proposed TMDL-specific permit requirements, compliance schedules, and deliverables are consistent with the assumptions and requirements of any applicable waste load allocation and implement each TMDL; and,
 - c. Where a BMP-based approach is proposed, an explanation of how the proposed BMPs will be sufficient to implement applicable waste load allocations.
42. Upon receipt of the information described in Finding 40, and no later than July 1, 2016, the State Water Board will issue a public notice and conduct a public comment period for the reopening of this General Permit to amend Attachment E, the Fact Sheet, and other provisions as necessary for incorporation of TMDL-specific permit requirements into this General Permit. Attachment E may also be subsequently reopened during the term of this General Permit to incorporate additional TMDL-specific permit requirements.

G. Discharges Subject to the California Ocean Plan

43. On October 16, 2012 the State Water Board amended the California Ocean Plan. The amended California Ocean Plan requires industrial storm water dischargers with outfalls discharging to ocean waters to comply with the

- California Ocean Plan's model monitoring provisions. These provisions require Dischargers to: (a) monitor runoff for specific parameters at all outfalls from two storm events per year, and collect at least one representative receiving water sample per year, (b) conduct specified toxicity monitoring at certain types of outfalls at a minimum of once per year, and (c) conduct marine sediment monitoring for toxicity under specific circumstances. The California Ocean Plan provides conditions under which some of the above monitoring provisions may be waived by the Water Boards.
44. This General Permit requires Dischargers with outfalls discharging to ocean waters that are subject to the model monitoring provisions of the California Ocean Plan to develop and implement a monitoring plan in compliance with those provisions and any additional monitoring requirements established pursuant to Water Code section 13383. Dischargers that have not developed and implemented a monitoring program in compliance with the California Ocean Plan's model monitoring provisions by July 1, 2015 (the effective date of this General Permit), or seven (7) days prior to commencing operations, whichever is later, are ineligible to obtain coverage under this General Permit.
 45. The California Ocean Plan prohibits the direct discharge of waste to ASBS. ASBS are defined in California Ocean Plan as "those areas designated by the State Water Board as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable."
 46. The California Ocean Plan authorizes the State Water Board to grant an exception to Ocean Plan provisions where the board determines that the exception will not compromise protection of ocean waters for beneficial uses and the public interest will be served.
 47. On March 20, 2012, the State Water Board adopted Resolution 2012-0012 which contains exceptions to the California Ocean Plan for specific discharges of storm water and non-point sources. This resolution also contains the special protections that are to be implemented for those discharges to ASBS.
 48. This General Permit requires Dischargers who have been granted an exception to the Ocean Plan authorizing the discharges to ASBS by the State Water Board to comply with the requirements contained in Section VIII.B of this General Permit.

H. Training

49. To improve compliance and maintain consistent implementation of this General Permit, Dischargers are required to designate a Qualified Industrial Storm Water Practitioner (QISP) for each facility the Discharger operates that has entered Level 1 status in the Exceedance Response Action (ERA) process as described in Section XII of this General Permit. A QISP may be assigned to more than one facility. In order to qualify as a QISP, a State

Water Board-sponsored or approved training course must be completed. A competency exam may be required by the State Water Board to demonstrate sufficient knowledge of the QISP course material.

50. A QISP must assist the Discharger in completing the Level 1 status and Level 2 status ERA requirements as specified in Section XII of this General Permit. A QISP is also responsible for assisting New Dischargers that will be discharging to an impaired water body with a 303(d) listed impairment, demonstrate eligibility for coverage through preparing the data and/or information required in Section VII.B.
51. A Compliance Group Leader, as defined in Section XIV of this General Order must complete a State Water Board sponsored or approved training program for Compliance Group Leaders.
52. All engineering work subject to the Professional Engineers Act (Bus. & Prof. Code § 6700, et seq.) and required by this General Permit shall be performed by a California licensed professional engineer.
53. California licensed professional civil, industrial, chemical, and mechanical engineers and geologists have licenses that have professional overlap with the topics of this General Permit. The California Department of Consumer Affairs, Board for Professional Engineers, Land Surveyors and Geologists (CBPELSG) provides the licensure and regulation of professional civil, industrial, chemical, and mechanical engineers and professional geologists in California. The State Water Board is developing a specialized self-guided State Water Board-sponsored registration and training program specifically for these CPBELSG licensed engineers and geologists in good standing with CBPELSG.

I. Storm Water Pollution Prevention Plan (SWPPP) Requirements

54. This General Permit requires the development of a site-specific SWPPP in accordance with Section X of this General Permit. The SWPPP must include the information needed to demonstrate compliance with the requirements of this General Permit. The SWPPP must be submitted electronically via SMARTS, and a copy be kept at the facility. SWPPP revisions shall be completed in accordance with Section X.B of this General Permit

J. Sampling, Visual Observations, Reporting and Record Keeping

55. This General Permit complies with 40 Code of Federal Regulations section 122.44(i), which establishes monitoring requirements that must be included in storm water permits. Under this General Permit, Dischargers are required to:
 - (a) conduct an Annual Comprehensive Facility Compliance Evaluation (Annual Evaluation) to identify areas of the facility contributing pollutants to industrial storm water discharges, (b) evaluate whether measures to reduce or prevent industrial pollutant loads identified in the Discharger's SWPPP are adequate and properly implemented in accordance with the terms of this

General Permit, and (c) determine whether additional control measures are needed.

56. This General Permit contains monitoring requirements that are necessary to determine whether pollutants are being discharged, and whether response actions are necessary. Data and information resulting from the monitoring will assist in Dischargers' evaluations of BMP effectiveness and compliance with this General Permit. Visual observations are one form of monitoring. This General Permit requires Dischargers to perform a variety of visual observations designed to identify pollutants in industrial storm water discharges and their sources. To comply with this General Permit Dischargers shall: (1) electronically self-report any violations via SMARTS, (2) comply with the Level 1 status and Level 2 status ERA requirements, when applicable, and (3) adequately address and respond to any Regional Water Board comments on the Discharger's compliance reports.
57. Dischargers that meet the requirements of the No Exposure Certification (NEC) Conditional Exclusion set forth in Section XVII of this General Permit are exempt from the SWPPP requirements, sampling requirements, and visual observation requirements in this General Permit.

K. Facilities Subject to Federal Storm Water Effluent Limitation Guidelines (ELGs)

58. U.S. EPA regulations at 40 Code of Federal Regulations Chapter I Subchapter N (Subchapter N) establish technology-based Effluent Limitation Guidelines and New Source Performance Standards (ELGs) for industrial storm water discharges from facilities in specific industrial categories. For these facilities, compliance with the BAT/BCT and ELG requirements constitutes compliance with technology-based requirements of this General Permit.
59. 40 Code of Federal Regulations section 122.44(i)(3) and (4) require storm water permits to require at least one Annual Evaluation and any monitoring requirements for applicable ELGs in Subchapter N. This General Permit requires Dischargers to comply with all applicable ELG requirements found in Subchapter N.

L. Sampling and Analysis Reduction

60. This General Permit reduces the number of qualifying sampling events required to be sampled each year when the Discharger demonstrates: (1) consistent compliance with this General Permit, (2) consistent effluent water quality sampling, and (3) analysis results that do not exceed numerical action levels.

M. Role of Numeric Action Levels (NALs) and Exceedance Response Actions (ERAs)

61. This General Permit incorporates a multiple objective performance measurement system that includes NALs, new comprehensive training requirements, Level 1 ERA Reports, Level 2 ERA Technical Reports, and Level 2 ERA Action Plans. Two objectives of the performance measurement system are to inform Dischargers, the public and the Water Boards on: (1) the overall pollutant control performance at any given facility, and (2) the overall performance of the industrial statewide storm water program. Additionally, the State Water Board expects that this information and assessment process will provide information necessary to determine the feasibility of numeric effluent limitations for industrial dischargers in the next reissuance of this General Permit, consistent with the State Water Board Storm Water Panel of Experts' June 2006 Recommendations.³
62. This General Permit contains annual and instantaneous maximum NALs. The annual NALs are established as the 2008 MSGP benchmark values, and are applicable for all parameters listed in Table 2. The instantaneous maximum NALs are calculated from a Water Board dataset, and are only applicable for Total Suspended Solids (TSS), Oil and Grease (O&G), and pH. An NAL exceedance is determined as follows:
- a. For annual NALs, an exceedance occurs when the average of all analytical results from all samples taken at a facility during a reporting year for a given parameter exceeds an annual NAL value listed in Table 2 of this General Permit; or,
 - b. For the instantaneous maximum NALs, an exceedance occurs when two or more analytical results from samples taken for any parameter within a reporting year exceed the instantaneous maximum NAL value (for Total Suspended Solids, and Oil and Grease), or are outside of the instantaneous maximum NAL range (for pH) listed in Table 2 of this General Permit. For the purposes of this General Permit, the reporting year is July 1 through June 30.
63. The NALs are not intended to serve as technology-based or water quality-based numeric effluent limitations. The NALs are not derived directly from either BAT/BCT requirements or receiving water objectives. NAL exceedances defined in this General Permit are not, in and of themselves, violations of this General Permit. A Discharger that does not fully comply with the Level 1 status and/or Level 2 status ERA requirements, when required by the terms of this General Permit, is in violation of this General Permit.
64. ERAs are designed to assist Dischargers in complying with this General Permit. Dischargers subject to ERAs must evaluate the effectiveness of their

³ State Water Board Storm Water Panel of Experts, The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities (June 19, 2006) <http://www.swrcb.ca.gov/water_issues/programs/stormwater/docs/numeric/swpanel_final_report.pdf> [as of February 4, 2014].

BMPs being implemented to ensure they are adequate to achieve compliance with this General Permit.

65. U.S. EPA regulations at Subchapter N establish ELGs for storm water discharges from facilities in 11 industrial categories. Dischargers subject to these ELGs are required to comply with the applicable requirements.
66. Exceedances of the NALs that are attributable solely to pollutants originating from non-industrial pollutant sources (such as run-on from adjacent facilities, non-industrial portions of the Discharger's property, or aerial deposition) are not a violation of this General Permit because the NALs are designed to provide feedback on industrial sources of pollutants. Dischargers may submit a Non-Industrial Source Pollutant Demonstration as part of their Level 2 ERA Technical Report to demonstrate that the presence of a pollutant causing an NAL exceedance is attributable solely to pollutants originating from non-industrial pollutant sources.
67. A Discharger who has designed, installed, and implemented BMPs to reduce or prevent pollutants in industrial storm water discharges in compliance with this General Permit may submit an Industrial Activity BMPs Demonstration, as part of their Level 2 ERA Technical Report.
68. This General Permit establishes design storm standards for all treatment control BMPs. These design standards are directly based on the standards in State Water Board Order 2000-0011 regarding Standard Urban Storm Water Mitigation Plans (SUSMPs). These design standards are generally expected to be consistent with BAT/BCT, to be protective of water quality, and to be effective for most pollutants. The standards are intended to eliminate the need for most Dischargers to further treat/control industrial storm water discharges that are unlikely to contain pollutant loadings that exceed the NALs set forth in this General Permit.

N. Compliance Groups

69. Compliance Groups are groups of Dischargers (Compliance Group Participants) that share common types of pollutant sources and industrial activity characteristics. Compliance Groups provide an opportunity for the Compliance Group Participants to combine resources and develop consolidated Level 1 ERA Reports for Level 1 NAL exceedances and appropriate BMPs for implementation in response to Level 2 status ERA requirements that are representative of the entire Compliance Group. Compliance Groups also provide the Water Boards and the public with valuable information as to how industrial storm water discharges are affected by non-industrial background pollutant sources (including natural background) and geographic locations. When developing the next reissuance of this General Permit, the State Water Board expects to have a better understanding of the feasibility and benefits of sector-specific and watershed-based permitting alternatives, which may include technology- or water quality-based numeric effluent limitations. The effluent data, BMP performance data

and other information provided from Compliance Groups' consolidated reporting will further assist the State Water Board in addressing sector-specific and watershed-based permitting alternatives.

O. Conditional Exclusion – No Exposure Certification (NEC)

70. Pursuant to U.S. EPA Phase II regulations, all Dischargers subject to this General Permit may qualify for a conditional exclusion from specific requirements if they submit a NEC demonstrating that their facilities have no exposure of industrial activities and materials to storm water discharges.
71. This General Permit requires Dischargers who seek the NEC conditional exclusion to obtain coverage in accordance with Section XVII of this General Permit. Dischargers that meet the requirements of the NEC are exempt from the SWPPP, sampling requirements, and monitoring requirements in this General Permit.
72. Dischargers seeking NEC coverage are required to certify and submit the applicable permit registration documents. Annual inspections, re-certifications, and fees are required in subsequent years. Light industry facility Dischargers excluded from coverage under the previous permit (Order 97-03-DWQ) must obtain the appropriate coverage under this General Permit. Failure to comply with the Conditional Exclusion conditions listed in this General Permit may lead to enforcement for discharging without a permit pursuant to sections 13385 or 13399.25, et seq., of the Water Code. A Discharger with NEC coverage that anticipates a change (or changes) in circumstances that would lead to exposure should register for permit coverage prior to the anticipated changes.

P. Special Requirements for Facilities Handling Plastic Materials

73. Section 13367 of the Water Code requires facilities handling preproduction plastic to implement specific BMPs aimed at minimizing discharges of such materials. The definition of Plastic Materials for the purposes of this General Permit includes the following types of sources of Plastic Materials: virgin and recycled plastic resin pellets, powders, flakes, powdered additives, regrind, dust, and other types of preproduction plastics with the potential to discharge or migrate off-site.

Q. Regional Water Board Authorities

74. Regional Water Boards are primarily responsible for enforcement of this General Permit. This General Permit recognizes that Regional Water Boards have the authority to protect the beneficial uses of receiving waters and prevent degradation of water quality in their region. As such, Regional Water Boards may modify monitoring requirements and review, comment, approve or disapprove certain Discharger submittals required under this General Permit.

IT IS HEREBY ORDERED that all Dischargers subject to this General Permit shall comply with the following conditions and requirements.

II. RECEIVING GENERAL PERMIT COVERAGE

A. Certification

1. For Storm Water Multiple Application and Report Tracking System (SMARTS) electronic account management and security reasons, as well as enforceability of this General Permit, the Discharger's Legally Responsible Person (LRP) of an industrial facility seeking coverage under this General Permit shall certify and submit all Permit Registration Documents (PRDs) for Notice of Intent (NOI) or No Exposure Certification (NEC) coverage. All other documents shall be certified and submitted via SMARTS by the Discharger's (LRP) or by their Duly Authorized Representative in accordance with the Electronic Signature and Certification Requirements in Section XXI.K. All documents required by this General Permit that are certified and submitted via SMARTS shall be in accordance with Section XXI.K.
2. Hereinafter references to certifications and submittals by the Discharger refer to the Discharger's LRP and their Duly Authorized Representative.

B. Coverages

This General Permit includes requirements for two (2) types of permit coverage, NOI coverage and NEC coverage. State Water Board Order 97-03-DWQ (previous permit) remains in effect until July 1, 2015. When PRDs are certified and submitted and the annual fee is received, the State Water Board will assign the Discharger a Waste Discharger Identification (WDID) number.

1. General Permit Coverage (NOI Coverage)
 - a. Dischargers that discharge storm water associated with industrial activity to waters of the United States are required to meet all applicable requirements of this General Permit.
 - b. The Discharger shall register for coverage under this General Permit by certifying and submitting PRDs via SMARTS (<http://smarts.waterboards.ca.gov>), which consist of:
 - i. A completed NOI and signed certification statement;
 - ii. A copy of a current Site Map from the Storm Water Pollution Prevention Plan (SWPPP) in Section X.E;
 - iii. A SWPPP (see Section X); and,

- c. The Discharger shall pay the appropriate Annual Fee in accordance with California Code of Regulations, title 23, section 2200 et seq.⁴
2. General Permit Coverage (NEC Coverage)
 - a. Dischargers that certify their facility has no exposure of industrial activities or materials to storm water in accordance with Section XVII qualify for NEC coverage and are not required to comply with the SWPPP or monitoring requirements of this General Permit.
 - b. Dischargers who qualify for NEC coverage shall conduct one Annual Facility Comprehensive Compliance Evaluation (Annual Evaluation) as described in Section XV, pay an annual fee, and certify annually that their facilities continue to meet the NEC requirements.
 - c. The Discharger shall submit the following PRDs on or before October 1, 2015 for NEC coverage via SMARTS:
 - i. A completed NEC Form (Section XVII.F.1) and signed certification statement (Section XVII.H);
 - ii. A completed NEC Checklist (Section XVII.F.2); and
 - iii. A current Site Map consistent with requirements in Section X.E.;
 - d. The Discharger shall pay the appropriate annual fee in accordance with California Code of Regulations, title 23, section 2200 et seq.⁵
3. General PRD Requirements
 - a. Site Maps

Dischargers registering for NOI or NEC coverage shall prepare a site map(s) as part of their PRDs in accordance with Section X.E. A separate copy of the site map(s) is required to be in the SWPPP. If there is a significant change in the facility layout (e.g., new building, change in storage locations, boundary change, etc.) a revision to the site map is required and shall be certified and submitted via SMARTS.
 - b. A Discharger shall submit a single set of PRDs for coverage under this General Permit for multiple industrial activities occurring at the same facility.
 - c. Any information provided to the Water Boards by the Discharger shall comply with the Homeland Security Act and other federal law that

⁴ Annual fees must be mailed or sent electronically using the State Water Boards' Electronic Funds Transfer (EFT) system in SMARTS.

⁵ See footnote 4.

addresses security in the United States; any information that does not comply should not be submitted in the PRDs. The Discharger must provide justification to the Regional Water Board regarding redacted information within any submittal.

- d. Dischargers may redact trade secrets from information that is submitted via SMARTS. Dischargers who certify and submit redacted information via SMARTS must include a general description of the redacted information and the basis for the redaction in the version that is submitted via SMARTS. Dischargers must submit complete and un-redacted versions of the information that are clearly labeled "CONFIDENTIAL" to the Regional Water Board within 30 days of the submittal of the redacted information. All information labeled "CONFIDENTIAL" will be maintained by the Water Boards in a separate, confidential file.
4. Schedule for Submitting PRDs - Existing Dischargers Under the Previous Permit.
- a. Existing Dischargers⁶ with coverage under the previous permit shall continue coverage under the previous permit until July 1, 2015. All waste discharge requirements and conditions of the previous permit are in effect until July 1, 2015.
 - b. Existing Dischargers with coverage under the previous permit shall register for NOI coverage by July 1, 2015 or for NEC coverage by October 1, 2015. Existing Dischargers previously listed in Category 10 (Light Industry) of the previous permit, and continue to have no exposure to industrial activities and materials, have until October 1, 2015 to register for NEC coverage.
 - c. Existing Dischargers with coverage under the previous permit, that do not register for NOI coverage by July 1, 2015, may have their permit coverage administratively terminated as soon as July 1, 2015.
 - d. Existing Dischargers with coverage under the previous permit that are eligible for NEC coverage but do not register for NEC coverage by October 1, 2015 may have their permit coverage administratively terminated as soon as October 1, 2015.
 - e. Existing Dischargers shall continue to comply with the SWPPP requirements in State Water Board Order 97-03-DWQ up to, but no later than, June 30, 2015.

⁶ Existing Dischargers are Dischargers with an active Notice of Intent (permit coverage) under the previous permit (97-03-DWQ) prior to the effective date of this General Permit.

- f. Existing Dischargers shall implement an updated SWPPP in accordance with Section X by July 1, 2015.
 - g. Existing Dischargers that submit a Notice of Termination (NOT) under the previous permit prior to July 1, 2015 and that receive NOT approval from the Regional Water Board are not subject to this General Permit unless they subsequently submitted new PRDs.
5. Schedule for Submitting PRDs - New Dischargers Obtaining Coverage On or After July 1, 2015
- New Dischargers registering for NOI coverage on or after July 1, 2015 shall certify and submit PRDs via SMARTS at least seven (7) days prior to commencement of industrial activities or on July 1, 2015, whichever comes later.
- a. New Dischargers registering for NEC coverage shall electronically certify and submit PRDs via SMARTS by October 1, 2015, or at least seven (7) days prior to commencement of industrial activities, whichever is later.

C. Termination and Changes to General Permit Coverage

1. Dischargers with NOI or NEC coverage shall request termination of coverage under this General Permit when either (a) operation of the facility has been transferred to another entity, (b) the facility has ceased operations, completed closure activities, and removed all industrial related pollutants, or (c) the facility's operations have changed and are no longer subject to the General Permit. Dischargers shall certify and submit a Notice of Termination via SMARTS. Until a valid NOT is received, the Discharger remains responsible for compliance with this General Permit and payment of accrued annual fees.
2. Whenever there is a change to the facility location, the Discharger shall certify and submit new PRDs via SMARTS. When ownership changes, the prior Discharger (seller) must inform the new Discharger (buyer) of the General Permit applications and regulatory coverage requirements. The new Discharger must certify and submit new PRDs via SMARTS to obtain coverage under this General Permit.
3. Dischargers with NOI coverage where the facility qualifies for NEC coverage in accordance with Section XVII of this General Permit, may register for NEC coverage via SMARTS. Such Dischargers are not required to submit an NOT to cancel NOI coverage.
4. Dischargers with NEC coverage, where changes in the facility and/or facility operations occur, which result in NOI coverage instead of NEC coverage, shall register for NOI coverage via SMARTS. Such Dischargers are not required to submit an NOT to cancel NEC coverage.

5. Dischargers shall provide additional information supporting an NOT, or revise their PRDs via SMARTS, upon request by the Regional Water Board.
6. Dischargers that are denied approval of a submitted NOT or registration for NEC coverage by the Regional Water Board, shall continue compliance with this General Permit under their existing NOI coverage.
7. New Dischargers (Dischargers with no previous NOI or NEC coverage) shall register for NOI coverage if the Regional Water Board denies NEC coverage.

D. Preparation Requirements

1. The following documents shall be certified and submitted by the Discharger via SMARTS:
 - a. Annual Reports (Section XVI) and SWPPPs (Section X);
 - b. NOTs;
 - c. Sampling Frequency Reduction Certification (Section XI.C.7);
 - d. Level 1 ERA Reports (Section XII.C) prepared by a QISP;
 - e. Level 2 ERA Technical Reports and Level 2 ERA Action Plans (Sections XII.D.1-2) prepared by a QISP; and,
 - f. SWPPPs for inactive mining operations as described in Section XIII, signed (wet signature and license number) by a California licensed professional engineer.
2. The following documents shall be signed (wet signature and license number) by a California licensed professional engineer:
 - a. Calculations for Dischargers subject to Subchapter N in accordance with Section XI.D;
 - b. Notice of Non-Applicability (NONA) Technical Reports described in Section XX.C for facilities that are engineered and constructed to have contained the maximum historic precipitation event (or series of events) using the precipitation data collected from the National Oceanic and Atmospheric Agency's website;
 - c. NONA Technical Reports described in Section XX.C for facilities located in basins or other physical locations that are not tributaries or hydrologically connected to waters of the United States; and,
 - d. SWPPPs for inactive mines described in Section XIII.

III. DISCHARGE PROHIBITIONS

- A. All discharges of storm water to waters of the United States are prohibited except as specifically authorized by this General Permit or another NPDES permit.
- B. Except for non-storm water discharges (NSWDs) authorized in Section IV, discharges of liquids or materials other than storm water, either directly or indirectly to waters of the United States, are prohibited unless authorized by another NPDES permit. Unauthorized NSWDs must be either eliminated or authorized by a separate NPDES permit.
- C. Industrial storm water discharges and authorized NSWDs that contain pollutants that cause or threaten to cause pollution, contamination, or nuisance as defined in section 13050 of the Water Code, are prohibited.
- D. Discharges that violate any discharge prohibitions contained in applicable Regional Water Board Water Quality Control Plans (Basin Plans), or statewide water quality control plans and policies are prohibited.
- E. Discharges to ASBS are prohibited in accordance with the California Ocean Plan, unless granted an exception by the State Water Board and in compliance with the Special Protections contained in Resolution 2012-0012.
- F. Industrial storm water discharges and NSWDs authorized by this General Permit that contain hazardous substances equal to or in excess of a reportable quantity listed in 40 Code of Federal Regulations sections 110.6, 117.21, or 302.6 are prohibited.

IV. AUTHORIZED NON-STORM WATER DISCHARGES (NSWDs)

- A. The following NSWDs are authorized provided they meet the conditions of Section IV.B:
 - 1. Fire-hydrant and fire prevention or response system flushing;
 - 2. Potable water sources including potable water related to the operation, maintenance, or testing of potable water systems;
 - 3. Drinking fountain water and atmospheric condensate including refrigeration, air conditioning, and compressor condensate;
 - 4. Irrigation drainage and landscape watering provided all pesticides, herbicides and fertilizers have been applied in accordance with the manufacturer's label;
 - 5. Uncontaminated natural springs, groundwater, foundation drainage, footing drainage;

6. Seawater infiltration where the seawater is discharged back into the source:
and,
 7. **Incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of your facility, but not intentional discharges from the cooling tower (e.g., "piped" cooling tower blowdown or drains).**
- B.** The NSWDs identified in Section IV.A are authorized by this General Permit if the following conditions are met:
1. The authorized NSWDs are not in violation of any Regional Water Board Water Quality Control Plans (Basin Plans) or other requirements, or statewide water quality control plans or policies requirement;
 2. The authorized NSWDs are not in violation of any municipal agency ordinance or requirements;
 3. BMPs are included in the SWPPP and implemented to:
 - a. Reduce or prevent the contact of authorized NSWDs with materials or equipment that are potential sources of pollutants;
 - b. Reduce, to the extent practicable, the flow or volume of authorized NSWDs;
 - c. Ensure that authorized NSWDs do not contain quantities of pollutants that cause or contribute to an exceedance of a water quality standards;
and,
 - d. Reduce or prevent discharges of pollutants in authorized NSWDs in a manner that reflects best industry practice considering technological availability and economic practicability and achievability.
 4. The Discharger conducts monthly visual observations (Section XI.A.1) of NSWDs and sources to ensure adequate BMP implementation and effectiveness; and,
 5. The Discharger reports and describes all authorized NSWDs in the Annual Report.
- C.** Firefighting related discharges are not subject to this General Permit and are not subject to the conditions of Section IV.B. These discharges, however, may be subject to Regional Water Board enforcement actions under other sections of the Water Code. Firefighting related discharges that are contained and are later discharged may be subject to municipal agency ordinances and/or Regional Water Board requirements.

V. EFFLUENT LIMITATIONS

- A. Dischargers shall implement BMPs that comply with the BAT/BCT requirements of this General Permit to reduce or prevent discharges of pollutants in their storm water discharge in a manner that reflects best industry practice considering technological availability and economic practicability and achievability.
- B. Industrial storm water discharges from facilities subject to storm water ELGs in Subchapter N shall not exceed those storm water ELGs. The ELGs for industrial storm water discharges subject to Subchapter N are in Attachment F of this General Permit.
- C. Dischargers located within a watershed for which a Total Maximum Daily Load (TMDL) has been approved by U.S. EPA, shall comply with any applicable TMDL-specific permit requirements that have been incorporated into this General Permit in accordance with Section VII.A. Attachment E contains a reference list of potential TMDLs that may apply to Dischargers subject to this General Permit.

VI. RECEIVING WATER LIMITATIONS

- A. Dischargers shall ensure that industrial storm water discharges and authorized NSWDS do not cause or contribute to an exceedance of any applicable water quality standards in any affected receiving water.
- B. Dischargers shall ensure that industrial storm water discharges and authorized NSWDS do not adversely affect human health or the environment.
- C. Dischargers shall ensure that industrial storm water discharges and authorized NSWDS do not contain pollutants in quantities that threaten to cause pollution or a public nuisance.

VII. TOTAL MAXIMUM DAILY LOADS (TMDLs)

A. Implementation

1. The State Water Board shall reopen and amend this General Permit, including Attachment E, the Fact Sheet and other applicable Permit provisions as necessary, in order to incorporate TMDL-specific permit requirements, as described in Findings 38 through 42. Once this General Permit is amended, Dischargers shall comply with the incorporated TMDL-specific permit requirements in accordance with any specified compliance schedule(s). TMDL-specific compliance dates that exceed the term of this General Permit may be included for reference, and are enforceable in the event that this General Permit is administratively extended or reissued.
2. The State Water Board may, at its discretion, reopen this General Permit to add TMDL-specific permit requirements to Attachment E, or to incorporate new TMDLs adopted during the term of this General Permit that include requirements applicable to Dischargers covered by this General Permit.

- B.** New Dischargers applying for NOI coverage under this General Permit that will be discharging to a water body with a 303(d) listed impairment are ineligible for coverage unless the Discharger submits data and/or information, prepared by a QISP, demonstrating that:
1. The Discharger has eliminated all exposure to storm water of the pollutant(s) for which the water body is impaired, has documented the procedures taken to prevent exposure onsite, and has retained such documentation with the SWPPP at the facility;
 2. The pollutant for which the water body is impaired is not present at the Discharger's facility, and the Discharger has retained documentation of this finding with the SWPPP at the facility; or,
 3. The discharge of any listed pollutant will not cause or contribute to an exceedance of a water quality standard. This is demonstrated if: (1) the discharge complies with water quality standard at the point of discharge, or (2) if there are sufficient remaining waste load allocations in an approved TMDL and the discharge is controlled at least as stringently as similar discharges subject to that TMDL.

VIII. DISCHARGES SUBJECT TO THE CALIFORNIA OCEAN PLAN

A. Discharges to Ocean Waters

1. Dischargers with outfalls discharging to ocean waters that are subject to the model monitoring provisions of the California Ocean Plan shall develop and implement a monitoring plan in compliance with those provisions and any additional monitoring requirements established pursuant to Water Code section 13383. Dischargers who have not developed and implemented a monitoring program in compliance with the California Ocean Plan's model monitoring provisions by July 1, 2015, or seven (7) days prior to commencing of operations, whichever is later, are ineligible to obtain coverage under this General Permit.
2. Dischargers are ineligible for the methods and exceptions provided in Section XI.C of this General permit for any of the outfalls discharging to ocean waters subject to the model monitoring provisions of the California Ocean Plan.

B. Discharge Granted an Exceptions for Areas of Special Biological Significance (ASBS)

Dischargers who were granted an exception to the California Ocean Plan prohibition against direct discharges of waste to an ASBS pursuant to Resolution 2012-0012⁷ amended by Resolution 2012-0031⁸ shall comply with the conditions and requirements set forth in Attachment G of this General Permit. Any Discharger that applies for and is granted an exception to the California Ocean Plan prohibition after July 1, 2013 shall comply with the conditions and requirements set forth in the granted exception.

IX. TRAINING QUALIFICATIONS

A. General

1. A Qualified Industrial Storm Water Practitioner (QISP) is a person (either the Discharger or a person designated by the Discharger) who has completed a State Water Board-sponsored or approved QISP training course⁹, and has registered as a QISP via SMARTS. Upon completed registration the State Water Board will issue a QISP identification number.
2. The Executive Director of the State Water Board or an Executive Officer of a Regional Water Board may rescind any QISP's registration if it is found that the QISP has repeatedly demonstrated an inadequate level of performance in completing the QISP requirements in this General Permit. An individual whose QISP registration has been rescinded may request that the State Water Board review the rescission. Any request for review must be received by the State Water Board no later than 30 days of the date that the individual received written notice of the rescission.
3. Dischargers with Level 1 status shall:
 - a. Designate a person to be the facility's QISP and ensure that this person has attended and satisfactorily completed the State Water Board-sponsored or approved QISP training course.
 - b. Ensure that the facility's designated QISP provides sufficient training to the appropriate team members assigned to perform activities required by this General Permit.

⁷ State Water Resources Control Board. Resolution 2012-0012. <http://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2012/rs2012_0012.pdf>. [as of February 4, 2014].

⁸ State Water Resources Control Board. Resolution 2012-0031. <http://www.swrcb.ca.gov/board_decisions/adopted_orders/resolutions/2012/rs2012_0031.pdf>. [as of February 4, 2014].

⁹ A specialized self-guided State Water Board-sponsored registration and training program will be available as an option for CPBELSG licensed professional civil, mechanical, industrial, and chemical engineers and professional geologists by the effective date of this General Permit.

X. Storm Water Pollution Prevention Plan (SWPPP)**A. SWPPP Elements**

Dischargers shall develop and implement a site-specific SWPPP for each industrial facility covered by this General Permit that shall contain the following elements, as described further in this Section¹⁰:

1. Facility Name and Contact Information;
2. Site Map;
3. List of Industrial Materials;
4. Description of Potential Pollution Sources;
5. Assessment of Potential Pollutant Sources;
6. Minimum BMPs;
7. Advanced BMPs, if applicable;
8. Monitoring Implementation Plan;
9. Annual Comprehensive Facility Compliance Evaluation (Annual Evaluation); and,
10. Date that SWPPP was Initially Prepared and the Date of Each SWPPP Amendment, if Applicable.

B. SWPPP Implementation and Revisions

All Dischargers are required to implement their SWPPP by July 1, 2015 or upon commencement of industrial activity. The Discharger shall:

1. Revise their on-site SWPPP whenever necessary;
2. Certify and submit via SMARTS their SWPPP within 30 days whenever the SWPPP contains significant revision(s); and,
3. With the exception of significant revisions, the Discharger is not required to certify and submit via SMARTS their SWPPP revisions more than once every three (3) months in the reporting year.

¹⁰ Appendix 1 (SWPPP Checklist) of this General Permit is provided to assist the Discharger in including information required in the SWPPP. This checklist is not required to be used.

C. SWPPP Performance Standards

1. The Discharger shall ensure a SWPPP is prepared to:
 - a. Identify and evaluate all sources of pollutants that may affect the quality of industrial storm water discharges and authorized NSWDS;
 - b. Identify and describe the minimum BMPs (Section X.H.1) and any advanced BMPs (Section X.H.2) implemented to reduce or prevent pollutants in industrial storm water discharges and authorized NSWDS. BMPs shall be selected to achieve compliance with this General Permit; and,
 - c. Identify and describe conditions or circumstances which may require future revisions to be made to the SWPPP.
2. The Discharger shall prepare a SWPPP in accordance with all applicable SWPPP requirements of this Section. A copy of the SWPPP shall be maintained at the facility.

D. Planning and Organization

1. Pollution Prevention Team

Each facility must have a Pollution Prevention Team established and responsible for assisting with the implementation of the requirements in this General Permit. The Discharger shall include in the SWPPP detailed information about its Pollution Prevention Team including:

- a. The positions within the facility organization (collectively, team members) who assist in implementing the SWPPP and conducting all monitoring requirements in this General Permit;
- b. The responsibilities, duties, and activities of each of the team members; and,
- c. The procedures to identify alternate team members to implement the SWPPP and conduct required monitoring when the regularly assigned team members are temporarily unavailable (due to vacation, illness, out of town business, or other absences).

2. Other Requirements and Existing Facility Plans

- a. The Discharger shall ensure its SWPPP is developed, implemented, and revised as necessary to be consistent with any applicable municipal, state, and federal requirements that pertain to the requirements in this General Permit.
- b. The Discharger may include in their SWPPP the specific elements of existing plans, procedures, or regulatory compliance documents that

contain storm water-related BMPs or otherwise relate to the requirements of this General Permit.

- c. The Discharger shall properly reference the original sources for any elements of existing plans, procedures, or regulatory compliance documents included as part of their SWPPP and shall maintain a copy of the documents at the facility as part of the SWPPP.
- d. The Discharger shall document in their SWPPP the facility's scheduled operating hours as defined in Attachment C. Scheduled facility operating hours that would be considered irregular (temporary, intermittent, seasonal, weather dependent, etc.) shall also be documented in the SWPPP.

E. Site Map

1. The Discharger shall prepare a site map that includes notes, legends, a north arrow, and other data as appropriate to ensure the map is clear, legible and understandable.
2. The Discharger may provide the required information on multiple site maps.
3. The Discharger shall include the following information on the site map:
 - a. The facility boundary, storm water drainage areas within the facility boundary, and portions of any drainage area impacted by discharges from surrounding areas. Include the flow direction of each drainage area, on-facility surface water bodies, areas of soil erosion, and location(s) of nearby water bodies (such as rivers, lakes, wetlands, etc.) or municipal storm drain inlets that may receive the facility's industrial storm water discharges and authorized NSWDS;
 - b. Locations of storm water collection and conveyance systems, associated discharge locations, and direction of flow. Include any sample locations if different than the identified discharge locations;
 - c. Locations and descriptions of structural control measures¹¹ that affect industrial storm water discharges, authorized NSWDS, and/or run-on;
 - d. Identification of all impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures;

¹¹ Examples of structural control measures are catch basins, berms, detention ponds, secondary containment, oil/water separators, diversion barriers, etc.

- e. Locations where materials are directly exposed to precipitation and the locations where identified significant spills or leaks (Section X.G.1.d) have occurred; and
- f. Areas of industrial activity subject to this General Permit. Identify all industrial storage areas and storage tanks, shipping and receiving areas, fueling areas, vehicle and equipment storage/maintenance areas, material handling and processing areas, waste treatment and disposal areas, dust or particulate generating areas, cleaning and material reuse areas, and other areas of industrial activity that may have potential pollutant sources.

F. List of Industrial Materials

The Discharger shall ensure the SWPPP includes a list of industrial materials handled at the facility, and the locations where each material is stored, received, shipped, and handled, as well as the typical quantities and handling frequency.

G. Potential Pollutant Sources

1. Description of Potential Pollutant Sources

a. Industrial Processes

The Discharger shall ensure the SWPPP describes each industrial process including: manufacturing, cleaning, maintenance, recycling, disposal, and any other activities related to the process. The type, characteristics, and approximate quantity of industrial materials used in or resulting from the process shall be included. Areas protected by containment structures and the corresponding containment capacity shall be identified and described.

b. Material Handling and Storage Areas

The Discharger shall ensure the SWPPP describes each material handling and storage area, including: the type, characteristics, and quantity of industrial materials handled or stored; the shipping, receiving, and loading procedures; the spill or leak prevention and response procedures; and the areas protected by containment structures and the corresponding containment capacity.

c. Dust and Particulate Generating Activities

The Discharger shall ensure the SWPPP describes all industrial activities that generate a significant amount of dust or particulate that may be deposited within the facility boundaries. The SWPPP shall describe such industrial activities, including the discharge locations, the source type, and the characteristics of the dust or particulate pollutant.

d. Significant Spills and Leaks

The Discharger shall:

- i. Evaluate the facility for areas where spills and leaks can likely occur;
- ii. Ensure the SWPPP includes:
 - a) A list of any industrial materials that have spilled or leaked in significant quantities and have discharged from the facility's storm water conveyance system within the previous five-year period;
 - b) A list of any toxic chemicals identified in 40 Code of Federal Regulations section 302 that have been discharged from the facilities' storm water conveyance system as reported on U.S. EPA Form R, as well as oil and hazardous substances in excess of reportable quantities (40 C.F.R. §§ 110, 117, and 302) that have discharged from the facility's storm water conveyance system within the previous five-year period;
 - c) A list of any industrial materials that have spilled or leaked in significant quantities and had the potential to be discharged from the facility's storm water conveyance system within the previous five-year period; and,
- iii. Ensure that for each discharge or potential discharge listed above the SWPPP includes the location, characteristics, and approximate quantity of the materials spilled or leaked; approximate quantity of the materials discharged from the facility's storm water conveyance system; the cleanup or remedial actions that have occurred or are planned; the approximate remaining quantity of materials that have the potential to be discharged; and the preventive measures taken to ensure spills or leaks of the material do not reoccur.

e. NSWDs

The Discharger shall:

- i. Ensure the SWPPP includes an evaluation of the facility that identifies all NSWDs, sources, and drainage areas;
- ii. Ensure the SWPPP includes an evaluation of all drains (inlets and outlets) that identifies connections to the storm water conveyance system;
- iii. Ensure the SWPPP includes a description of how all unauthorized NSWDs have been eliminated; and,

- iv. Ensure all NSWDs are described in the SWPPP. This description shall include the source, quantity, frequency, and characteristics of the NSWDs, associated drainage area, and whether it is an authorized or unauthorized NSW in accordance with Section IV.
- f. Erodible Surfaces

The Discharger shall ensure the SWPPP includes a description of the facility locations where soil erosion may be caused by industrial activity, contact with storm water, authorized and unauthorized NSWs, or run-on from areas surrounding the facility.

2. Assessment of Potential Pollutant Sources

- a. The Discharger shall ensure that the SWPPP includes a narrative assessment of all areas of industrial activity with potential industrial pollutant sources. At a minimum, the assessment shall include:
 - i. The areas of the facility with likely sources of pollutants in industrial storm water discharges and authorized NSWs;
 - ii. The pollutants likely to be present in industrial storm water discharges and authorized NSWs;
 - iii. The approximate quantity, physical characteristics (e.g., liquid, powder, solid, etc.), and locations of each industrial material handled, produced, stored, recycled, or disposed;
 - iv. The degree to which the pollutants associated with those materials may be exposed to, and mobilized by contact with, storm water;
 - v. The direct and indirect pathways by which pollutants may be exposed to storm water or authorized NSWs;
 - vi. All sampling, visual observation, and inspection records;
 - vii. The effectiveness of existing BMPs to reduce or prevent pollutants in industrial storm water discharges and authorized NSWs;
 - viii. The estimated effectiveness of implementing, to the extent feasible, minimum BMPs to reduce or prevent pollutants in industrial storm water discharges and authorized NSWs; and,
 - ix. The identification of the industrial pollutants related to the receiving waters with 303(d) listed impairments identified in Appendix 3 or approved TMDLs that may be causing or contributing to an exceedance of a water quality standard in the receiving waters.
- b. Based upon the assessment above, Dischargers shall identify in the SWPPP any areas of the facility where the minimum BMPs described in

subsection H.1 below will not adequately reduce or prevent pollutants in storm water discharges in compliance with Section V.A. Dischargers shall identify any advanced BMPs, as described in subsection H.2 below, for those areas.

- c. Based upon the assessment above, Dischargers shall identify any drainage areas with no exposure to industrial activities and materials in accordance with the definitions in Section XVII.
- d. Based upon the assessment above, Dischargers shall identify any additional parameters, beyond the required parameters in Section XI.B.6 that indicate the presence of pollutants in industrial storm water discharges.

H. Best Management Practices (BMPs)

1. Minimum BMPs

The Discharger shall, to the extent feasible, implement and maintain all of the following minimum BMPs to reduce or prevent pollutants in industrial storm water discharges.¹²

a. Good Housekeeping

The Discharger shall:

- i. Observe all outdoor areas associated with industrial activity; including storm water discharge locations, drainage areas, conveyance systems, waste handling/disposal areas, and perimeter areas impacted by off-facility materials or storm water run-on to determine housekeeping needs. Any identified debris, waste, spills, tracked materials, or leaked materials shall be cleaned and disposed of properly;
- ii. Minimize or prevent material tracking;
- iii. Minimize dust generated from industrial materials or activities;
- iv. Ensure that all facility areas impacted by rinse/wash waters are cleaned as soon as possible;
- v. Cover all stored industrial materials that can be readily mobilized by contact with storm water;

¹² For the purposes of this General Permit, the requirement to implement BMPs “to the extent feasible” requires Dischargers to select, design, install and implement BMPs that reduce or prevent discharges of pollutants in their storm water discharge in a manner that reflects best industry practice considering technological availability and economic practicability and achievability.

- vi. Contain all stored non-solid industrial materials or wastes (e.g., particulates, powders, shredded paper, etc.) that can be transported or dispersed by the wind or contact with storm water;
- vii. Prevent disposal of any rinse/wash waters or industrial materials into the storm water conveyance system;
- viii. Minimize storm water discharges from non-industrial areas (e.g., storm water flows from employee parking area) that contact industrial areas of the facility; and,
- ix. Minimize authorized NSWDs from non-industrial areas (e.g., potable water, fire hydrant testing, etc.) that contact industrial areas of the facility.

b. Preventive Maintenance

The Discharger shall:

- i. Identify all equipment and systems used outdoors that may spill or leak pollutants;
- ii. Observe the identified equipment and systems to detect leaks, or identify conditions that may result in the development of leaks;
- iii. Establish an appropriate schedule for maintenance of identified equipment and systems; and,
- iv. Establish procedures for prompt maintenance and repair of equipment, and maintenance of systems when conditions exist that may result in the development of spills or leaks.

c. Spill and Leak Prevention and Response

The Discharger shall:

- i. Establish procedures and/or controls to minimize spills and leaks;
- ii. Develop and implement spill and leak response procedures to prevent industrial materials from discharging through the storm water conveyance system. Spilled or leaked industrial materials shall be cleaned promptly and disposed of properly;
- iii. Identify and describe all necessary and appropriate spill and leak response equipment, location(s) of spill and leak response equipment, and spill or leak response equipment maintenance procedures; and,
- iv. Identify and train appropriate spill and leak response personnel.

d. Material Handling and Waste Management

The Discharger shall:

- i. Prevent or minimize handling of industrial materials or wastes that can be readily mobilized by contact with storm water during a storm event;
- ii. Contain all stored non-solid industrial materials or wastes (e.g., particulates, powders, shredded paper, etc.) that can be transported or dispersed by the wind or contact with storm water;
- iii. Cover industrial waste disposal containers and industrial material storage containers that contain industrial materials when not in use;
- iv. Divert run-on and storm water generated from within the facility away from all stockpiled materials;
- v. Clean all spills of industrial materials or wastes that occur during handling in accordance with the spill response procedures (Section X.H.1.c); and,
- vi. Observe and clean as appropriate, any outdoor material or waste handling equipment or containers that can be contaminated by contact with industrial materials or wastes.

e. Erosion and Sediment Controls

For each erodible surface facility location identified in the SWPPP (Section X.G.1.f), the Discharger shall:

- i. Implement effective wind erosion controls;
- ii. Provide effective stabilization for inactive areas, finished slopes, and other erodible areas prior to a forecasted storm event;
- iii. Maintain effective perimeter controls and stabilize all site entrances and exits to sufficiently control discharges of erodible materials from discharging or being tracked off the site;
- iv. Divert run-on and storm water generated from within the facility away from all erodible materials; and,
- v. If sediment basins are implemented, ensure compliance with the design storm standards in Section X.H.6.

f. **Employee Training Program**

The Discharger shall:

- i. Ensure that all team members implementing the various compliance activities of this General Permit are properly trained to implement the requirements of this General Permit, including but not limited to: BMP implementation, BMP effectiveness evaluations, visual observations,

and monitoring activities. If a Discharger enters Level 1 status, appropriate team members shall be trained by a QISP;

- ii. Prepare or acquire appropriate training manuals or training materials;
 - iii. Identify which personnel need to be trained, their responsibilities, and the type of training they shall receive;
 - iv. Provide a training schedule; and,
 - v. Maintain documentation of all completed training classes and the personnel that received training in the SWPPP.
- g. Quality Assurance and Record Keeping

The Discharger shall:

- i. Develop and implement management procedures to ensure that appropriate staff implements all elements of the SWPPP, including the Monitoring Implementation Plan;
- ii. Develop a method of tracking and recording the implementation of BMPs identified in the SWPPP; and
- iii. Maintain the BMP implementation records, training records, and records related to any spills and clean-up related response activities for a minimum of five (5) years (Section XXI.J.4).

2. Advanced BMPs

- a. In addition to the minimum BMPs described in Section X.H.1, the Discharger shall, to the extent feasible, implement and maintain any advanced BMPs identified in Section X.G.2.b, necessary to reduce or prevent discharges of pollutants in its storm water discharge in a manner that reflects best industry practice considering technological availability and economic practicability and achievability.
- b. Advanced BMPs may include one or more of the following BMPs:
 - i. Exposure Minimization BMPs

These include storm resistant shelters (either permanent or temporary) that prevent the contact of storm water with the identified industrial materials or area(s) of industrial activity.
 - ii. Storm Water Containment and Discharge Reduction BMPs

These include BMPs that divert, infiltrate, reuse, contain, retain, or reduce the volume of storm water runoff. Dischargers are

encouraged to utilize BMPs that infiltrate or reuse storm water where feasible.

iii. **Treatment Control BMPs**

This is the implementation of one or more mechanical, chemical, biologic, or any other treatment technology that will meet the treatment design standard.

iv. Other Advanced BMPs

Any additional BMPs not described in subsections b.i through iii above that are necessary to meet the effluent limitations of this General Permit.

3. Temporary Suspension of Industrial Activities

For facilities that plan to temporarily suspend industrial activities for ten (10) or more consecutive calendar days during a reporting year, the Discharger may also suspend monitoring if it is infeasible to conduct monitoring while industrial activities are suspended (e.g., the facility is not staffed, or the facility is remote or inaccessible) and the facility has been stabilized. The Discharger shall include in the SWPPP the BMPs necessary to achieve compliance with this General Permit during the temporary suspension of the industrial activity. Once all necessary BMPs have been implemented to stabilize the facility, the Discharger is not required to:

- a. Perform monthly visual observations (Section XI.A.1.a.); or,
- b. Perform sampling and analysis (Section XI.B.) if it is infeasible to do so (e.g. facility is remotely located).

The Discharger shall upload via SMARTS (7) seven calendar days prior to the planned temporary suspension of industrial activities:

- a. SWPPP revisions specifically addressing the facility stabilization BMPs;
- b. The justification for why monitoring is infeasible at the facility during the period of temporary suspension of industrial activities;
- c. The date the facility is fully stabilized for temporary suspension of industrial activities; and,
- d. The projected date that industrial activities will resume at the facility.

Upon resumption of industrial activities at the facility, the Discharger shall, via SMARTS, confirm and/or update the date the facility's industrial activities have resumed. At this time, the Discharger is required to resume all compliance activities under this General Permit.

The Regional Water Boards may review the submitted information pertaining to the temporary suspension of industrial activities. Upon review, the Regional Water Board may request revisions or reject the Discharger's request to temporarily suspend monitoring.

4. **BMP Descriptions**

- a. The Discharger shall ensure that the SWPPP identifies each BMP being implemented at the facility, including:
 - i. The pollutant(s) that the BMP is designed to reduce or prevent in industrial storm water discharges;
 - ii. The frequency, time(s) of day, or conditions when the BMP is scheduled for implementation;
 - iii. The locations within each area of industrial activity or industrial pollutant source where the BMP shall be implemented;
 - iv. The individual and/or position responsible for implementing the BMP;
 - v. The procedures, including maintenance procedures, and/or instructions to implement the BMP effectively;
 - vi. The equipment and tools necessary to implement the BMP effectively; and,
 - vii. The BMPs that may require more frequent visual observations beyond the monthly visual observations as described in Section XI.A.1.
- b. The Discharger shall ensure that the SWPPP identifies and justifies each minimum BMP or applicable advanced BMP not being implemented at the facility because they do not reflect best industry practice considering technological availability and economic practicability and achievability.
- c. The Discharger shall identify any BMPs described in subsection a above that are implemented in lieu of any of the minimum or applicable advanced BMPs.

5. **BMP Summary Table**

The Discharger shall prepare a table summarizing each identified area of industrial activity, the associated industrial pollutant sources, the industrial pollutants, and the BMPs being implemented.

6. Design Storm Standards for Treatment Control BMPs

All new treatment control BMPs employed by the Discharger to comply with Section X.H.2 Advanced BMPs and new sediment basins installed after the effective date of this order shall be designed to comply with design storm standards in this Section, except as provided in an Industrial Activity BMP Demonstration (Section XII.D.2.a). A Factor of Safety shall be incorporated into the design of all treatment control BMPs to ensure that storm water is sufficiently treated throughout the life of the treatment control BMPs. The design storm standards for treatment control BMPs are as follows:

- a. Volume-based BMPs: The Discharger, at a minimum, shall calculate¹³ the volume to be treated using one of the following methods:
 - i. The volume of runoff produced from an 85th percentile 24-hour storm event, as determined from local, historical rainfall records;
 - ii. The volume of runoff produced by the 85th percentile 24-hour storm event, determined as the maximized capture runoff volume for the facility, from the formula recommended in the Water Environment Federation's Manual of Practice,¹⁴ or,
 - iii. The volume of annual runoff required to achieve 80% or more treatment, determined in accordance with the methodology set forth in the latest edition of California Stormwater Best Management Practices Handbook¹⁵, using local, historical rainfall records.
- b. Flow-based BMPs: The Discharger shall calculate the flow needed to be treated using one of the following methods:
 - i. The maximum flow rate of runoff produced from a rainfall intensity of at least 0.2 inches per hour for each hour of a storm event;
 - ii. The maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity, as determined from local historical rainfall records, multiplied by a factor of two; or,
 - iii. The maximum flow rate of runoff, as determined using local historical rainfall records, that achieves approximately the same reduction in total pollutant loads as would be achieved by treatment of the 85th percentile hourly rainfall intensity multiplied by a factor of two.

¹³ All hydrologic calculations shall be certified by a California licensed professional engineer in accordance with the Professional Engineers Act (Bus. & Prof. Code § 6700, et seq).

¹⁴ Water Environment Federation (WEF). Manual of Practice No. 23/ ASCE Manual of Practice No. 87, cited in chapter 5 (1998 Edition) and Cited in Chapter 3 (2012 Edition) .

¹⁵ California Stormwater Quality Association. Stormwater Best Management Practice New Development and Redevelopment Handbook. < <http://www.casqa.org/> >. [as of July 3, 2013].

I. MONITORING IMPLEMENTATION PLAN

The Discharger shall prepare a Monitoring Implementation Plan in accordance with the requirements of this General Permit. The Monitoring Implementation Plan shall be included in the SWPPP and shall include the following items:

1. An identification of team members assigned to conduct the monitoring requirements;
2. A description of the following in accordance with Attachment H:
 - a. Discharge locations;
 - b. Visual observation procedures; and,
 - c. Visual observation response procedures related to monthly visual observations and sampling event visual observations.
3. Justifications for any of the following that are applicable to the facility:
 - a. Alternative discharge locations in accordance with Section XI.C.3;
 - b. Representative Sampling Reduction in accordance with Section XI.C.4; or,
 - c. Qualified Combined Samples in accordance with Section XI.C.5.
4. Procedures for field instrument calibration instructions, including calibration intervals specified by the manufacturer; and,
5. An example Chain of Custody form used when handling and shipping water quality samples to the lab.

XI. MONITORING

A. Visual Observations

1. Monthly Visual Observations
 - a. At least once per calendar month, the Discharger shall visually observe each drainage area for the following:
 - i. The presence or indications of prior, current, or potential unauthorized NSWDS and their sources;
 - ii. Authorized NSWDS, sources, and associated BMPs to ensure compliance with Section IV.B.3; and,

- iii. Outdoor industrial equipment and storage areas, outdoor industrial activities areas, BMPs, and all other potential source of industrial pollutants.
- b. The monthly visual observations shall be conducted during daylight hours of scheduled facility operating hours and on days without precipitation.
- c. The Discharger shall provide an explanation in the Annual Report for uncompleted monthly visual observations.

2. Sampling Event Visual Observations

Sampling event visual observations shall be conducted at the same time sampling occurs at a discharge location. At each discharge location where a sample is obtained, the Discharger shall observe the discharge of storm water associated with industrial activity.

- a. The Discharger shall ensure that visual observations of storm water discharged from containment sources (e.g. secondary containment or storage ponds) are conducted at the time that the discharge is sampled.
- b. Any Discharger employing volume-based or flow-based treatment BMPs shall sample any bypass that occurs while the visual observations and sampling of storm water discharges are conducted.
- c. The Discharger shall visually observe and record the presence or absence of floating and suspended materials, oil and grease, discolorations, turbidity, odors, trash/debris, and source(s) of any discharged pollutants.
- d. In the event that a discharge location is not visually observed during the sampling event, the Discharger shall record which discharge locations were not observed during sampling or that there was no discharge from the discharge location.
- e. The Discharger shall provide an explanation in the Annual Report for uncompleted sampling event visual observations.

3. Visual Observation Records

The Discharger shall maintain records of all visual observations. Records shall include the date, approximate time, locations observed, presence and probable source of any observed pollutants, name of person(s) that conducted the observations, and any response actions and/or additional SWPPP revisions necessary in response to the visual observations.

4. The Discharger shall revise BMPs as necessary when the visual observations indicate pollutant sources have not been adequately addressed in the SWPPP.

B. Sampling and Analysis

1. A Qualifying Storm Event (QSE) is a precipitation event that:
 - a. Produces a discharge for at least one drainage area; and,
 - b. Is preceded by 48 hours with no discharge from any drainage area.
2. The Discharger shall collect and analyze storm water samples from two (2) QSEs within the first half of each reporting year (July 1 to December 31), and two (2) QSEs within the second half of each reporting year (January 1 to June 30).
3. Compliance Group Participants are only required to collect and analyze storm water samples from one (1) QSE within the first half of each reporting year (July 1 to December 31) and one (1) QSE within the second half of the reporting year (January 1 to June 30).
4. Except as provided in Section XI.C.4 (Representative Sampling Reduction), samples shall be collected from each drainage area at all discharge locations. The samples must be:
 - a. Representative of storm water associated with industrial activities and any commingled authorized NSWDS; or,
 - b. Associated with the discharge of contained storm water.
5. Samples from each discharge location shall be collected within four (4) hours of:
 - a. The start of the discharge; or,
 - b. The start of facility operations if the QSE occurs within the previous 12-hour period (e.g., for storms with discharges that begin during the night for facilities with day-time operating hours). Sample collection is required during scheduled facility operating hours and when sampling conditions are safe in accordance with Section XI.C.6.a.ii.
6. The Discharger shall analyze all collected samples for the following parameters:
 - a. Total suspended solids (TSS) and oil and grease (O&G);
 - b. pH (see Section XI.C.2);

- c. Additional parameters identified by the Discharger on a facility-specific basis that serve as indicators of the presence of all industrial pollutants identified in the pollutant source assessment (Section X.G.2). These additional parameters may be modified (added or removed) in accordance with any updated SWPPP pollutant source assessment;
 - d. Additional applicable parameters listed in Table 1 below. These parameters are dependent on the facility Standard Industrial Classification (SIC) code(s);
 - e. Additional applicable industrial parameters related to receiving waters with 303(d) listed impairments or approved TMDLs based on the assessment in Section X.G.2.a.ix. Test methods with lower detection limits may be necessary when discharging to receiving waters with 303(d) listed impairments or TMDLs;
 - f. Additional parameters required by the Regional Water Board. The Discharger shall contact its Regional Water Board to determine appropriate analytical test methods for parameters not listed in Table 2 below. These analytical test methods will be added to SMARTS; and
 - g. For discharges subject to Subchapter N, additional parameters specifically required by Subchapter N. If the discharge is subject to ELGs, the Dischargers shall contact the Regional Water Board to determine appropriate analytical methods for parameters not listed in Table 2 below.
7. The Discharger shall select corresponding NALs, analytical test methods,, and reporting units from the list provided in Table 2 below. SMARTS will be updated over time to add additional acceptable analytical test methods. Dischargers may propose an analytical test method for any parameter or pollutant that does not have an analytical test method specified in Table 2 or in SMARTS. Dischargers may also propose analytical test methods with substantially similar or more stringent method detection limits than existing approved analytical test methods. Upon approval, the analytical test method will be added to SMARTS.
 8. The Discharger shall ensure that the collection, preservation and handling of all storm water samples are in accordance with Attachment H, Storm Water Sample Collection and Handling Instructions.
 9. Samples from different discharge locations shall not be combined or composited except as allowed in Section XI.C.5 (Qualified Combined Samples).
 10. The Discharger shall ensure that all laboratory analyses are conducted according to test procedures under 40 Code of Federal Regulations part 136, including the observation of holding times, unless other test procedures have been specified in this General Permit or by the Regional Water Board.

11. Sampling Analysis Reporting

- a. The Discharger shall submit all sampling and analytical results for all individual or Qualified Combined Samples via SMARTS within 30 days of obtaining all results for each sampling event.
- b. The Discharger shall provide the method detection limit when an analytical result from samples taken is reported by the laboratory as a "non-detect" or less than the method detection limit. A value of zero shall not be reported.
- c. The Discharger shall provide the analytical result from samples taken that is reported by the laboratory as below the minimum level (often referred to as the reporting limit) but above the method detection limit.

Reported analytical results will be averaged automatically by SMARTS. For any calculations required by this General Permit, SMARTS will assign a value of zero (0) for all results less than the minimum level as reported by the laboratory.

TABLE 1: Additional Analytical Parameters

SIC code	SIC code Description	Parameters*
102X	Copper Ores	COD; N+N
12XX	Coal Mines	Al; Fe
144X	Sand and Gravel	N+N
207X	Fats and Oils	BOD; COD; N+N
2421	Sawmills & Planning Mills	COD; Zn
2426	Hardwood Dimension	COD
2429	Special Product Sawmills	COD
243X	Millwork, Veneer, Plywood	COD
244X	Wood Containers	COD
245X	Wood Buildings & Mobile Homes	COD
2491	Wood Preserving	As; Cu
2493	Reconstituted Wood Products	COD
263X	Paperboard Mills	COD
281X	Industrial Inorganic Chemicals	Al; Fe; N+N
282X	Plastic Materials, Synthetics	Zn
284X	Soaps, Detergents, Cosmetics	N+N; Zn
287X	Fertilizers, Pesticides, etc.	Fe; N+N; Pb; Zn; P
301X	Tires, Inner Tubes	Zn
302X	Rubber and Plastic Footwear	Zn
305X	Rubber & Plastic Sealers & Hoses	Zn
306X	Misc. Fabricated Rubber Products	Zn
325X	Structural Clay Products	Al
326X	Pottery & Related Products	Al
3297	Non-Clay Refractories	Al
327X	Concrete, Gypsum, Plaster Products (Except 3274)	Fe
3295	Minerals & Earths	Fe
331X	Steel Works, Blast Furnaces, Rolling and Finishing Mills	Al; Zn
332X	Iron and Steel Foundries	Al; Cu; Fe; Zn
335X	Metal Rolling, Drawing, Extruding	Cu; Zn

336X	Nonferrous Foundries (Castings)	Cu; Zn
34XX	Fabricated Metal Products (Except 3479)	Zn; N+N; Fe; Al
3479	Coating and Engraving	Zn; N+N
4953	Hazardous Waste Facilities	NH ₃ ; Mg; COD; As; Cn; Pb; HG; Se; Ag
44XX	Water Transportation	Al; Fe; Pb; Zn
45XX	Air Transportation Facilities ¹⁶	BOD; COD; NH ₃
4911	Steam Electric Power Generating Facilities	Fe
4953	Landfills and Land Application Facilities	Fe
5015	Dismantling or Wrecking Yards	Fe; Pb; Al
5093	Scrap and Waste Materials (not including source-separated recycling)	Fe; Pb; Al; Zn; COD

*Table 1 Parameter Reference	
Ag – Silver	Mg – Magnesium
Al – Aluminum	N+N - Nitrate & Nitrite Nitrogen
As – Arsenic	NH – Ammonia
BOD – Biochemical Oxygen Demand	Ni – Nickel
Cd - Cadmium	P – Phosphorus
Cn – Cyanide	Se – Selenium
COD – Chemical Oxygen Demand	TSS – Total Suspended Solids
Cu – Copper	Zn – Zinc
Fe – Iron	Pb – Lead
Hg – Mercury	

¹⁶ Only airports (SIC 4512-4581) where a single Discharger, or a combination of permitted facilities use more than 100,000 gallons of glycol-based deicing chemicals and/or 100 tons or more of urea on an average annual basis, are required to monitor these parameters for those outfalls that collect runoff from areas where deicing activities occur.

TABLE 2: Parameter NAL Values, Test Methods, and Reporting Units

PARAMETER	TEST METHOD	REPORTING UNITS	ANNUAL NAL	INSTANTANEOUS MAXIMUM NAL
pH*	See Section XI.C.2	pH units	N/A	Less than 6.0 Greater than 9.0
Suspended Solids (TSS)*, Total	SM 2540-D	mg/L	100	400
Oil & Grease (O&G)*, Total	EPA 1664A	mg/L	15	25
Zinc, Total (H)	EPA 200.8	mg/L	0.26**	
Copper, Total (H)	EPA 200.8	mg/L	0.0332**	
Cyanide, Total	SM 4500–CN C, D, or E	mg/L	0.022	
Lead, Total (H)	EPA 200.8	mg/L	0.262**	
Chemical Oxygen Demand (COD)	SM 5220C	mg/L	120	
Aluminum, Total	EPA 200.8	mg/L	0.75	
Iron, Total	EPA 200.7	mg/L	1.0	
Nitrate + Nitrite Nitrogen	SM 4500-NO3- E	mg/L as N	0.68	
Total Phosphorus	SM 4500-P B+E	mg/L as P	2.0	
Ammonia (as N)	SM 4500-NH3 B+ C or E	mg/L	2.14	
Magnesium, total	EPA 200.7	mg/L	0.064	
Arsenic, Total (c)	EPA 200.8	mg/L	0.15	
Cadmium, Total (H)	EPA 200.8	mg/L	0.0053**	
Nickel, Total (H)	EPA 200.8	mg/l	1.02**	
Mercury, Total	EPA 245.1	mg/L	0.0014	
Selenium, Total	EPA 200.8	mg/L	0.005	
Silver, Total (H)	EPA 200.8	mg/L	0.0183**	
Biochemical Oxygen Demand (BOD)	SM 5210B	mg/L	30	

SM – Standard Methods for the Examination of Water and Wastewater, 18th edition

EPA – U.S. EPA test methods

(H) – Hardness dependent

* Minimum parameters required by this General Permit

**The NAL is the highest value used by U.S. EPA based on their hardness table in the 2008 MSGP.

C. Methods and Exceptions

1. The Discharger shall comply with the monitoring methods in this General Permit and Attachment H.
2. pH Methods
 - a. Dischargers that are not subject to Subchapter N ELGs mandating pH analysis related to acidic or alkaline sources and have never entered Level 1 status for pH, are eligible to screen for pH using wide range litmus pH paper or other equivalent pH test kits. The pH screen shall be performed as soon as practicable, but no later than 15 minutes after the sample is collected.
 - b. Dischargers subject to Subchapter N ELGs shall either analyze samples for pH using methods in accordance with 40 Code of Federal Regulations 136 for testing storm water or use a calibrated portable instrument for pH.
 - c. Dischargers that enter Level 1 status (see Section XII.C) for pH shall, in the subsequent reporting years, analyze for pH using methods in accordance with 40 Code of Federal Regulations 136 or use a calibrated portable instrument for pH.
 - d. Dischargers using a calibrated portable instrument for pH shall ensure that all field measurements are conducted in accordance with the accompanying manufacturer's instructions.
3. Alternative Discharge Locations
 - a. The Discharger is required to identify, when practicable, alternative discharge locations for any discharge locations identified in accordance with Section XI.B.4 if the facility's discharge locations are:
 - i. Affected by storm water run-on from surrounding areas that cannot be controlled; and/or,
 - ii. Difficult to observe or sample (e.g. submerged discharge outlets, dangerous discharge location accessibility).
 - b. The Discharger shall submit and certify via SMARTS any alternative discharge location or revisions to the alternative discharge locations in the Monitoring Implementation Plan.
4. Representative Sampling Reduction
 - a. The Discharger may reduce the number of locations to be sampled in each drainage area (e.g., roofs with multiple downspouts, loading/unloading areas with multiple storm drains) if the industrial

activities, BMPs, and physical characteristics (grade, surface materials, etc.) of the drainage area for each location to be sampled are substantially similar to one another. To qualify for the Representative Sampling Reduction, the Discharger shall provide a Representative Sampling Reduction justification in the Monitoring Implementation Plan section of the SWPPP.

- b. The Representative Sampling Reduction justification shall include:
 - i. Identification and description of each drainage area and corresponding discharge location(s);
 - ii. A description of the industrial activities that occur throughout the drainage area;
 - iii. A description of the BMPs implemented in the drainage area;
 - iv. A description of the physical characteristics of the drainage area;
 - v. A rationale that demonstrates that the industrial activities and physical characteristics of the drainage area(s) are substantially similar; and,
 - vi. An identification of the discharge location(s) selected for representative sampling, and rationale demonstrating that the selected location(s) to be sampled are representative of the discharge from the entire drainage area.
- c. A Discharger that satisfies the conditions of subsection 4.b.i through v above shall submit and certify via SMARTS the revisions to the Monitoring Implementation Plan that includes the Representative Sampling Reduction justification.
- d. Upon submittal of the Representative Sampling Reduction justification, the Discharger may reduce the number of locations to be sampled in accordance with the Representative Sampling Reduction justification. The Regional Water Board may reject the Representative Sampling Reduction justification and/or request additional supporting documentation. In such instances, the Discharger is ineligible for the Representative Sampling Reduction until the Regional Water Board approves the Representative Sampling Reduction justification.

5. Qualified Combined Samples

- a. The Discharger may authorize an analytical laboratory to combine samples of equal volume from as many as four (4) discharge locations if the industrial activities, BMPs, and physical characteristics (grade, surface materials, etc.) within each of the drainage areas are substantially similar to one another.

- b. The Qualified Combined Samples justification shall include:
 - i. Identification and description of each drainage area and corresponding discharge locations;
 - ii. A description of the BMPs implemented in the drainage area;
 - iii. A description of the industrial activities that occur throughout the drainage area;
 - iv. A description of the physical characteristics of the drainage area; and,
 - v. A rationale that demonstrates that the industrial activities and physical characteristics of the drainage area(s) are substantially similar.
 - c. A Discharger that satisfies the conditions of subsection 5.b.i through iv above shall submit and certify via SMARTS the revisions to the Monitoring Implementation Plan that includes the Qualified Combined Samples justification.
 - d. Upon submittal of the Qualified Combined Samples justification revisions in the Monitoring Implementation Plan, the Discharger may authorize the lab to combine samples of equal volume from as many as four (4) drainage areas. The Regional Water Board may reject the Qualified Combined Samples justification and/or request additional supporting documentation. In such instances, the Discharger is ineligible for the Qualified Combined Samples justification until the Regional Water Board approves the Qualified Combined Samples justification.
 - e. Regional Water Board approval is necessary to combine samples from more than four (4) discharge locations.
6. Sample Collection and Visual Observation Exceptions
- a. Sample collection and visual observations are not required under the following conditions:
 - i. During dangerous weather conditions such as flooding or electrical storms; or,
 - ii. Outside of scheduled facility operating hours. The Discharger is not precluded from collecting samples or conducting visual observations outside of scheduled facility operating hours.
 - b. In the event that samples are not collected, or visual observations are not conducted in accordance with Section XI.B.5 due to these exceptions, an explanation shall be included in the Annual Report.

- c. Sample collection is not required for drainage areas with no exposure to industrial activities and materials in accordance with the definitions in Section XVII.
7. Sampling Frequency Reduction Certification
 - a. Dischargers are eligible to reduce the number of QSEs sampled each reporting year in accordance with the following requirements:
 - i. Results from four (4) consecutive QSEs that were sampled (QSEs may be from different reporting years) did not exceed any NALs as defined in Section XII.A; and
 - ii. The Discharger is in full compliance with the requirements of this General Permit and has updated, certified and submitted via SMARTS all documents, data, and reports required by this General Permit during the time period in which samples were collected.
 - b. The Regional Water Board may notify a Discharger that it may not reduce the number of QSEs sampled each reporting year if the Discharger is subject to an enforcement action.
 - c. An eligible Discharger shall certify via SMARTS that it meets the conditions in subsection 7.a above.
 - d. Upon Sampling Frequency Reduction certification, the Discharger shall collect and analyze samples from one (1) QSE within the first half of each reporting year (July 1 to December 31), and one (1) QSE within the second half of each reporting year (January 1 to June 30). All other monitoring, sampling, and reporting requirements remain in effect.
 - e. Dischargers who participate in a Compliance Group and certify a Sampling Frequency Reduction are only required to collect and analyze storm water samples from one (1) QSE within each reporting year.
 - f. A Discharger may reduce sampling per the Sampling Frequency Reduction certification unless notified by the Regional Water Board that: (1) the Sampling Frequency Reduction certification has been rejected or (2) additional supporting documentation must be submitted. In such instances, a Discharger is ineligible for the Sampling Frequency Reduction until the Regional Water Board provides Sampling Frequency Reduction certification approval. Revised Sampling Frequency Reduction certifications shall be certified and submitted via SMARTS by the Discharger.
 - g. A Discharger loses its Sampling Frequency Reduction certification if an NAL exceedance occurs (Section XII.A).

D. Facilities Subject to Federal Storm Water Effluent Limitation Guidelines (ELGs)

1. In addition to the other requirements in this General Permit, Dischargers with facilities subject to storm water ELGs in Subchapter N shall:
 - a. Collect and analyze samples from QSEs for each regulated pollutant specified in the appropriate category in Subchapter N as specified in Section XI.B;
 - b. For Dischargers with facilities subject to 40 Code of Federal Regulations parts 419¹⁷ and 443¹⁸, estimate or calculate the volume of industrial storm water discharges from each drainage area subject to the ELGs and the mass of each regulated pollutant as defined in parts 419 and 443; and,
 - c. Ensure that the volume/mass estimates or calculations required in subsection b are completed by a California licensed professional engineer.
2. Dischargers subject to Subchapter N shall submit the information in Section XI.D.1.a through c in their Annual Report.
3. Dischargers with facilities subject to storm water ELGs in Subchapter N are ineligible for the Representative Sampling Reduction in Section XI.C.4.

XII. EXCEEDANCE RESPONSE ACTIONS (ERAs)

A. NALs and NAL Exceedances

The Discharger shall perform sampling, analysis and reporting in accordance with the requirements of this General Permit and shall compare the results to the two types of NAL values in Table 2 to determine whether either type of NAL has been exceeded for each applicable parameter. The two types of potential NAL exceedances are as follows:

1. Annual NAL exceedance: The Discharger shall determine the average concentration for each parameter using the results of all the sampling and analytical results for the entire facility for the reporting year (i.e., all "effluent" data). The Discharger shall compare the average concentration for each parameter to the corresponding annual NAL values in Table 2. For Dischargers using composite sampling or flow-weighted measurements in accordance with standard practices, the average concentrations shall be calculated in accordance with the U.S. EPA's NPDES Storm Water

¹⁷ Part 419 - Petroleum refining point source category

¹⁸ Part 443 - Effluent limitations guidelines for existing sources and standards of performance and pretreatment standards for new sources for the paving and roofing materials (tars and asphalt) point source category

Sampling Guidance Document.¹⁹ An annual NAL exceedance occurs when the average of all the analytical results for a parameter from samples taken within a reporting year exceeds the annual NAL value for that parameter listed in Table 2; and,

2. Instantaneous maximum NAL exceedance: The Discharger shall compare all sampling and analytical results from each distinct sample (individual or combined as authorized by XI.C.5) to the corresponding instantaneous maximum NAL values in Table 2. An instantaneous maximum NAL exceedance occurs when two (2) or more analytical results from samples taken for any single parameter within a reporting year exceed the instantaneous maximum NAL value (for TSS and O&G) or are outside of the instantaneous maximum NAL range for pH.

B. Baseline Status

At the beginning of a Discharger's NOI Coverage, all Dischargers have Baseline status for all parameters.

C. Level 1 Status

A Discharger's Baseline status for any given parameter shall change to Level 1 status if sampling results indicate an NAL exceedance for that same parameter. Level 1 status will commence on July 1 following the reporting year during which the exceedance(s) occurred.²⁰

1. Level 1 ERA Evaluation

- a. By October 1 following commencement of Level 1 status for any parameter with sampling results indicating an NAL exceedance, the Discharger shall:
 - b. Complete an evaluation, with the assistance of a QISP, of the industrial pollutant sources at the facility that are or may be related to the NAL exceedance(s); and,
 - c. Identify in the evaluation the corresponding BMPs in the SWPPP and any additional BMPs and SWPPP revisions necessary to prevent future NAL exceedances and to comply with the requirements of this General Permit. Although the evaluation may focus on the drainage areas where the NAL exceedance(s) occurred, all drainage areas shall be evaluated.

2. Level 1 ERA Report

¹⁹ U.S. EPA. NPDES Storm Water Sampling Guidance Document. <<http://www.epa.gov/npdes/pubs/owm0093.pdf>>. [as of February 4, 2014]

²⁰ For all sampling results reported before June 30th of the preceding reporting year. If sample results indicating an NAL exceedance are submitted after June 30th, the Discharger will change status once those results have been reported.

- a. Based upon the above evaluation, the Discharger shall, as soon as practicable but no later than January 1 following commencement of Level 1 status :
 - i. Revise the SWPPP as necessary and implement any additional BMPs identified in the evaluation;
 - ii. Certify and submit via SMARTS a Level 1 ERA Report prepared by a QISP that includes the following:
 - 1) A summary of the Level 1 ERA Evaluation required in subsection C.1 above; and,
 - 2) A detailed description of the SWPPP revisions and any additional BMPs for each parameter that exceeded an NAL.
 - iii. Certify and submit via SMARTS the QISP's identification number, name, and contact information (telephone number, e-mail address).
 - b. A Discharger's Level 1 status for a parameter will return to Baseline status once a Level 1 ERA report has been completed, all identified additional BMPs have been implemented, and results from four (4) consecutive QSEs that were sampled subsequent to BMP implementation indicate no additional NAL exceedances for that parameter.
3. NAL Exceedances Prior to Implementation of Level 1 Status BMPs.

Prior to the implementation of an additional BMP identified in the Level 1 ERA Evaluation or October 1, whichever comes first, sampling results for any parameter(s) being addressed by that additional BMP will not be included in the calculations of annual average or instantaneous NAL exceedances in SMARTS.

D. Level 2 Status

A Discharger's Level 1 status for any given parameter shall change to Level 2 status if sampling results indicate an NAL exceedance for that same parameter while the Discharger is in Level 1. Level 2 status will commence on July 1 following the reporting year during which the NAL exceedance(s) occurred.²¹

1. Level 2 ERA Action Plan

²¹ For all sampling results reported before June 30th of the preceding reporting year. If sample results indicating an NAL exceedance are submitted after June 30th, the Discharger will change status upon the date those results have been reported into SMARTS.

- a. Dischargers with Level 2 status shall certify and submit via SMARTS a Level 2 ERA Action Plan prepared by a QISP that addresses each new Level 2 NAL exceedance by January 1 following the reporting year during which the NAL exceedance(s) occurred. For each new Level 2 NAL exceedance, the Level 2 Action Plan will identify which of the demonstrations in subsection D.2.a through c the Discharger has selected to perform. A new Level 2 NAL exceedance is any Level 2 NAL exceedance for 1) a new parameter in any drainage area, or 2) the same parameter that is being addressed in an existing Level 2 ERA Action Plan in a different drainage area.
- b. The Discharger shall certify and submit via SMARTS the QISP's identification number, name, and contact information (telephone number, e-mail address) if this information has changed since previous certifications.
- c. The Level 2 ERA Action Plan shall at a minimum address the drainage areas with corresponding Level 2 NAL exceedances.
- d. All elements of the Level 2 ERA Action Plan shall be implemented as soon as practicable and completed no later than 1 year after submitting the Level 2 ERA Action Plan.
- e. The Level 2 ERA Action Plan shall include a schedule and a detailed description of the tasks required to complete the Discharger's selected demonstration(s) as described below in Section D.2.a through c.

2. Level 2 ERA Technical Report

On January 1 of the reporting year following the submittal of the Level 2 ERA Action Plan, a Discharger with Level 2 status shall certify and submit a Level 2 ERA Technical Report prepared by a QISP that includes one or more of the following demonstrations:

a. Industrial Activity BMPs Demonstration

This shall include the following requirements, as applicable:

- i. Shall include a description of the industrial pollutant sources and corresponding industrial pollutants that are or may be related to the NAL exceedance(s);
- ii. Shall include an evaluation of all pollutant sources associated with industrial activity that are or may be related to the NAL exceedance(s);
- iii. Where all of the Discharger's implemented BMPs, including additional BMPs identified in the Level 2 ERA Action Plan, achieve

compliance with the effluent limitations of this General Permit and are expected to eliminate future NAL exceedance(s), the Discharger shall provide a description and analysis of all implemented BMPs;

- iv. In cases where all of the Discharger's implemented BMPs, including additional BMPs identified in the Level 2 ERA Action Plan, achieve compliance with the effluent limitations of this General Permit but are not expected to eliminate future NAL exceedance(s), the Discharger shall provide, in addition to a description and analysis of all implemented BMPs:
 - 1) An evaluation of any additional BMPs that would reduce or prevent NAL exceedances;
 - 2) Estimated costs of the additional BMPs evaluated; and,
 - 3) An analysis describing the basis for the selection of BMPs implemented in lieu of the additional BMPs evaluated but not implemented.
 - v. The description and analysis of BMPs required in subsection a.iii above shall specifically address the drainage areas where the NAL exceedance(s) responsible for the Discharger's Level 2 status occurred, although any additional Level 2 ERA Action Plan BMPs may be implemented for all drainage areas; and,
 - vi. If an alternative design storm standard for treatment control BMPs (in lieu of the design storm standard for treatment control BMPs in Section X.H.6 in this General Permit) will achieve compliance with the effluent limitations of this General Permit, the Discharger shall provide an analysis describing the basis for the selection of the alternative design storm standard.
- b. Non-Industrial Pollutant Source Demonstration

This shall include:

- i. A statement that the Discharger has determined that the exceedance of the NAL is attributable solely to the presence of non-industrial pollutant sources. (The pollutant may also be present due to industrial activities, in which case the Discharger must demonstrate that the pollutant contribution from the industrial activities by itself does not result in an NAL exceedance.) The sources shall be identified as either run-on from adjacent properties, aerial deposition from man-made sources, or as generated by on-site non-industrial sources;

- ii. A statement that the Discharger has identified and evaluated all potential pollutant sources that may have commingled with storm water associated with the Discharger's industrial activity and may be contributing to the NAL exceedance;
 - iii. A description of any on-site industrial pollutant sources and corresponding industrial pollutants that are contributing to the NAL exceedance;
 - iv. An assessment of the relative contributions of the pollutant from (1) storm water run-on to the facility from adjacent properties or non-industrial portions of the Discharger's property or from aerial deposition and (2) the storm water associated with the Discharger's industrial activity;
 - v. A summary of all existing BMPs for that parameter; and,
 - vi. An evaluation of all on-site/off-site analytical monitoring data demonstrating that the NAL exceedances are caused by pollutants in storm water run-on to the facility from adjacent properties or non-industrial portions of the Discharger's property or from aerial deposition.
- c. Natural Background Pollutant Source Demonstration

This shall include:

- i. A statement that the Discharger has determined that the NAL exceedance is attributable solely to the presence of the pollutant in the natural background that has not been disturbed by industrial activities. (The pollutant may also be present due to industrial activities, in which case the Discharger must demonstrate that the pollutant contribution from the industrial activities by itself does not result in an NAL exceedance);
- ii. A summary of all data previously collected by the Discharger, or other identified data collectors, that describes the levels of natural background pollutants in the storm water discharge;
- iii. A summary of any research and published literature that relates the pollutants evaluated at the facility as part of the Natural Background Source Demonstration;
- iv. Map showing the reference site location in relation to facility along with available land cover information;
- v. Reference site and test site elevation;

- vi. Available geology and soil information for reference and test sites;
- vii. Photographs showing site vegetation;
- viii. Site reconnaissance survey data regarding presence of roads, outfalls, or other human-made structures; and,
- ix. Records from relevant state or federal agencies indicating no known mining, forestry, or other human activities upstream of the proposed reference site.

3. Level 2 ERA Technical Report Submittal

- a. The Discharger shall certify and submit via SMARTS the Level 2 ERA Technical Report described in Section D.2 above.
- b. The State Water Board and Regional Boards (Water Boards) may review the submitted Level 2 ERA Technical Reports. Upon review of a Level 2 ERA Technical Report, the Water Boards may reject the Level 2 ERA Technical Report and direct the Discharger to take further action(s) to comply with this General Permit.
- c. Dischargers with Level 2 status who have submitted the Level 2 ERA Technical Report are only required to annually update the Level 2 ERA Technical Report based upon additional NAL exceedances of the same parameter and same drainage area (if the original Level 2 ERA Technical Report contained an Industrial Activity BMP Demonstration and the implemented BMPs were expected to eliminate future NAL exceedances in accordance with Section XII.D.2.a.ii), facility operational changes, pollutant source(s) changes, and/or information that becomes available via compliance activities (monthly visual observations, sampling results, annual evaluation, etc.). The Level 2 ERA Technical Report shall be prepared by a QISP and be certified and submitted via SMARTS by the Discharger with each Annual Report. If there are no changes prompting an update of the Level 2 ERA Technical Report, as specified above, the Discharger will provide this certification in the Annual Report that there have been no changes warranting re-submittal of the Level 2 ERA Technical Report.
- d. Dischargers are not precluded from submitting a Level 2 ERA Action Plan or ERA Technical Report prior to entering Level 2 status if information is available to adequately prepare the report and perform the demonstrations described above. A Discharger who chooses to submit a Level 2 ERA Action Plan or ERA Technical Report prior to entering Level 2 status will automatically be placed in Level 2 in accordance to the Level 2 ERA schedule.

4. Eligibility for Returning to Baseline Status

- a. Dischargers with Level 2 status who submit an Industrial Activity BMPs Demonstration in accordance with subsection 2.a.i through iii above and have implemented BMPs to prevent future NAL exceedance(s) for the Level 2 parameter(s) shall return to baseline status for that parameter, if results from four (4) subsequent consecutive QSEs sampled indicate no additional NAL exceedance(s) for that parameter(s). If future NAL exceedances occur for the same parameter(s), the Discharger's Baseline status will return to Level 2 status on July 1 in the subsequent reporting year during which the NAL exceedance(s) occurred. These Dischargers shall update the Level 2 ERA Technical Report as required above in Section D.3.c.
- b. Dischargers are ineligible to return to baseline status if they submit any of the following:
 - i. A industrial activity BMP demonstration in accordance with subsection 2.a.iv above;
 - ii. An non-industrial pollutant source demonstration; or,
 - iii. A natural background pollutant source demonstration.

5. Level 2 ERA Implementation Extension

- a. Dischargers that need additional time to submit the Level 2 ERA Technical Report shall be automatically granted a single time extension for up to six (6) months upon submitting the following items into SMARTS, as applicable:
 - i. Reasons for the time extension;
 - ii. A revised Level 2 ERA Action Plan including a schedule and a detailed description of the necessary tasks still to be performed to complete the Level 2 ERA Technical Report; and
 - iii. A description of any additional temporary BMPs that will be implemented while permanent BMPs are being constructed.
- b. The Regional Water Boards will review Level 2 ERA Implementation Extensions for completeness and adequacy. Requests for extensions that total more than six (6) months are not granted unless approved in writing by the Water Boards. The Water Boards may (1) reject or revise the time allowed to complete Level 2 ERA Implementation Extensions, (2) identify additional tasks necessary to complete the Level 2 ERA Technical Report, and/or (3) require the Discharger to implement additional temporary BMPs.

XIII. INACTIVE MINING OPERATION CERTIFICATION

- A.** Inactive mining operations are defined in Part 3 of Attachment A of this General Permit. The Discharger may, in lieu of complying with the General Permit requirements described in subsection B below, certify and submit via SMARTS that their inactive mining operation meets the following conditions:
1. The Discharger has determined and justified in the SWPPP that it is impracticable to implement the monitoring requirements in this General Permit for the inactive mining operation;
 2. A SWPPP has been signed (wet signature and license number) by a California licensed professional engineer and is being implemented in accordance with the requirements of this General Permit; and,
 3. The facility is in compliance with this General Permit, except as provided in subsection B below.
- B.** The Discharger who has certified and submitted that they meet the conditions in subsection A above, are not subject to the following General Permit requirements:
1. Monitoring Implementation Plan in Section X.I;
 2. Monitoring Requirements in Section XI;
 3. Exceedance Response Actions (ERAs) in Section XII; and,
 4. Annual Report Requirements in Section XVI.
- C.** Inactive Mining Operation Certification Submittal Schedule
1. The Discharger shall certify and submit via SMARTS NOI coverage PRDs listed in Section II.B.1 and meet the conditions in subsection A above.
 2. The Discharger shall annually inspect the inactive mining site and certify via SMARTS no later than July 15th of each reporting year, that their inactive mining operation continues to meet the conditions in subsection A above.
 3. The Discharger shall have a California licensed professional engineer review and update the SWPPP if there are changes to their inactive mining operation or additional BMPs are needed to comply with this General Permit. Any significant updates to the SWPPP shall be signed (wet signature and license number) by a California license professional engineer.
 4. The Discharger shall certify and submit via SMARTS any significantly revised SWPPP within 30 days of the revision(s).

XIV. COMPLIANCE GROUPS AND COMPLIANCE GROUP LEADERS

A. Compliance Group Qualification Requirements

1. Any group of Dischargers of the same industry type or any QISP representing Dischargers of the same industry type may form a Compliance Group. A Compliance Group shall consist of Dischargers that operate facilities with similar types of industrial activities, pollutant sources, and pollutant characteristics (e.g., scrap metals recyclers would join a different group than paper recyclers, truck vehicle maintenance facilities would join a different group than airplane vehicle maintenance facilities, etc.). A Discharger participating in a Compliance Group is termed a Compliance Group Participant. Participation in a Compliance Group is not required. Compliance Groups may be formed at any time.
2. Each Compliance Group shall have a Compliance Group Leader.
3. To establish a Compliance Group, the Compliance Group Leader shall register as a Compliance Group Leader via SMARTS. The registration shall include documentation demonstrating compliance with the Compliance Group qualification requirements above and a list of the Compliance Group Participants.
4. Each Compliance Group Participant shall register as a member of an established Compliance Group via SMARTS.
5. The Executive Director of the State Water Board may review Compliance Group registrations and/or activities for compliance with the requirements of this General Permit. The Executive Director may reject the Compliance Group, the Compliance Group Leader, or individual Compliance Group Participants within the Compliance Group.

B. Compliance Group Leader Responsibilities

1. A Compliance Group Leader must complete a State Water Board sponsored or approved training program for Compliance Group Leaders.
2. The Compliance Group Leader shall assist Compliance Group Participants with all compliance activities required by this General Permit.
3. A Compliance Group Leader shall prepare a Consolidated Level 1 ERA Report for all Compliance Group Participants with Level 1 status for the same parameter. Compliance Group Participants who certify and submit these Consolidated Level 1 ERA Reports are subject to the same provisions as individual Dischargers with Level 1 status, as described in Section XII.C. A Consolidated Level 1 ERA Report is equivalent to a Level 1 ERA Report.

4. The Compliance Group Leader shall update the Consolidated Level 1 ERA Report as needed to address additional Compliance Group Participants with ERA Level 1 status.
5. A Compliance Group Leader shall prepare a Level 2 ERA Action Plan specific to each Compliance Group Participant with Level 2 status. Compliance Group Participants who certify and submit these Level 2 ERA Action Plans are subject to the same provisions as individual Dischargers with Level 2 status, as described in Section XII.D.
6. A Compliance Group Leader shall prepare a Level 2 ERA Technical Report specific to each Compliance Group Participant with Level 2 status. Compliance Group Participants who certify and submit these Level 2 ERA Technical Reports are subject to the same provisions as individual Dischargers with Level 2 status, as described in Section XII.D.
7. The Compliance Group Leader shall inspect all the facilities of the Compliance Group Participants that have entered Level 2 status prior to preparing the individual Level 2 ERA Technical Report.
8. The Compliance Group Leader shall revise the Consolidated Level 1 ERA Report, individual Level 2 ERA Action Plans, or individual Level 2 Technical Reports in accordance with any comments received from the Water Boards.
9. The Compliance Group Leader shall inspect all the facilities of the Compliance Group Participants at a minimum of once per reporting year (July 1 to June 30).

C. Compliance Group Participant Responsibilities

1. Each Compliance Group Participant is responsible for permit compliance for the Compliance Group Participant's facility and for ensuring that the Compliance Group Leader's activities related to the Compliance Group Participant's facility comply with this General Permit.
2. Compliance Group Participants with Level 1 status shall certify and submit via SMARTS the Consolidated Level 1 ERA Report. The Compliance Group Participants shall certify that they have reviewed the Consolidated Level 1 ERA Report and have implemented any required additional BMPs. Alternatively, the Compliance Group Participant may submit an individual Level 1 ERA Report in accordance with the provisions in Section XII.C.2.
3. Compliance Group Participants with Level 2 status shall certify and submit via SMARTS their individual Level 2 ERA Action Plan and Technical Report prepared by their Compliance Group Leader. Each Compliance Group Participant shall certify that they have reviewed the Level 2 ERA Action Plan and Technical Report and will implement any required additional BMPs.

4. Compliance Group Participants can at any time discontinue their participation in their associated Compliance Group via SMARTS. Upon discontinuation, the former Compliance Group Participant is immediately subject to the sampling and analysis requirements described in Section XI.B.2.

XV. ANNUAL COMPREHENSIVE FACILITY COMPLIANCE EVALUATION (ANNUAL EVALUATION)

The Discharger shall conduct one Annual Evaluation for each reporting year (July 1 to June 30). If the Discharger conducts an Annual Evaluation fewer than eight (8) months, or more than sixteen (16) months, after it conducts the previous Annual Evaluation, it shall document the justification for doing so. The Discharger shall revise the SWPPP, as appropriate, and implement the revisions within 90 days of the Annual Evaluation. At a minimum, Annual Evaluations shall consist of:

- A. A review of all sampling, visual observation, and inspection records conducted during the previous reporting year;
- B. An inspection of all areas of industrial activity and associated potential pollutant sources for evidence of, or the potential for, pollutants entering the storm water conveyance system;
- C. An inspection of all drainage areas previously identified as having no exposure to industrial activities and materials in accordance with the definitions in Section XVII;
- D. An inspection of equipment needed to implement the BMPs;
- E. An inspection of any BMPs;
- F. A review and effectiveness assessment of all BMPs for each area of industrial activity and associated potential pollutant sources to determine if the BMPs are properly designed, implemented, and are effective in reducing and preventing pollutants in industrial storm water discharges and authorized NSWDDs; and,
- G. An assessment of any other factors needed to comply with the requirements in Section XVI.B.

XVI. ANNUAL REPORT

- A. The Discharger shall certify and submit via SMARTS an Annual Report no later than July 15th following each reporting year using the standardized format and checklists in SMARTS.
- B. The Discharger shall include in the Annual Report:
 1. A Compliance Checklist that indicates whether a Discharger complies with, and has addressed all applicable requirements of this General Permit;

2. An explanation for any non-compliance of requirements within the reporting year, as indicated in the Compliance Checklist;
3. An identification, including page numbers and/or sections, of all revisions made to the SWPPP within the reporting year; and,
4. The date(s) of the Annual Evaluation.

XVII. CONDITIONAL EXCLUSION - NO EXPOSURE CERTIFICATION (NEC)

A. Discharges composed entirely of storm water that has not been exposed to industrial activity are not industrial storm water discharges. Dischargers are conditionally excluded from complying with the SWPPP and monitoring requirements of this General Permit if all of the following conditions are met:

1. There is no exposure of Industrial Materials and Activities to rain, snow, snowmelt, and/or runoff;
2. All unauthorized NSWDS have been eliminated and all authorized NSWDS meet the conditions of Section IV;
3. The Discharger has certified and submitted via SMARTS PRDs for NEC coverage pursuant to the instructions in Section II.B.2; and,
4. The Discharger has satisfied all other requirements of this Section.

B. NEC Specific Definitions

1. No Exposure - all Industrial Materials and Activities are protected by a Storm-Resistant Shelter to prevent all exposure to rain, snow, snowmelt, and/or runoff.
2. Industrial Materials and Activities - includes, but is not limited to, industrial material handling activities or equipment, machinery, raw materials, intermediate products, by-products, final products, and waste products.
3. Material Handling Activities - includes the storage, loading and unloading, transportation, or conveyance of any industrial raw material, intermediate product, final product, or waste product.
4. Sealed - banded or otherwise secured, and without operational taps or valves.
5. Storm-Resistant Shelters - includes completely roofed and walled buildings or structures. Also includes structures with only a top cover supported by permanent supports but with no side coverings, provided material within the structure is not subject to wind dispersion (sawdust, powders, etc.), or track-out, and there is no storm water discharged from within the structure that comes into contact with any materials.

C. NEC Qualifications

To qualify for an NEC, a Discharger shall:

1. Except as provided in subsection D below, provide a Storm-Resistant Shelter to protect Industrial Materials and Activities from exposure to rain, snow, snowmelt, run-on, and runoff;
2. Inspect and evaluate the facility annually to determine that storm water exposed to industrial materials or equipment has not and will not be discharged to waters of the United States. Evaluation records shall be maintained for five (5) years in accordance with Section XXI.J.4;
3. Register for NEC coverage by certifying that there are no discharges of storm water contaminated by exposure to Industrial Materials and Activities from areas of the facility subject to this General Permit, and certify that all unauthorized NSWDS have been eliminated and all authorized NSWDS meet the conditions of Section IV (Authorized NSWDS). NEC coverage and annual renewal requires payment of an annual fee in accordance with California Code of Regulations, title 23, section 2200 et seq.; and,
4. Submit PRDs for NEC coverage shall be prepared and submitted in accordance with the:
 - a. Certification requirements in Section XXI.K; and,
 - b. Submittal schedule in accordance with Section II.B.2.

D. NEC Industrial Materials and Activities - Storm-Resistant Shelter Not Required

To qualify for NEC coverage, a Storm-Resistant Shelter is not required for the following:

1. Drums, barrels, tanks, and similar containers that are tightly Sealed, provided those containers are not deteriorated, do not contain residual industrial materials on the outside surfaces, and do not leak;
2. Adequately maintained vehicles used in material handling;
3. Final products, other than products that would be mobilized in storm water discharge (e.g., rock salt);
4. Any Industrial Materials and Activities that are protected by a temporary shelter for a period of no more than ninety (90) days due to facility construction or remodeling; and,
5. Any Industrial Materials and Activities that are protected within a secondary containment structure that will not discharge storm water to waters of the United States.

E. NEC Limitations

1. NEC coverage is available on a facility-wide basis only, not for individual outfalls. If a facility has industrial storm water discharges from one or more drainage areas that require NOI coverage, Dischargers shall register for NOI coverage for the entire facility through SMARTS in accordance with Section II.B.2. Any drainage areas on that facility that would otherwise qualify for NEC coverage may be specially addressed in the facility SWPPP by including an NEC Checklist and a certification statement demonstrating that those drainage areas of the facility have been evaluated; and that none of the Industrial Materials or Activities listed in subsection C above are, or will be in the foreseeable future, exposed to precipitation.
2. If circumstances change and Industrial Materials and Activities become exposed to rain, snow, snowmelt, and/or runoff, the conditions for this exclusion shall no longer apply. In such cases, the Discharger may be subject to enforcement for discharging without a permit. A Discharger with NEC coverage that anticipates changes in circumstances should register for NOI coverage at least seven (7) days before anticipated exposure.
3. The Regional Water Board may deny NEC coverage and require NOI coverage upon determining that:
 - a. Storm water is exposed to Industrial Materials and Activities; and/or
 - b. The discharge has a reasonable potential to cause or contribute to an exceedance of an applicable water quality standards.

F. NEC Permit Registration Documents Required for Initial NEC Coverage

A Discharger shall submit via SMARTS the following PRDs for NEC coverage to document the applicability of the conditional exclusion:

1. The NEC form, which includes:
 - a. The legal name, postal address, telephone number, and e-mail address of the Discharger;
 - b. The facility business name and physical mailing address, the county name, and a description of the facility location if the facility does not have a physical mailing address; and,
 - c. Certification by the Discharger that all PRDs submitted are correct and true and the conditions of no exposure have been met.
2. An NEC Checklist prepared by the Discharger demonstrating that the facility has been evaluated; and that none of the following industrial materials or activities are, or will be in the foreseeable future, exposed to precipitation:

- a. Using, storing or cleaning industrial machinery or equipment, and areas where residuals from using, storing or cleaning industrial machinery or equipment remain and are exposed;
- b. Materials or residuals on the ground or in storm water inlets from spills/leaks;
- c. Materials or products from past industrial activity;
- d. Material handling equipment (except adequately maintained vehicles);
- e. Materials or products during loading/unloading or transporting activities;
- f. Materials or products stored outdoors (except final products intended for outside use, e.g., new cars, where exposure to storm water does not result in the discharge of pollutants);
- g. Materials contained in open, deteriorated or leaking storage drums, barrels, tanks, and similar containers;
- h. Materials or products handled/stored on roads or railways owned or maintained by the Discharger;
- i. Waste material (except waste in covered, non-leaking containers, e.g., dumpsters);
- j. Application or disposal of processed wastewater (unless already covered by an NPDES permit); and,
- k. Particulate matter or visible deposits of residuals from roof stacks/vents evident in the storm water outflow.

3. Site Map (see Section X.E).

G. Requirements for Annual NEC Coverage Recertification

By October 1 of each reporting year beginning in 2015, any Discharger who has previously registered for NEC coverage shall either submit and certify an NEC demonstrating that the facility has been evaluated, and that none of the Industrial Materials or Activities listed above are, or will be in the foreseeable future, exposed to precipitation, or apply for NOI coverage.

H. NEC Certification Statement

All NEC certifications and re-certifications shall include the following certification statement:

I certify under penalty of law that I have read and understand the eligibility requirements for claiming a condition of 'no exposure' and obtaining an exclusion from NPDES storm water permitting; and that there are no discharges of storm water contaminated by exposure to industrial activities

or materials from the industrial facility identified in this document (except as allowed in subsection C above). I understand that I am obligated to submit a no exposure certification form annually to the State Water Board and, if requested, to the operator of the local Municipal Separate Storm Sewer System (MS4) into which this facility discharges (where applicable). I understand that I must allow the Water Board staff, or MS4 operator where the discharge is into the local MS4, to perform inspections to confirm the condition of no exposure and to make such inspection reports publicly available upon request. I understand that I must obtain coverage under an NPDES permit prior to any point source discharge of storm water from the facility. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly involved in gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

XVIII. SPECIAL REQUIREMENTS - PLASTIC MATERIALS

- A.** Facilities covered under this General Permit that handle Plastic Materials are required to implement BMPs to eliminate discharges of plastic in storm water in addition to the other requirements of this General Permit that are applicable to all other Industrial Materials and Activities. Plastic Materials are virgin and recycled plastic resin pellets, powders, flakes, powdered additives, regrind, dust, and other similar types of preproduction plastics with the potential to discharge or migrate off-site. Any Dischargers' facility handling Plastic Materials will be referred to as Plastics Facilities in this General Permit. Any Plastics Facility covered under this General Permit that manufactures, transports, stores, or consumes these materials shall submit information to the State Water Board in their PRDs, including the type and form of plastics, and which BMPs are implemented at the facility to prevent illicit discharges. Pursuant to Water Code section 13367, Plastics Facilities are subject to mandatory, minimum BMPs.
1. At a minimum, Plastics Facilities shall implement and include in the SWPPP:
 - a. Containment systems at each on-site storm drain discharge location down gradient of areas containing plastic material. The containment system shall be designed to trap all particles retained by a 1mm mesh screen, with a treatment capacity of no less than the peak flow rate from a one-year, one-hour storm.
 - b. When a containment system is infeasible, or poses the potential to cause an illicit discharge, the facility may propose a technically feasible

alternative BMP or suite of BMPs. The alternative BMPs shall be designed to achieve the same or better performance standard as a 1mm mesh screen with a treatment capacity of the peak flow rate from a one-year, one-hour storm. Alternative BMPs shall be submitted to the Regional Water Board for approval.

- c. Plastics Facilities shall use durable sealed containers designed not to rupture under typical loading and unloading activities at all points of plastic transfer and storage.
 - d. Plastics Facilities shall use capture devices as a form of secondary containment during transfers, loading, or unloading Plastic Materials. Examples of capture devices for secondary containment include, but are not limited to catch pans, tarps, berms or any other device that collects errant material.
 - e. Plastics Facilities shall have a vacuum or vacuum-type system for quick cleanup of fugitive plastic material available for employees.
 - f. Pursuant to Water Code section 13367(e)(1), Plastics Facilities that handle Plastic Materials smaller than 1mm in size shall develop a containment system designed to trap the smallest plastic material handled at the facility with a treatment capacity of at least the peak flow rate from a one-year, one-hour storm, or develop a feasible alternative BMP or suite of BMPs that are designed to achieve a similar or better performance standard that shall be submitted to the Regional Water Board for approval.
2. Plastics Facilities are exempt from the Water Code requirement to install a containment system under section 13367 of the Water Code if they meet one of the following requirements that are determined to be equal to, or exceed the performance requirements of a containment system:
- a. The Discharger has certified and submitted via SMARTS a valid No Exposure Certification (NEC) in accordance with Section XVII; or
 - b. Plastics Facilities are exempt from installing a containment system, if the following suite of eight (8) BMPs is implemented. This combination of BMPs is considered to reduce or prevent the discharge of plastics at a performance level equivalent to or better than the 1mm mesh and flow standard in Water Code section 13367(e)(1).
 - i. Plastics Facilities shall annually train employees handling Plastic Materials. Training shall include environmental hazards of plastic discharges, employee responsibility for corrective actions to prevent errant Plastic Materials, and standard procedures for containing, cleaning, and disposing of errant Plastic Materials.

- ii. Plastics Facilities shall immediately fix any Plastic Materials containers that are punctured or leaking and shall clean up any errant material in a timely manner.
- iii. Plastics Facilities shall manage outdoor waste disposal of Plastic Materials in a manner that prevents the materials from leaking from waste disposal containers or during waste hauling.
- iv. Plastics Facilities that operate outdoor conveyance systems for Plastic Materials shall maintain the system in good operating condition. The system shall be sealed or filtered in such a way as to prevent the escape of materials when in operation. When not in operation, all connection points shall be sealed, capped, or filtered so as to not allow material to escape. Employees operating the conveyance system shall be trained how to operate in a manner that prevents the loss of materials such as secondary containment, immediate spill response, and checks to ensure the system is empty during connection changes.
- v. Plastics Facilities that maintain outdoor storage of Plastic Materials shall do so in a durable, permanent structure that prevents exposure to weather that could cause the material to migrate or discharge in storm water.
- vi. Plastics Facilities shall maintain a schedule for regular housekeeping and routine inspection for errant Plastic Materials. The Plastics Facility shall ensure that their employees follow the schedule.
- vii. PRDs shall include the housekeeping and routine inspection schedule, spill response and prevention procedures, and employee training materials regarding plastic material handling.
- viii. Plastics Facilities shall correct any deficiencies in the employment of the above BMPs that result in errant Plastic Materials that may discharge or migrate off-site in a timely manner. Any Plastic Materials that are discharged or that migrate off-site constitute an illicit discharge in violation of this General Permit.

XIX. REGIONAL WATER BOARD AUTHORITIES

- A.** The Regional Water Boards may review a Discharger's PRDs for NOI or NEC coverage and administratively reject General Permit coverage if the PRDs are deemed incomplete. The Regional Water Boards may take actions that include rescinding General Permit coverage, requiring a Discharger to revise and re-submit their PRDs (certified and submitted by the Discharger) within a specified time period, requiring the Discharger to apply for different General Permit coverage or a different individual or general permit, or taking no action.
- B.** The Regional Water Boards have the authority to enforce the provisions and requirements of this General Permit. This includes, but is not limited to,

reviewing SWPPPs, Monitoring Implementation Plans, ERA Reports, and Annual Reports, conducting compliance inspections, and taking enforcement actions.

- C. As appropriate, the Regional Water Boards may issue NPDES storm water general or individual permits to a Discharger, categories of Dischargers, or Dischargers within a watershed or geographic area. Upon issuance of such NPDES permits, this General Permit shall no longer regulate the affected Discharger(s).
- D. The Regional Water Boards may require a Discharger to revise its SWPPP, ERA Reports, or monitoring programs to achieve compliance with this General Permit. In this case, the Discharger shall implement these revisions in accordance with a schedule provided by the Regional Water Board.
- E. The Regional Water Boards may approve requests from a Discharger to include co-located, but discontinuous, industrial activities within the same facility under a single NOI or NEC coverage.
- F. Consistent with 40 Code of Federal Regulations section 122.26(a)(9)(i)(D), the Regional Water Boards may require any discharge that is not regulated by this General Permit, that is determined to contribute to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States, to be covered under this General Permit as appropriate. Upon designation, the Discharger responsible for the discharge shall obtain coverage under this General Permit.
- G. The Regional Water Boards may review a Discharger's Inactive Mining Operation Certification and reject it at any time if the Regional Water Board determines that access to the facility for monitoring purposes is practicable or that the facility is not in compliance with the applicable requirements of this General Permit.
- H. All Regional Water Board actions that modify a Discharger's obligations under this General Permit must be in writing and should also be submitted in SMARTS.

XX. SPECIAL CONDITIONS

A. Reopener Clause

This General Permit may be reopened and amended to incorporate TMDL-related provisions. This General Permit may also be modified, revoked and reissued, or terminated for cause due to promulgation of amended regulations, water quality control plans or water quality control policies, receipt of U.S. EPA guidance concerning regulated activities, judicial decision, or in accordance with 40 Code of Federal Regulations sections 122.62, 122.63, 122.64, and 124.5.

B. Water Quality Based Corrective Actions

1. Upon determination by the Discharger or written notification by the Regional Water Board that industrial storm water discharges and/or authorized NSWDS contain pollutants that are in violation of Receiving Water Limitations (Section VI), the Discharger shall:
 - a. Conduct a facility evaluation to identify pollutant source(s) within the facility that are associated with industrial activity and whether the BMPs described in the SWPPP have been properly implemented;
 - b. Assess the facility's SWPPP and its implementation to determine whether additional BMPs or SWPPP implementation measures are necessary to reduce or prevent pollutants in industrial storm water discharges to meet the Receiving Water Limitations (Section VI); and,
 - c. Certify and submit via SMARTS documentation based upon the above facility evaluation and assessment that:
 - i. Additional BMPs and/or SWPPP implementation measures have been identified and included in the SWPPP to meet the Receiving Water Limitations (Section VI); or
 - ii. No additional BMPs or SWPPP implementation measures are required to reduce or prevent pollutants in industrial storm water discharges to meet the Receiving Water Limitations (Section VI).
2. The Regional Water Board may reject the Dischargers water quality based corrective actions and/or request additional supporting documentation.

C. Requirements for Dischargers Claiming “No Discharge” through the Notice of Non-Applicability (NONA)

1. For the purpose of the NONA, the Entity (Entities) is referring to the person(s) defined in section 13399.30 of the Water Code.
2. Entities who are claiming “No Discharge” through the NONA shall meet the following eligibility requirements:
 - a. The facility is engineered and constructed to have contained the maximum historic precipitation event (or series of events) using the precipitation data collected from the National Oceanic and Atmospheric Agency's website (or other nearby precipitation data available from other government agencies) so that there will be no discharge of industrial storm water to waters of the United States; or,
 - b. The facility is located in basins or other physical locations that are not hydrologically connected to waters of the United States.
3. When claiming the “No Discharge” option, Entities shall submit and certify via SMARTS both the NONA and a No Discharge Technical Report. The No

Discharge Technical Report shall demonstrate the facility meets the eligibility requirements described above.

4. The No Discharge Technical Report shall be signed (wet signature and license number) by a California licensed professional engineer.

XXI. STANDARD CONDITIONS

A. Duty to Comply

Dischargers shall comply with all standard conditions in this General Permit. Permit noncompliance constitutes a violation of the Clean Water Act and the Water Code and is grounds for enforcement action and/or removal from General Permit coverage.

Dischargers shall comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions.

B. Duty to Reapply

Dischargers that wish to continue an activity regulated under this General Permit after the expiration date of this General Permit shall apply for and obtain authorization from the Water Boards as required by the new general permit once it is issued.

C. General Permit Actions

1. This General Permit may be modified, revoked and reissued, or terminated for cause. Submittal of a request by the Discharger for General Permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not annul any General Permit condition.
2. If a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under section 307(a) of the Clean Water Act for a toxic pollutant which is present in the discharge, and that standard or prohibition is more stringent than any limitation on the pollutant in this General Permit, this General Permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition.

D. Need to Halt or Reduce Activity Not a Defense

In an enforcement action, it shall not be a defense for a Discharger that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this General Permit.

E. Duty to Mitigate

Dischargers shall take all responsible steps to reduce or prevent any discharge that has a reasonable likelihood of adversely affecting human health or the environment.

F. Proper Operation and Maintenance

Dischargers shall at all times properly operate and maintain any facilities and systems of treatment and control (and related equipment and apparatuses) which are installed or used by the Discharger to achieve compliance with the conditions of this General Permit. Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance may require the operation of backup or auxiliary facilities or similar systems installed by a Discharger when necessary to achieve compliance with the conditions of this General Permit.

G. Property Rights

This General Permit does not convey any property rights of any sort or any exclusive privileges. It also does not authorize any injury to private property or any invasion of personal rights, nor does it authorize any infringement of federal, state, or local laws and regulations.

H. Duty to Provide Information

Upon request by the relevant agency, Dischargers shall provide information to determine compliance with this General Permit to the Water Boards, U.S. EPA, or local Municipal Separate Storm Sewer System (MS4) within a reasonable time. Dischargers shall also furnish, upon request by the relevant agency, copies of records that are required to be kept by this General Permit.

I. Inspection and Entry

Dischargers shall allow the Water Boards, U.S. EPA, and local MS4 (including any authorized contractor acting as their representative), to:

1. Enter upon the premises at reasonable times where a regulated industrial activity is being conducted or where records are kept under the conditions of this General Permit;
2. Access and copy at reasonable times any records that must be kept under the conditions of this General Permit;
3. Inspect the facility at reasonable times; and,
4. Sample or monitor at reasonable times for the purpose of ensuring General Permit compliance.

J. Monitoring and Records

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
2. If Dischargers monitor any pollutant more frequently than required, the results of such monitoring shall be included in the calculation and reporting of the data submitted.
3. Records of monitoring information shall include:
 - a. The date, exact location, and time of sampling or measurement;
 - b. The date(s) analyses were performed;
 - c. The individual(s) that performed the analyses;
 - d. The analytical techniques or methods used; and,
 - e. The results of such analyses.
4. Dischargers shall retain, for a period of at least five (5) years, either a paper or electronic copy of all storm water monitoring information, records, data, and reports required by this General Permit. Copies shall be available for review by the Water Board's staff at the facility during scheduled facility operating hours.
5. Upon written request by U.S. EPA or the local MS4, Dischargers shall provide paper or electronic copies of Annual Reports or other requested records to the Water Boards, U.S. EPA, or local MS4 within ten (10) days from receipt of the request.

K. Electronic Signature and Certification Requirements

1. All Permit Registration Documents (PRDs) for NOI and NEC coverage shall be certified and submitted via SMARTS by the Discharger's Legally Responsible Person (LRP). All other documents may be certified and submitted via SMARTS by the LRP or by their designated Duly Authorized Representative.
2. When a new LRP or Duly Authorized Representative is designated, the Discharger shall ensure that the appropriate revisions are made via SMARTS. In unexpected or emergency situations, it may be necessary for the Discharger to directly contact the State Water Board's Storm Water Section to register for SMARTS account access in order to designate a new LRP.
3. Documents certified and submitted via SMARTS by an unauthorized or ineligible LRP or Duly Authorized Representative are invalid.

4. LRP eligibility is as follows:
 - a. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
 - i. A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function; or
 - ii. The manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
 - b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively;
 - c. For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official. This includes the chief executive officer of the agency or the senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA).
5. Duly Authorized Representative eligibility is as follows:
 - a. The Discharger must authorize via SMARTS any person designated as a Duly Authorized Representative;
 - b. The authorization shall specify that a person designated as a Duly Authorized Representative has responsibility for the overall operation of the regulated facility or activity, such as a person that is a manager, operator, superintendent, or another position of equivalent responsibility, or is an individual who has overall responsibility for environmental matters for the company; and,
 - c. The authorization must be current (it has been updated to reflect a different individual or position) prior to any report submittals, certifications, or records certified by the Duly Authorized Representative.

L. Certification

Any person signing, certifying, and submitting documents under Section XXI.K above shall make the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons that manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

M. Anticipated Noncompliance

Dischargers shall give advance notice to the Regional Water Board and local MS4 of any planned changes in the industrial activity that may result in noncompliance with this General Permit.

N. Penalties for Falsification of Reports

Clean Water Act section 309(c)(4) provides that any person that knowingly makes any false material statement, representation, or certification in any record or other document submitted or required to be maintained under this General Permit, including reports of compliance or noncompliance shall upon conviction, be punished by a fine of not more than \$10,000 or by imprisonment for not more than two years or by both.

O. Oil and Hazardous Substance Liability

Nothing in this General Permit shall be construed to preclude the initiation of any legal action or relieve the Discharger from any responsibilities, liabilities, or penalties to which the Discharger is or may be subject to under section 311 of the Clean Water Act.

P. Severability

The provisions of this General Permit are severable; if any provision of this General Permit or the application of any provision of this General Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this General Permit shall not be affected thereby.

Q. Penalties for Violations of Permit Conditions

1. Clean Water Act section 309 provides significant penalties for any person that violates a permit condition implementing sections 301, 302, 306, 307, 308, 318, or 405 of the Clean Water Act or any permit condition or limitation implementing any such section in a permit issued under section 402. Any

person that violates any permit condition of this General Permit is subject to a civil penalty not to exceed \$37,500²² per calendar day of such violation, as well as any other appropriate sanction provided by section 309 of the Clean Water Act.

2. The Porter-Cologne Water Quality Control Act also provides for civil and criminal penalties, which may be greater than penalties under the Clean Water Act.

R. Transfers

Coverage under this General Permit is non-transferrable. When operation of the facility has been transferred to another entity, or a facility is relocated, new PRDs for NOI and NEC coverage must be certified and submitted via SMARTS prior to the transfer, or at least seven (7) days prior to the first day of operations for a relocated facility.

S. Continuation of Expired General Permit

If this General Permit is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with 40 Code of Federal Regulations 122.6 and remain in full force and effect.

²² May be further adjusted in accordance with the Federal Civil Penalties Inflation Adjustment Act.

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FACT SHEET FOR
STORM WATER DISCHARGES
ASSOCIATED WITH INDUSTRIAL ACTIVITIES
NPDES NO. CAS000001**

TABLE OF CONTENTS

I. BACKGROUND 1

A. Purpose 1

B. History 1

C. Blue Ribbon Panel of Experts (Panel) 2

D. Summary of Significant Changes in this General Permit 4

II. TECHNICAL RATIONALE FOR REQUIREMENTS IN THIS GENERAL PERMIT 9

A. Receiving General Permit Coverage 9

B. Discharge Prohibitions 14

C. Non-Storm Water Discharges (NSWDs) 14

D. Effluent Limitations 15

E. Receiving Water Limitations and Water Quality Standards 22

F. Total Maximum Daily Loads (TMDLs) 22

G. Discharges Subject to the California Ocean Plan 26

H. Training Qualifications 27

I. Storm Water Pollution Prevention Plan (SWPPP) 29

J. Monitoring and Reporting Requirements 42

K. Exceedance Response Actions (ERAs) 55

L. Inactive Mining Operations 66

M. Compliance Groups and Compliance Group Leaders 66

N. Annual Evaluation 68

O. Annual Report 68

P. Conditional Exclusion - No Exposure Certification (NEC) Requirements 68

Q. Special Requirements - Plastic Materials 69

R. Regional Water Board Authorities 70

S. Special Conditions: Requirements for Dischargers Claiming the “No Discharge” Option in the Notice of Non-Applicability 71

FIGURES

FIGURE 1: Example Waste Load Allocations Proposed Translation: Ballona Creek Estuary – Toxic Pollutants 23

FIGURE 2: Five Phases for Developing and Implementing an Industrial Storm Water Pollution Prevention Plan (SWPPP) 31

FIGURE 3: Compliance Determination Flowchart 45

TABLES

TABLE 1: Role-Specific Permit Requirements..... 28

TABLE 2: Example - Assessment of Potential Industrial Pollution Sources and Corresponding BMPs Summary . 32

I. BACKGROUND

A. Purpose

The purpose of this Fact Sheet is to explain the legal requirements and technical rationale that serve as the basis for the requirements of this Order 2014-0057-DWQ (General Permit), adopted by the State Water Resources Control Board (State Water Board) on April 1, 2014. This General Permit regulates operators of facilities subject to storm water permitting (Dischargers), that discharge storm water associated with industrial activity (industrial storm water discharges). This General Permit replaces Water Quality Order 97-03-DWQ. This Fact Sheet does not contain any independently-enforceable requirements; the General Permit contains all of the actual requirements applicable to Dischargers. In case of any conflict between the Fact Sheet and the General Permit, the terms of the General Permit govern.

B. History

The Federal Clean Water Act (CWA)¹ prohibits discharges from point sources to waters of the United States, unless the discharges are in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. (CWA § 301(a).) In 1987, the CWA was amended to establish a framework for regulating municipal storm water discharges and discharges of storm water associated with industrial activity (industrial storm water discharges) under the NPDES program. (CWA § 402(p).) In 1990, the United States Environmental Protection Agency (U.S. EPA) promulgated regulations, commonly known as Phase I, establishing application requirements for storm water permits for specified categories of industries. (40 C.F.R. § 122.26.) In 1992, U.S. EPA revised the monitoring requirements for industrial storm water discharges. (40 C.F.R. § 122.44(i)(2), (4), (5).) In 1999, U.S. EPA adopted additional storm water regulations, known as Phase II. (64 Fed. Reg. 68722.) The Phase II regulations provide for, among other things, a conditional exclusion from NPDES permitting requirements for industrial activities that have no exposure to storm water.

Industrial storm water discharges are regulated pursuant to CWA section 402(p)(3)(A). This provision requires NPDES permits for industrial storm water discharges to implement CWA section 301, which includes requirements for Dischargers to comply with technology-based effluent limitations, and any more stringent water quality-based limitations necessary to meet water quality standards. Technology-based effluent limitations applicable to industrial activities are based on best conventional pollutant control technology (BCT) for conventional pollutants, and best available technology economically achievable (BAT) for toxic and non-conventional pollutants. (CWA § 301(b)(1)(A) and (2)(A).) To ensure compliance with water quality standards, NPDES permits may also require a Discharger to implement best management practices (BMPs). 40 Code of Federal Regulations section 122.44(k)(4) requires the use of BMPs to control or abate the discharge of pollutants when numeric effluent limitations (NELs) are infeasible. The State Water Board has concluded that it is infeasible to establish

¹ Federal Water Pollution Control Act of 1970 (also referred to as the Clean Water Act or CWA), 33 U.S.C. § 1201 et seq. All further statutory references herein are to the CWA unless otherwise indicated.

NELs for storm water discharges associated with industrial activity due to insufficient information at the time of adoption of this General Permit.

On April 17, 1997, the State Water Board issued NPDES General Permit for Industrial Storm Water Discharges, Excluding Construction Activities, Water Quality Order 97-03-DWQ (previous permit). This General Permit, Order 2014-0057-DWQ rescinds the previous permit and serves as the statewide general permit for industrial storm water discharges. The State Water Board concludes that significant revisions to the previous permit requirements are necessary for implementation, consistency and objective enforcement. As discussed in this Fact Sheet, this General Permit requires Dischargers to:

- Eliminate unauthorized non-storm water discharges (NSWDs);
- Develop and implement storm water pollution prevention plans (SWPPPs) that include best management practices (BMPs);
- Implement minimum BMPs, and advanced BMPs as necessary, to achieve compliance with the effluent and receiving water limitations of this General Permit;
- Conduct monitoring, including visual observations and analytical storm water monitoring for indicator parameters;
- Compare monitoring results for monitored parameters to applicable numeric action levels (NALs) derived from the U.S. EPA 2008 Multi-Sector General Permit for Storm Water Discharges Associated with Industrial Activity (2008 MSGP) and other industrial storm water discharge monitoring data collected in California;
- Perform the appropriate Exceedance Response Actions (ERAs) when there are exceedances of the NALs; and,
- Certify and submit all permit-related compliance documents via the Storm Water Multiple Application and Report Tracking System (SMARTS). Dischargers shall certify and submit these documents which include, but are not limited to, Permit Registration Documents (PRDs) including Notices of Intent (NOIs), No Exposure Certifications (NECs), and Storm Water Pollution Prevention Plans (SWPPPs), as well as Annual Reports, Notices of Termination (NOTs), Level 1 ERA Reports, and Level 2 ERA Technical Reports.

C. Blue Ribbon Panel of Experts (Panel)

In 2005 and 2006, the State Water Board convened a Blue Ribbon Panel of Experts (Panel) to address the feasibility of NELs in California's storm water permits. Specifically, the Panel was charged with answering the following questions:

Is it technically feasible to establish numeric effluent limitations, or some other quantifiable limit, for inclusion in storm water permits?

How would such limitations or criteria be established, and what information and data would be required?²

The Panel was directed to answer these questions for industrial storm water discharge general permits, construction storm water discharge general permits, and area-wide municipal storm water discharge permits. The Panel was also directed to address both technology-based and water quality based limitations and criteria.

In evaluating the establishment of numeric limitations and criteria, the Panel was directed to consider all of the following:

- The ability of the State Water Board to establish appropriate objective limitations or criteria;
- How compliance is to be determined;
- The ability of Dischargers and inspectors to monitor for compliance; and
- The technical and financial ability of Dischargers to comply with the limitations or criteria.

Following an opportunity for public comment, the Panel identified several water quality concerns, public process and program effectiveness issues. A summary of the Panel's recommendations regarding industrial storm water discharges follows:³

- Current data are inadequate; accordingly, the State Water Board should improve monitoring requirements to collect useful data for establishing NALs and NELs.
- Required parameters for further monitoring should be consistent with the type of industrial activity (i.e., monitor for heavy metals when there is a reasonable expectation that the industrial activity will contribute to increased heavy metals concentrations in storm water).
- Insofar as possible, the use of California data (or national data applicable to California) is preferred when setting NELs and NALs.
- Industrial facilities that do not discharge to Municipal Separate Storm Sewer Systems (MS4s) should implement BMPs for their non-industrial exposure (e.g., parking lots, roof runoff) similar to BMPs implemented by commercial facilities in MS4 jurisdictions.

² State Water Board Storm Water Panel of Experts, The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities (June 19, 2006). <http://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/numeric/swpanel_final_report.pdf>. [as of February 4, 2014].

³ See footnote 2.

- In all cases, Dischargers should implement a suite of minimum BMPs, including, but not limited to, good housekeeping practices, employee training, and preventing exposure of materials to rain.
- Standard Industrial Classification (SIC) code categories are not a satisfactory way of identifying industrial activities at any given site. The State Water Board should develop an improved method of characterizing industrial activities that will improve water quality in storm water.
- Recognizing that implementing the Panel's suggested changes is a large task, the State Water Board should set priorities for implementation of the Panel's suggested approach in order to achieve the greatest reduction of pollutants statewide.
- Recognizing that an increasing number of industries have moved industrial activities indoors to prevent storm water pollution, such facilities should be granted regulatory relief from NALs and/or NELs , but should still be required to comply with any applicable MS4 permit requirements.
- Recognizing the need for improved monitoring and reduction of pollutants in industrial storm water discharges, the State Water Board should consider the total economic impact of its requirements to not economically penalize California industries when compared to industries outside of California.

With regard to the industrial activities component of its charge, the Panel limited its focus to the question of whether sampling data can be used to derive technology-based NELs. The Panel did not address other factors or approaches that may relate to the task of determining technology- and water quality-based NELs consistent with the regulations and law. Examples of these other factors are discussed in more detail in this Fact Sheet. Additionally, in its final report the Panel did not clearly differentiate between the role of numeric and non-numeric effluent limitations, nor did it consider U.S. EPA procedures used to promulgate effluent limitation guidelines (ELGs) in 40 Code of Federal Regulations, Chapter I, Subchapter N (Subchapter N).

D. Summary of Significant Changes in this General Permit

The previous permit issued by the State Water Board on April 17, 1997, had been administratively extended since 2002 until the adoption of this General Permit. Significant revisions to the previous permit were necessary to update permit requirements consistent with recent regulatory changes pertaining to industrial storm water under the CWA. This General Permit differs from the previous permit in the following areas:

1. Minimum Best Management Practices (BMPs)

This General Permit requires Dischargers to implement a set of minimum BMPs. Implementation of the minimum BMPs, in combination with any advanced BMPs (BMPs, collectively,) necessary to reduce or prevent pollutants in industrial storm water discharges, serve as the basis for compliance with this General Permit's

technology-based effluent limitations and water quality based receiving water limitations. Although there is great variation in industrial activities and pollutant sources between industrial sectors and, in some cases between operations within the same industrial sector, the minimum BMPs specified in this General Permit represent common practices that can be implemented by most facilities.

The previous permit did not require a minimum set of BMPs but rather allowed Dischargers to consider which non-structural BMPs should be implemented and which structural BMPs should be considered for implementation when non-structural BMPs are ineffective.

This General Permit requires Dischargers to implement minimum BMPs (which are mostly non-structural BMPs), and advanced BMPs (which are mostly structural BMPs) when implementation of the minimum BMPs do not meet the requirements of the General Permit. Advanced BMPs consists of treatment control BMPs, exposure reduction BMPs, and storm water containment and discharge reduction BMPs. BMPs that exceed the performance expectation of minimum BMPs are considered advanced BMPs. Dischargers are encouraged to utilize advanced BMPs that infiltrate or reuse storm water where feasible.

The minimum and advanced BMPs required in this General Permit are consistent with U.S. EPA's 2008 Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (2008 MSGP), guidance developed by the California Stormwater Quality Association, and recommendations by Regional Water Quality Control Board (Regional Water Board) inspectors. Dischargers are required to evaluate BMPs being implemented and determine an appropriate interval for the implementation and inspection of these BMPs.

2. Conditional Exclusion - No Exposure Certification (NEC)

This General Permit applies U.S. EPA Phase II regulations regarding a conditional exclusion for facilities that have no exposure of industrial activities and materials to storm water. (40 C.F.R. § 122.26(g).) (The previous permit required light industries to obtain coverage only if their activities were exposed to storm water.) This General Permit implements current U.S. EPA rules allowing any type of industry to claim a conditional exclusion. The NEC requires enrollment for coverage prior to conditionally excluding a Discharger from a majority of this General Permit's requirements.

3. Electronic Reporting Requirements

This General Permit requires Dischargers to submit and certify all reports electronically via SMARTS. The previous permit used a paper reporting process with electronic reporting as an option.

4. Training Expectations and Roles

This General Permit requires that Dischargers arrange to have appropriately trained personnel implementing this General Permit's requirements at each facility. In

addition, if a Discharger's facility enters Level 1 status, the Level 1 ERA Report must be prepared by a Qualified Industrial Storm Water Practitioner (QISP). All Action Plans and Technical Reports required in Level 2 status must also be prepared by a QISP.

Dischargers may appoint a staff person to complete the QISP training or may contract with an outside QISP. QISP training is tailored to persons with a high degree of technical knowledge and environmental experience. Although QISPs do not need to be California licensed professional engineers, it may be necessary to involve a California licensed professional engineer to perform certain aspects of the Technical Reports.

5. Numeric Action Levels (NALs) and NAL Exceedances

This General Permit contains two types of NAL exceedances. An annual NAL exceedance occurs when the average of all sampling results within a reporting year for a single parameter (except pH) exceeds the applicable annual NAL. The annual NALs are derived from, and function similarly to, the benchmark values provided in the 2008 MSGP. Instantaneous maximum NALs target hot spots or episodic discharges of pollutants. An instantaneous maximum NAL exceedance occurs when two or more analytical results from samples taken for any parameter within a reporting year exceed the applicable instantaneous maximum NAL value. Instantaneous maximum NALs for Total Suspended Solids (TSS) and Oil and Grease (O&G) are based on previously gathered California industrial storm water discharge monitoring data. The instantaneous maximum NAL for pH is derived from the benchmark value provided in the 2008 MSGP.

6. Exceedance Response Actions (ERA)

This General Permit requires Dischargers to develop and implement ERAs, when an annual NAL or instantaneous maximum NAL exceedance occurs during a reporting year. The first time an annual NAL or instantaneous maximum NAL exceedance occurs for any one parameter, a Discharger's status is changed from Baseline to Level 1 status, and the Discharger is required to evaluate and revise, as necessary, its BMPs (with the assistance of a QISP) and submit a report prepared by a QISP. The second time an annual NAL or instantaneous maximum NAL exceedance occurs for the same parameter in a subsequent reporting year, the Discharger's status is changed from Level 1 to Level 2 status, and Dischargers are required to submit a Level 2 ERA Action Plan and a Level 2 ERA Technical Report. Unless the demonstration is not accepted by the State Water Board or a Regional Water Board, the Discharger is not required to perform additional ERA requirements for the parameter(s) involved if the Discharger demonstrates that:

- a. Additional BMPs required to eliminate NAL exceedances are not technologically available or economically practicable and achievable; or,
- b. NAL exceedances are solely caused by non-industrial pollutant sources; or,

- c. NAL exceedances are solely attributable to pollutants from natural background sources.

Information supporting the above demonstrations must be included in QISP-prepared Level 2 ERA Technical Reports.

7. CWA section 303(d) Impairment

This General Permit requires a Discharger to monitor additional parameters if the discharge(s) from its facility contributes pollutants to receiving waters that are listed as impaired for those pollutants (CWA section 303(d) listings). This General Permit lists the receiving waters that are 303(d) listed as impaired for pollutants that are likely to be associated with industrial storm water in Appendix 3. For example, if a Discharger discharges to a water body that is listed as impaired for copper, and the discharge(s) from its facility has the potential sources of copper, the Discharger must add copper to the list of parameters to monitor in its storm water discharge.

8. Design Storm Standards for Treatment Control BMPs

This General Permit includes design storm standards for Dischargers implementing treatment control BMPs. The design storm standards include both volume- and flow-based criteria. Dischargers are not required to retrofit existing treatment control BMPs unless required to meet the technology-based effluent limitations and receiving water limitations in this General Permit.

9. Qualifying Storm Event (QSE)

This General Permit defines a QSE as a precipitation event that:

- a. Produces a discharge for at least one drainage area; and,
- b. Is preceded by 48 hours with no discharge from any drainage area.

The definition above differs from the definition in the previous permit, resulting in an increase number of QSEs eligible for sample collection. Therefore, most Dischargers will be able to collect the required number of samples, regardless of their facility location.

10. Sampling Protocols

This General Permit requires Dischargers to collect samples during scheduled facility operating hours from each drainage location within four hours of: (1) the start of the discharge from a QSE occurring during scheduled facility operating hours, or (2) the start of scheduled facility operating hours if the QSE occurred in the previous twelve (12) hours. The benefits of this sampling protocol: (a) allows a more reasonable amount of time to collect samples, (b) increases the likelihood for samples collected at discharge locations to be representative of the drainage area discharge characteristics, (c) increases the number of QSEs eligible for sample collection, and, (d) reduces the likelihood of Dischargers collecting samples with short-term concentration spikes.

The previous permit required that Dischargers collect grab samples during the first hour of discharge that commenced during scheduled facility operating hours. These sample collection requirements were widely considered to be too rigid and out of step with other states' sample collection requirements. Since many storm events begin in the evening or early morning hours, numerous opportunities to collect samples were lost because Dischargers could not obtain samples during the first hour of discharge. Dischargers with facilities that have multiple discharge locations had difficulties collecting samples within such a short timeframe therefore affecting data quality.

11. Sampling Frequency

This General Permit increases the sampling frequency by requiring the Discharger to collect and analyze storm water samples from each discharge location for two (2) QSEs within the first half of each reporting year (July 1 to December 31), and two (2) QSEs within the second half of each reporting year (January 1 to June 30). The increased sampling, compared to the previous permit's two samples during the wet season, is consistent with the 2008 MSGP and other states' permit requirements and will improve compliance determination with this General Permit. The State Water Board expects that the elimination of the wet season sampling requirements will increase the number of possible QSEs eligible for monitoring.

12. Compliance Groups

To allow industrial facilities to efficiently share knowledge, skills and resources towards achieving General Permit compliance, this General Permit allows the formation of Compliance Groups and Compliance Group Leaders. Dischargers participating in a Compliance Group (Compliance Group Participants) are collectively required to sample twice a year. Compliance Group Leaders are required to be approved through the State Water Board-approved training program process, inspect each facility once within each reporting year, and prepare Level 1 and Level 2 ERA reports as necessary. The Compliance Group option is described in more detail in General Permit section XIV and in this Fact Sheet in the Section titled "Compliance Groups."

13. Discharges to Ocean Waters

This General Permit requires Dischargers with ocean-discharging outfalls subject to model monitoring provisions of the California Ocean Plan to develop and implement a monitoring plan in compliance with those provisions and any additional monitoring requirements established pursuant to Water Code section 13383. Dischargers who have not developed and implemented a monitoring program in compliance with the California Ocean Plan model monitoring provisions by January 1, 2015 or seven (7) days prior to commencing operations, whichever is later, are ineligible to obtain coverage under this General Permit.

II. TECHNICAL RATIONALE FOR REQUIREMENTS IN THIS GENERAL PERMIT

A. Receiving General Permit Coverage

1. This General Permit provides regulatory coverage for new and existing industrial storm water discharges and authorized NSWs from:
 - a. Facilities required by federal regulations to obtain an NPDES permit;
 - b. Facilities designated by the Regional Water Boards to obtain an NPDES permit; and,
 - c. Facilities directed by the Regional Water Boards to obtain coverage specifically under this General Permit. The Regional Water Board typically directs a Discharger to change General Permit coverage under two circumstances:
 - (1) switch from an individual NPDES permit to this General Permit, or
 - (2) switch from the NPDES General Permit for Storm Water Discharges Associated with Construction And Land Disturbance Activities, (Order 2009-0009-DWQ, NPDES No CAS000002) to this General Permit for long-term construction related activities that are similar to industrial activities (e.g. concrete batch plants).

40 Code of Federal Regulations section 122.26(b)(14) defines "storm water discharge associated with industrial activity" and describes the types of facilities subject to permitting (primarily by Standard Industrial Classification (SIC) code). This General Permit provides regulatory coverage for all facilities with industrial activities described in Attachment A where the covered industrial activity is the Discharger's primary industrial activity. In some instances, a Discharger may have more than one primary industrial activity occurring at a facility.

The 1987 SIC manual uses the term "establishment" to determine the primary economic activity of a facility. The manual instructs that where distinct and separate economic activities are performed at a single location, each activity should be treated as a separate establishment (and, therefore, separate primary activity). For example, the United States Navy (primary SIC code 9711) may conduct industrial activities subject to permitting under this General Permit, such as landfill operations (SIC code 4953), ship and boat building and repair (SIC code 3731, and flying field operations (SIC code 4581).

The SIC manual also discusses "auxiliary" functions of establishments. Auxiliary functions provide management or support services to the establishment. Examples of auxiliary functions are warehouses and storage facilities for the establishment's own materials, maintenance and repair shops of the establishment's own machinery, automotive repair shops or storage garages of the establishment's own vehicles, administrative offices, research, development, field engineering support, and testing conducted for the establishment. When auxiliary functions are performed at physically separate facilities from the establishment they serve, they generally are not subject to General Permit coverage. If

auxiliary functions are performed at the same physical location as the establishment, then they are subject to General Permit coverage if they are associated with industrial activities.

This clarification does not change the scope of which facilities are subject to permitting relative to the 1997 IGP. The 1997 IGP Fact Sheet had used the term “auxiliary” to describe a facility’s separate primary activities, which has caused confusion.

In 1997, the North American Industrial Classification System (NAICS) was published, replacing the SIC code system. The U.S. EPA has indicated that it intends to incorporate the NAICS codes into the federal storm water regulations but has not done so yet. The State Water Board recognizes that many Dischargers in newer industries were not included in the 1987 SIC code manual and may have difficulty determining their SIC code information. To address this transition, SMARTS has been modified to accept both SIC codes and NAICS codes, and NAICS codes are automatically translated into SIC codes. There may be instances of conflict between SIC and NAICS codes. The use of NAICS codes shall not expand or reduce the types of industries subject to this General Permit as compared to the SIC codes listed in the General Permit. State Water Board staff will work closely with the applicant to resolve these conflicts in SMARTS as they are identified. Dischargers should be aware that the use of an NAICS code which results in failure to submit any of the required PRDs under this General Permit remains a violation of the terms of this General Permit.

The facilities included in category one of Attachment A (facilities subject to Subchapter N) are subject to storm water ELGs that are incorporated into the requirements of this General Permit. Dischargers whose facilities are included in this category must examine the appropriate federal ELGs to determine the applicability of those guidelines. This General Permit contains additional requirements (Section XI.D) that apply only to facilities with storm water ELGs.

2. Types of Discharges Not Covered by this General Permit

- a. Discharges from construction and land disturbance activities that are subject to the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit).
- b. Discharges covered by an individual or general storm water NPDES permit. Some industrial storm water discharges may be regulated by other individual or general NPDES permits issued by the State Water Board or the Regional Water Boards (Water Boards, collectively,). This General Permit shall not regulate these discharges. When the individual or general NPDES permits for such discharges expire, the Water Boards may authorize coverage under this General Permit or another general NPDES permit, or may issue a new individual NPDES permit consistent with the federal and state storm water regulations. Interested parties may request that the State Water Board or appropriate Regional Water Board issue individual or general NPDES permits for specific discharges that, in their view are not properly regulated through this General Permit. General permits may be issued for a particular industrial group or watershed area which

would supersede this General Permit. To date, two Regional Water Board have issued such permits:

- i. The Lahontan Regional Water Board has adopted an NPDES permit and general Waste Discharge Requirements to regulate discharges from marinas and maintenance dredging (Regional Water Board Order R6T-2005-0015 - NPDES Permit No. CAG616003) in the Lake Tahoe Hydrologic Unit.
 - ii. The Santa Ana Regional Water Board adopted the Sector Specific General Permit for Stormwater Runoff Associated with Industrial Activities from Scrap Metal Recycling Facilities within the Santa Ana Region, Order R8-2012-0012, NPDES Permit No. CAG 618001 (Scrap Metal Recycling Permit). The Scrap Metal Recycling Permit is applicable to facilities within the Santa Ana Region that are listed under Standard Industrial Classification (SIC) Code 5093 and engaged in the following types of activities: (1) automotive wrecking for scrap-wholesale (this category does not include facilities engaged in automobile dismantling for the primary purpose of selling second hand parts); (2) iron and steel scrap - wholesale; (3) junk and scrap metal - wholesale; (4) metal waste and scrap - wholesale; and (5) non-ferrous metals scrap - wholesale. Other types of facilities listed under SIC Code 5093 and engaged in waste recycling are not required to get coverage under the Scrap Metal Recycling Permit. A list of covered facilities as of February 8, 2011 was included in Attachment A of the Scrap Metal Recycling Permit.
- c. Discharges that the Regional Water Boards determine to be ineligible for coverage under this General Permit. In such cases, a Regional Water Board will require the discharges be covered by another individual or general NPDES permit. The applicability of this General Permit to such discharges is terminated when the discharge is subject to another individual or general NPDES permit.
- d. Discharges that do not enter waters of the United States. These include:
- i. Discharges to municipal separate sanitary sewer systems;
 - ii. Discharges to evaporation ponds, discharges to percolation ponds, and/or any other methods used to retain and prevent industrial storm water discharges from entering waters of the United States;
 - iii. Discharges to combined sewer systems. In California, the only major combined sewer systems are located in San Francisco and downtown Sacramento. Dischargers who believe they discharge into a combined sewer system should contact the local Regional Water Board to verify discharge location; and,
 - iv. Dischargers Claiming the “No Discharge” Option in the Notice of Non-Applicability (NONA) (Fact Sheet Section II.S).
- e. Discharges from mining operations or oil and gas facilities composed entirely of flows that are from conveyances or systems of conveyances used for collecting and conveying precipitation runoff and do not come into contact with any overburden, raw materials, intermediate products, finished products, by-products, or waste products located at the facility. (33 U.S.C. § 1342(l)(2).)
- f. Discharges from facilities on Tribal Lands regulated by U.S. EPA.

3. Obtaining General Permit Coverage (Section II of this General Permit)

The State Water Board has developed the SMARTS online database system to handle registration and reporting under this General Permit. More information regarding SMARTS and access to the database is available online at <https://smarts.waterboards.ca.gov>. The State Water Board has determined that all documents related to general storm water enrollment and compliance must be certified and submitted via SMARTS by Dischargers.

This General Permit requires all Dischargers to electronically certify and submit PRDs via SMARTS to obtain: (1) regulatory coverage, or (2) to certify that there are no industrial activities exposed to storm water at the facility and obtain regulatory coverage under the NEC provision of this General Permit. Facilities that were eligible to self-certify no exposure under the previous permit (see category 10 in Attachment 1 of the previous permit) are required to certify and submit via SMARTS PRDs for NOI coverage under this General Permit by July 1, 2015 or for NEC coverage by October 1, 2015. The Water Board is estimating that 10,000 – 30,000 Dischargers may be registering for NOI or NEC coverage under this General Permit. Separate registration deadlines, one for NOI coverage and one for NEC coverage, provides Dischargers better assistance from Storm Water Helpdesk and staff.

Dischargers shall electronically certify and submit the PRDs via SMARTS for each individual facility. This requirement is intended to establish a clear accounting of the name, address, and contact information for each Discharger, as well as a description of each Discharger's facility.

The Water Boards recognize that certain information pertaining to an industrial facility may be confidential. Many Stakeholders were asking for clarification on the process the Water Boards would use to manage confidential information or the process Dischargers could use to redact such information. Dischargers may redact trade secrets information from required submittals (Section II.B.3.d). Dischargers are required to include a general description of the redacted information and the basis for the redaction. Dischargers are still required to submit complete and un-redacted versions of the information to the Water Boards within 30 days, however these versions should be clearly labeled "CONFIDENTIAL" so that the confidentiality of these documents is clear to Regional Water Board staff, even when there is a change in staff. This General Permit requires that all information provided to the Water Boards by the Discharger comply with the Homeland Security Act and other federal law that addresses security in the United States.

All Dischargers who certify and submit PRDs via SMARTS for NOI coverage on or after July 1, 2015 or for NEC coverage on or after October 1, 2015, shall immediately comply with the provisions in this General Permit.

4. General Permit Coverage for Landfills

This General Permit covers storm water discharges from landfills, land application sites, and open dumps that receive or have received industrial waste from any facility covered by this General Permit. Industrial storm water discharges from these

facilities must be covered by this General Permit unless (1) they are already covered by another NPDES permit, or (2) the Regional Water Board has determined that an NPDES permit is not required because the site has been stabilized or required closure activities have been completed.

In most cases, it is appropriate for new landfill construction or final closure to be covered by the Construction General Permit, rather than this General Permit. Questions have arisen as to what constitutes new landfill construction at an existing landfill versus the normal planned expansion of a landfill. Similarly, questions have arisen about the type of closure activities that may be subject to the Construction General Permit versus the normal closure of “cells” that occurs during continued landfill operations and are not subject to the Construction General Permit. Other questions such as whether temporary or permanent newly graded/paved roads disturbing greater than one acre at a landfill are subject to the Construction General Permit. Landfill Dischargers have asked for clarity regarding these questions. The previous permit required Dischargers to contact the Regional Water Boards to determine permit appropriateness. Site specific circumstances continue to require Dischargers to contact Regional Water Boards for final determinations.

Based upon the State Water Board’s storm water program history, there are only a handful of instances where an operating landfill has been simultaneously subject to both the construction and industrial permitting requirements. Typically a landfill is subject to the construction permitting requirements during the time the landfill is initially constructed and prior to operation. A landfill is subject to the industrial permitting requirements during landfill operations, and subject to the construction permitting requirements during final landfill closure activities.

Once a landfill begins operations, continued expansion or closure of incremental landfill cells is authorized under the industrial permitting requirements since these are normal aspects of landfill operations. These expansion/closure activities occur within a limited timeframe (often taking less than 90 days from beginning to end) and are not separately subject to additional local approval (e.g., a new building permit). Any construction or demolition of temporary non-impervious roads directly related to landfill operations are subject to the industrial permitting requirements.

Construction or closure of a separate section of the landfill that is either subject to additional permitting by the local authorities and/or lasts more than 90 days requires coverage under the Construction General Permit. Construction of permanent facility structures such as buildings and impervious parking lots or roads that disturb greater than one acre are also subject to the Construction General Permit. (Permanent facility structures are defined as any structural improvements designed to remain until the landfill is closed.)

Site specific circumstances such as proximity to nearby waterways, extent of activities, pollutants of concern, and other considerations can impact any decision as to whether a particular activity is to be regulated under this General Permit or the Construction General Permit. Regional Water Boards will continue to exercise their discretion as necessary to protect the beneficial uses of the receiving water(s).

5. General Permit Coverage for Small Municipal Separate Storm Sewer Systems (MS4s)

Section 1068 of the Intermodal Surface Transportation Efficiency Act of 1991 exempted municipal agencies serving populations of less than 100,000 from Phase I permit requirements other than sanitary landfills, power plants, and airports facilities. U.S. EPA's Phase II regulations eliminated the above exemption as of March 10, 2003. All facilities in Attachment A of this General Permit that are operated by a small municipal agency are subject to NPDES storm water permitting requirements and this General Permit.

6. Changes to General Permit Coverage

Dischargers who no longer operate a facility required to be covered under this General Permit (either NOI or NEC coverage) are required to electronically certify and submit via SMARTS a Notice of Termination (NOT). An NOT is required when there is a change in ownership of the industrial activities subject to permitting or when industrial activities subject to permitting are permanently discontinued by the Discharger at the site. When terminating NOI coverage, Dischargers may only submit an NOT once all exposure of industrial materials and equipment have been eliminated. Dischargers may not submit NOTs for temporary or seasonal facility closures. The General Permit requires Dischargers to implement appropriate BMPs to reduce or prevent pollutants in storm water discharges during the temporary facility closure.

This General Permit allows Dischargers to change General Permit coverage, as appropriate, from NOI coverage to NEC coverage or from NEC coverage to NOI coverage.

B. Discharge Prohibitions

This General Permit covers industrial storm water discharges and authorized NSWDS from industrial facilities and prohibits any discharge of materials other than storm water and authorized NSWDS (Section III and Section IV of this General Permit). It is a violation of this General Permit to discharge hazardous substances in storm water in excess of the reportable quantities established in 40 Code of Federal Regulations sections 117.3 and 302.4.

The State Water Board is authorized, under Water Code section 13377, to issue NPDES permits which apply and ensure compliance with all applicable provisions of the CWA, and any more stringent limitations necessary to implement water quality control plans, protect beneficial uses, and prevent nuisance.

C. Non-Storm Water Discharges (NSWDs)

Unauthorized NSWDS can be generated from various pollutant sources. Depending upon their quantity and location where generated, unauthorized NSWDS can discharge to the storm drain system during dry weather as well as during a storm event (comingled with storm water discharge). These NSWDS can consist of, but are not limited to; (1) waters generated by the rinsing or washing of vehicles, equipment,

buildings, or pavement, or (2) fluid, particulate or solid materials that have spilled, leaked, or been disposed of improperly.

Some NSWDs are not directly related to industrial activities and normally discharge minimal pollutants when properly managed. Section IV of this General Permit provides a limited list of NSWDs that are authorized if Dischargers implement BMPs to prevent contact with industrial materials prior to discharge. The list in Section IV is similar to the list provided in the 2008 MSGP but does not include pavement and external building surfaces washing without detergents. These two items are not included because the Discharger is responsible to reduce or prevent pollutants in storm water discharges from paved areas and buildings associated with industrial activities. Since industrial materials and non-industrial material likely co-exist, the washing of paved areas and external building surfaces may result in discharges of pollutants associated with industrial activities. In addition, washing activities generally occur during dry-weather periods when receiving water flows are lower than wet-weather periods. Wash waters are likely to discharge in higher concentrations than would occur if these pollutants were naturally discharged during a storm event. The discharge of high concentration wash water during a time of dry-weather flows is inconsistent with the goal of protecting receiving waters. These discharges are, therefore, considered unauthorized NSWDs. Similar to the 2008 MSGP, firefighting related discharges are not subject to this General Permit.

A major required element of the SWPPP is the identification and measures for elimination of unauthorized NSWDs. Unauthorized NSWDs can contribute a significant pollutant load to receiving waters. Measures to control spills, leakage, and dumping can often be addressed through BMPs. This General Permit's BMP requirements for NSWDs remain essentially unchanged from the previous permit other than the increased frequency of required visual observations from quarterly to monthly. See Section XI.A.1 of this General Permit.

D. Effluent Limitations

1. Technology-Based and Water Quality-Based Effluent Limitations

CWA Section 301(b)(1)(C) requires that discharges from existing facilities must, at a minimum, comply with technology-based effluent limitations based on the technological capability of Dischargers to control pollutants in their discharges. Discharges must also comply with any more stringent water quality-based limitations necessary to meet water quality standards in accordance with CWA Section 301(b)(1)(C). Water quality-based limitations are discussed in Section E of this Fact Sheet titled "Receiving Water Limitations." Both technology-based effluent limitations and water quality-based limitations are implemented through NPDES permits. (CWA sections 301(a) and (b).)

2. Types of Technology-Based Effluent Limitations

All NPDES permits are required to contain technology-based effluent limitations (TBELs). (40 C.F.R. §§122.44(a)(1) and 125.3.) TBELs may consist of effluent limitations guidelines (ELGs) established by U.S. EPA through regulation, or may be developed using best professional judgment on a case-by-case basis.

The CWA sets forth standards for TBELs based on the type of pollutant or the type of facility/source involved. The CWA establishes two levels of pollution control for existing sources. For the first level, existing sources that discharge pollutants directly to receiving waters were initially subject to effluent limitations based on the “best practicable control technology currently available” (BPT). (33 U.S.C. § 1314(b)(1)(B).) BPT applies to all pollutants. For the second level, existing sources that discharge conventional pollutants are subject to effluent limitations based on the “best conventional pollutant control technology” (BCT). (33 U.S.C. §1314(b)(4)(A); see also 40 C.F.R. §401.16 (list of conventional pollutants).) Also for the second level, other existing sources that discharge toxic pollutants or “nonconventional” pollutants (“nonconventional” pollutants are pollutants that are neither “toxic” nor “conventional”) are subject to effluent limitations based on “best available technology economically achievable” (BAT). (33 U.S.C. §1311(b)(2)(A); see also 40 C.F.R. §401.15 (list of toxic pollutants).) The factors to be considered in establishing the levels of these control technologies are specified in section 304(b) of the CWA and in U.S. EPA’s regulations at 40 C.F.R. §125.3.

When establishing ELGs for an industrial category, U.S. EPA evaluates a wide variety of technical factors to determine BPT, BCT, and BAT. U.S. EPA considers the specific factors of an industry such as pollutant sources, industrial processes, and the size and scale of operations. U.S. EPA evaluates the specific treatment, structural, and operational source control BMPs available to reduce or prevent pollutants in the discharges. The costs of implementing BMPs to address these factors are weighed against their effectiveness and ability to protect water quality. Factors such as industry economic viability, economies of scale, and retrofit costs are also considered.

To date, U.S. EPA has: (1) not promulgated storm water ELGs for most industrial categories, (2) not established NELs within all ELGs that have been promulgated, and (3) exempted certain types of facilities within an industrial category from complying with established ELGs. The feedlot category (40 Code of Federal Regulations part 412) provides an example of several of these points. In that instance, U.S. EPA did not establish numeric effluent limitations but instead: (1) established a narrative effluent limitation requiring retention of all feedlot-related runoff from a 25-year, 24-hour storm, and (2) limited application of the ELG to feedlots with a minimum number of animals. U.S. EPA also recently promulgated ELGs for the "Construction and Development (C&D)" industry, which included, among many other limitations, conditional numeric effluent limitations. Though the NELs in these ELGs were later stayed by U.S. EPA, the ELGs exempted construction sites of less than 30 acres from complying with the established numeric effluent limitations.

40 Code of Federal Regulations, Chapter I, Subchapter N (“Subchapter N”), includes over 40 separate industrial categories where the U.S. EPA has established ELGs for new and existing industrial wastewater discharges to surface waters, discharges to publicly owned treatment works (pre-treatment standards), and storm water discharges to surface waters. Generally, U.S. EPA has focused its efforts on the development of ELGs for larger industries and those industries with the greatest potential to pollute. In total, the 40 categories for which ELGs have been

established (not including construction) represent less than 10 percent of the types of facilities subject to this General Permit. Additionally, most ELGs focus on industrial process wastewater discharges and pre-treatment standards, and only 11 of the 40 categories establish numeric or narrative ELGs for industrial storm water discharges. Those that do include ELGs for industrial storm water discharges generally address storm water discharges that are generated from direct contact with primary pollutant sources at the subject facilities, and not the totality of the industrial storm water discharge from the facility, as the term “storm water discharge associated with industrial activity” for this General Order is defined in the CWA. (40 C.F.R. § 122.26(b)(14).) Where U.S. EPA has not issued effluent limitation guidelines for an industry, the State Water Board is required to establish effluent limitations for NPDES permits on a case-by-case basis based on best professional judgment (BPJ). (33 U.S.C. § 1342(a)(1); 40 C.F.R. § 125.3(c)(2).) In this General Permit, most of the TBELs are based on BPJ decision-making because no ELG applies.

The TBELs in this General Permit represent the BPT (for conventional, toxic, and non-conventional pollutants), BCT (for conventional pollutants), and BAT (for toxic pollutants and non-conventional pollutants) levels of control for the applicable pollutants. If U.S. EPA has not promulgated ELGs for an industry, or if a Discharger is discharging a pollutant not covered by the otherwise applicable ELG, the State Water Board is required to establish effluent limitations in NPDES permit limitations based on best professional judgment. (33 U.S.C. § 1342(a)(1); 40 C.F.R. 125.3(c).) This General Permit includes TBELs established on best professional judgment and limitations based on storm water-specific ELGs listed in Attachment F of this General Permit, where applicable.

3. Authority to Include Non-Numeric Technology-Based Limits in NPDES Permits

TBELs in this General Permit are based on best professional judgment and are non-numeric (“narrative”) technology-based effluent limitations expressed as requirements for implementation of effective BMPs. Federal regulations provide that permits must include BMPs to control or abate the discharge of pollutants when where “[n]umeric effluent limitations are infeasible.” 40 C.F.R. 122.44(k)(3).

Since 1977, courts have recognized that there are circumstances when numeric effluent limitations are infeasible and have held that EPA may issue permits with conditions (e.g., BMPs) designed to reduce the level of effluent discharges to acceptable levels. *Natural Res. Def. Council, Inc. v. Costle*, 568 F.2d 1369 (D.C.Cir.1977).

U.S. EPA has also interpreted the CWA to allow BMPs to take the place of numeric effluent limitations under certain circumstances. 40 C.F.R. §122.44(k), titled “Establishing limitations, standards, and other permit conditions (applicable to State NPDES programs ...),” provides that permits may include BMPs to control or abate the discharge of pollutants when: (1) “[a]uthorized under section 402(p) of the CWA for the control of stormwater discharges”; or (2) “[n]umeric effluent limitations are infeasible.” 40 C.F.R. § 122.44(k).

In 2006, The U.S. Court of Appeals for the Sixth Circuit held that the CWA does not require U.S. EPA to set numeric limits where such limits are infeasible. (*Citizens Coal Council v. United States Environmental Protection Agency*, 447 F.3d 879, 895-96 (6th Cir. 2006)). The *Citizens Coal* court cited to the statement in *Waterkeeper Alliance, Inc. v. EPA*, 399 F.3d 486, 502 (2d Cir. 2005) that “site-specific BMPs are effluent limitations under the CWA” in concluding that “the EPA’s inclusion of numeric and non-numeric limitations in the guideline for the coal remaining subcategory was a reasonable exercise of its authority under the CWA.” (447 F.3d at 896.) Additionally, the *Citizen’s Coal* court cited to *Natural Res. Def. Council, Inc. v. EPA*, 673 F.2d 400, 403 (D.C.Cir.1982) noting that “section 502(11) [of the CWA] defines ‘effluent limitation’ as ‘any restriction’ on the amounts of pollutants discharged, not just a numerical restriction.” NPDES permit writers have substantial discretion to impose non-quantitative permit requirements pursuant to section 402(a)(1)), especially when the use of numeric limits is infeasible. (*NRDC v. EPA*, 822 F.2d 104, 122-24 (D.C. Cir. 1987); 40 C.F.R. 122.44(k)(3).)

4. Decision to Include Non-Numeric Technology-Based Effluent Limits in This General Permit

It is infeasible for the State Water Board to develop numeric effluent limitations using the best professional judgment approach due to lack of sufficient information. Previous versions of this General Permit required Dischargers to sample their industrial storm water discharges and report the results to the Regional Water Boards. Dischargers were not required to submit this data online into a statewide database; as a result, much of this data is not available for analysis. Moreover, much of the data that are available for analysis are not of sufficient quality to make conclusions or perform basic statistical tests.

The Blue Ribbon Panel of Experts, State Water Board staff, and many stakeholders evaluated the available storm water data set and concluded that the information provides limited value due to the limited pool of industrial facilities submitting data, poor overall data quality, and extreme variance within the dataset, as described below.

The poor quality of the existing data set is attributable a number of factors. For example, the previous permits have required Dischargers to sample during the first hour of discharge from two storm events a year. This sampling schedule was designed to catch what was considered to represent the higher end of storm water discharge concentrations for most parameters. The results from this type of sampling were thought to be an indicator of whether or not additional BMPs would be necessary. The sampling schedule was not designed, however, to estimate pollutant discharge loading, or to characterize the impact of the discharge on the receiving water. Doing so would normally require the use of more advanced sampling protocols such as flow meters, continuous automatic sampling devices, certified/trained sampling personnel, and other facility-specific considerations.

Furthermore, there is currently no data which details the relationship between the BMPs implemented at each facility and the facility’s sampling results. The SWPPPs required by the previous permits were not submitted to the Water Boards, but were

kept onsite by Dischargers. Due to the limited availability of quality sampling data and "level of effort" information contained in SWPPPs, the State Water Board is unable to exercise best professional judgment to make the connection between effluent quality (sampling results) and the level of effort, costs, and performance of the various technologies that is needed in order to express the TBELs in this General Permit numerically, as NELs.

Some stakeholders have suggested that separating the data sets by industry type would lead to more reliable data with which to develop NELs. Advocates of this approach suggest that the variability of the data may be caused in part by the mixing of data from different industrial categories. The State Water Board believes that the variation is primarily due to storm intensity, duration, time of year, soil saturation or some other factors. It is necessary to collect information related to those factors and BMPs implemented in order to evaluate the variability attributable to those factors. There is currently too large of an information gap to begin the process of developing NELs for all industrial sectors not currently subject to ELGs.

The State Water Board has proposed NELs in past drafts of this General Permit. In comments, many stakeholders have highlighted the difficulty of developing statewide NELs that are applicable to all industry sectors, or even NELs that cover any specific industry sectors. For example, stakeholders have commented that:

- a. Background/ambient conditions in some hydrogeologic zones may contribute pollutant loadings that would significantly contribute to, if not exceed, the NEL values;
- b. Some advanced treatment technologies have flow/volume limitations as well as economy of scale issues for smaller facilities;
- c. Treatment technologies that require that sheet flows be captured and conveyed via discrete channels or basins may not only result in significant retrofit costs, but may conflict with local ordinances that prohibit such practices, as they can cause damage or erosion to down gradient property owners, or cause other environmental problems;
- d. There is insufficient regulatory guidance and procedures to allow permit writers to properly specify monitoring frequency and sampling protocols (e.g., instantaneous maximum, 1-day average, 3-day average, etc.), and for Dischargers to obtain representative samples to compare to NELs for the purpose of strict compliance; and,
- e. NELs must be developed with consideration of what is economically achievable for each industrial sector. These stakeholders point out that the U.S. EPA goes to great lengths evaluating the various BMP technologies available for a particular pollutant, the costs and efficiency of each BMP, and the applicability of the BMPs to the industry as a whole or to a limited number of industrial sites based upon the size of the facility, the quantity of material, and other considerations.

The State Water Board does not have the information (including monitoring data, industry specific information, BMP performance analyses, water quality information, monitoring guidelines, and information on costs and overall effectiveness of control technologies) necessary to promulgate NELs at the time of adoption of this General Permit. Therefore, it is infeasible to include NELs in this statewide General Permit.

Many of the new requirements in this General Permit have been designed to address the shortcomings of previous permits and the existing storm water data set. Under this General Permit, sampling results must be certified and submitted into SMARTS by Dischargers, along with SWPPPs which outline the technologies and BMPs used to control pollutants at each facility. The ERA process will also collect information on costs and the engineering aspects of the various control technologies employed by each facility. Previous permit versions did not have a mechanism for receiving this site specific information electronically, and only a small percentage of Dischargers submitted their Annual Reports via SMARTS. This General Permit will make this information more accessible, allowing the Water Boards to evaluate the relationship between BMPs and the ability of facilities to meet the NALs set forth in this General Permit. Finally, the new Qualified Industrial Storm Water Practitioner (QISP) training requirements of this General Permit have been designed in part to improve the quality of the data submitted.

5. Narrative Technology-Based Effluent Limitations (TBELs) and Best Management Practices (BMPs)

The primary TBEL in this General Permit requires Dischargers to “implement BMPs that comply with the BAT/BCT requirements of this General Permit to reduce or prevent discharges of pollutants in their storm water discharge in a manner that reflects best industry practice considering technological availability and economic practicability and achievability.” (Section V.A of this General Permit). This TBEL is a restatement of the BAT/BCT standard, as articulated by U.S. EPA in the 2008 MSGP and accompanying Fact Sheet. In order to comply with this TBEL, Dischargers must implement BMPs that meet or exceed the BAT/BCT technology-based standard. The requirement to “reduce or prevent” is equivalent to the requirement in the federal regulations that BMPs be used in lieu of NELs to “control or abate” the discharge of pollutants. (40 C.F.R. § 122.44(k).)

BMPs are defined as the “scheduling of activities, prohibitions of practices, maintenance procedures, and other management practices to reduce or prevent the discharge of pollutants... includ[ing] treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.” (40 C.F.R. § 122.2.)

This General Permit (Sections X.H.1 and X.H.2) requires all Dischargers to implement minimum BMPs, as well as any advanced BMPs that are necessary to adequately reduce or prevent pollutants in discharges consistent with the TBELs. The minimum BMPs specified in this General Permit represent common practices that can be implemented by most facilities. This General Permit generally does not mandate the specific mode of design, installation or implementation for the minimum BMPs at a Discharger’s facility. It is up to the Discharger, in the first instance, to

determine what must be done to meet the applicable effluent limits. For example, Section X.H.1.a.vi of this General Permit requires Dischargers to contain all stored non-solid industrial materials that can be transported or dispersed via wind or contact with storm water. How this is achieved will vary by facility: for some facilities, all activities may be moved indoors, while for others this will not be feasible. However, even for the latter, many activities may be moved indoors, others may be contained using tarps or a containment system, while still other activities may be limited to times when exposure to precipitation is not likely. Each of these control measures is acceptable and appropriate depending upon the facility-specific circumstances.

BMPs can be actions (including processes, procedures, schedules of activities, prohibitions on practices and other management practices), or structural or installed devices to reduce or prevent water pollution. (40 C.F.R. § 122.2.) They can be just about anything that is effective at preventing pollutants from entering the environment, and for meeting applicable limits of this General Permit. In this General Permit, Dischargers are required to select, design, install, and implement facility-specific control measures to meet these limits. Many industrial facilities already have such control measures in place for product loss prevention, accident and fire prevention, worker health and safety or to comply with other environmental regulations. Dischargers must tailor the BMPs detailed in this General Permit to their facilities, as well as improve upon them as necessary to meet permit limits. The examples detailed in this Fact Sheet emphasize prevention over treatment. However, sometimes more traditional end-of-pipe treatment may be necessary, particularly where a facility might otherwise cause or contribute to an exceedance of water quality standards.

This General Permit requires Dischargers to implement BMPs “to the extent feasible.” Consistent with the control level requirements of the CWA, for the purposes of this General Permit, the requirement to implement BMPs “to the extent feasible” means to reduce and/or prevent discharges of pollutants using BMPs that represent BAT and BPT in light of best industry practice.⁴ In other words, Dischargers are required to select, design, install and implement BMPs that reduce or prevent discharges of pollutants in their storm water discharge in a manner that reflects best industry practice considering their technological availability and economic practicability and achievability.

To determine technological availability and economic practicability and achievability, Dischargers need to consider what control measures are considered “best” for their industry, and then select and design control measures for their site that are viable in terms of cost and technology. The State Water Board believes that for many facilities minimization of pollutants in storm water discharges can be achieved without using highly engineered, complex treatment systems. The BMPs included in

⁴ Because toxic and nonconventional pollutants are controlled in the first step by BPT and in the second step by BAT, and the second level of control is “increasingly stringent” (EPA v. National Crushed Stone, 449 U.S. 64, 69 (1980), for simplicity of discussion, the rest of this discussion will focus on BAT. Similarly, because the BAT levels of control in this General Permit are expressed as BMPs and pollution prevention measures, they will also control conventional pollutants. Therefore this discussion will focus on BAT rather than BCT or BPT for conventional pollutants.

this General Permit emphasize effective “low-tech” controls, such as regular cleaning of outdoor areas where industrial activities may take place, proper maintenance of equipment, diversion of storm water around areas where pollutants may be picked up, and effective advanced planning and training (e.g., for spill prevention and response).

E. Receiving Water Limitations and Water Quality Standards

Pursuant to CWA section 301(b)(1)(C) and Water Code section 13377, this General Permit requires compliance with receiving water limitations based on water quality standards. The primary receiving water limitation requires that industrial storm water discharges not cause or contribute to an exceedance of applicable water quality standards. Implementation of the BMPs as required by the technology-based effluent limitation in Section V of this General Permit will typically result in compliance with the receiving water limitations. The discussion of BMPs in this General Permit generally focuses on requiring implementation of BMPs to the extent necessary to achieve compliance with the technology-based effluent limitations, because the technology-based limitations apply similarly to all facilities. In addition, however, this General Permit also makes it clear that, if any individual facility's storm water discharge causes or contributes to an exceedance of a water quality standard, that Discharger must implement additional BMPs or other control measures that are tailored to that facility in order to attain compliance with the receiving water limitation. A Discharger that is notified by a Regional Water Board or who determines the discharge is causing or contributing to an exceedance of a water quality standard must comply with the Water Quality Based Corrective Actions found in Section XX.B of this General Permit.

Water Quality Based Corrective Actions are different from the Level 1 and Level 2 ERAs that result from effluent-based monitoring. It is possible for a Discharger to be engaged in Level 1 or Level 2 ERAs for one or more pollutants and simultaneously be required to perform Water Quality Based Corrective Actions for one or more other pollutants.

Failure to comply with these additional Water Quality Based Corrective Action requirements is a violation of this General Permit. If additional operational source control measures do not adequately reduce the pollutants, Dischargers must implement additional measures such as the construction of treatment systems and/or overhead coverage. Overhead coverage is any structure or temporary shelter that prevents the vertical contact of precipitation with industrial materials or activities. If the Regional Water Board determines that the Discharger's selected BMPs are inadequate, the Regional Water Board may require implementation of additional BMPs and/or may take enforcement against Dischargers for failure to comply with this General Permit.

F. Total Maximum Daily Loads (TMDLs)

TMDLs are regulatory tools that provide the maximum amount of a pollutant from potential source in the watershed that a water body can receive while attaining water quality standards. A TMDL is defined as the sum of the allowable loads of a single pollutant from all contributing point sources (the waste load allocations) and non-point sources (load allocations), plus the contribution from background sources. (40 C.F.R. § 130.2, subd. (i).) Discharges covered by this General Permit are considered to be point

source discharges, and therefore must comply with effluent limitations that are “consistent with the assumptions and requirements of any available waste load allocation for the discharge prepared by the State and approved by EPA pursuant to 40 Code of Federal Regulations section 130.7.” (40 C.F.R. § 122.44, subd. (d)(1)(vii).) In addition, Water Code section 13263, subdivision (a), requires that waste discharge requirements implement relevant water quality control plans. Many TMDLs in existing water quality control plans include both waste load allocations and implementation requirements. Attachment E of this General Permit lists the watersheds with U.S. EPA-approved and U.S. EPA-established TMDLs that include TMDL requirements for Dischargers covered by this General Permit.

NPDES-regulated storm water discharges (which include industrial storm water) must be addressed by waste load allocations in TMDLs. (40 C.F.R. § 130.2(h).) NPDES permits must contain effluent limits and conditions consistent with the requirements and assumptions of the waste load allocations in TMDLs. (40 C.F.R. § 122.44(d)(1)(vii)(B).) To date, the relevant waste load allocations assigned to industrial storm water discharges are not directly translatable to effluent limitations. Many of the TMDLs lack sufficient facility specific information, discharge characterization data, implementation requirements, and compliance monitoring requirements. Accordingly, an analysis of each TMDL applicable to industrial storm water discharges must be performed to determine if it is appropriate to translate the waste load allocation into a numeric effluent limit, or if the effluent limit is to be expressed narratively using a BMP approach. U.S. EPA recognizes that because storm water discharges are highly variable in frequency and duration and are not easily characterized, it is often not feasible or appropriate to establish numeric limits. Variability and the lack of data available make it difficult to determine with precision or certainty actual and projected loadings for individual Dischargers or groups of Dischargers.

Regardless of whether the effluent limit is to be numeric or narrative, the existing waste load allocations must be carefully analyzed, and in many cases translated, to determine the appropriate effluent limitations. Issues of interpretation exist with all of the waste load allocations applicable to Dischargers, and these issues vary based on the TMDL. Below is an example of one of the simpler issues:

FIGURE 1: Example Waste Load Allocations Proposed Translation: Ballona Creek Estuary – Toxic Pollutants

Metals per Acre Waste Load Allocations for Individual General Construction or Industrial Storm Water Permittees (grams/year/acre)				
Cadmium	Copper	Lead	Silver	Zinc
0.1	3	4	0.1	13
Metals per Acre Waste Load Allocations for Individual General Construction or Industrial Storm Water Permittees (milligrams/year/acre)				
Chlordane	DDTs	Total Polychlorinated biphenyl (PCBs)	Total Polycyclic aromatic hydrocarbons (PAHs)	
0.04	0.14	2	350	

In order for the above waste load allocations to effectively be implemented as effluent limits under the General Permit, the Water Boards must (1) identify which discharges the waste load allocations apply to, (2) identify the acreages of the individual facilities, (3) convert the waste load allocations from grams/year/acre (or milligrams/year/acre) to grams/year (or milligrams/year) based on the acreage at each identified facility, (4) assign the effluent limits to the identified Dischargers, (5) determine appropriate monitoring to assess compliance with the effluent limits, and (6) develop a tracking mechanism for each identified facility and their individual effluent limits. A similar stepwise process is necessary for each TMDL with waste load allocations assigned to industrial storm water discharges. For TMDLs where effluent limits will be expressed as BMPs, analysis must be performed to determine the appropriate BMPs and the corresponding effectiveness to comply with the assigned waste load allocations.

Some waste load allocations are already expressed as concentration based numbers. It may appear simple to incorporate these values into this General Permit as effluent limits, but the questions still remain regarding how to determine compliance. The monitoring requirements in this General Permit are not designed to measure compliance with a numeric effluent limit or to measure the effect of a discharge on a receiving water body. (See the discussion on monitoring requirements in Fact Sheet Section II.J.) This General Permit requires sampling of four (4) storm events a year, with certain limitations as to when a discharge may be sampled. This method of monitoring may not appropriately serve as TMDL compliance sampling since grab samples are only representative of the particular moment in time when the sample was taken. Since storm water is highly variable, four grab samples per year may not provide sufficient confidence that the effluent limit is being met. An alternative monitoring scheme may be necessary to determine the facility's impact on the receiving water and to determine compliance with any assigned effluent limits. Questions concerning whether sampling results should be grab samples, composite samples, flow-weighted averaged over all drainage areas, etc. cannot be determined for each concentration-based TMDL without a more thorough analysis.

Additionally, monitoring and assessment requirements must be developed for all of the TMDLs to determine compliance with or progress towards meeting TMDL requirements. The proposed monitoring requirements in this General Permit are not designed to assess pollutant loading or determine compliance with TMDL-specific effluent limits.

Due to the large number and variety of discharges subject to a wide range of TMDLs statewide, to prevent a severe delay in the adoption of this General Permit, TMDL-specific permit requirements for the TMDLs listed in Attachment E will be proposed by the Regional Water Boards. Since the waste load allocations and/or implementation requirements apply to multiple discharges in the region(s) the TMDL were developed, the development of TMDL-specific permit requirements is best coordinated at the Regional Water Board level. The development of TMDL-specific permit requirements is subject to notice and a public comment period prior to incorporation into this General Permit.

Regional Water Board staff, with the assistance of State Water Board staff, will develop and submit the proposed TMDL-specific permit requirements for each of the TMDLs listed in Attachment E by July 1, 2016.⁵ After conducting a 30-day public comment period, the Regional Water Boards will propose TMDL-specific permit requirements to the State Water Board for adoption into this General Permit. The Regional Water Boards may also include TMDL-specific monitoring requirements for inclusion in this General Permit, or may issue Regional Water Board orders pursuant to Water Code section 13383 requiring TMDL-specific monitoring. The Regional Water Boards or their Executive Officers may complete these tasks, and the proposed TMDL-specific permit requirements shall have no force or effect until adopted, with or without modification, by the State Water Board. Unless directed to do so by the Regional Water Board, Dischargers are not required to take any additional actions to comply with the TMDLs listed in Attachment E until the State Water Board reopens this General Permit and includes TMDL-specific permit requirements. This approach is consistent with the 2008 MSGP. TMDL-specific permit requirements are not limited by the BAT/BCT technology-based standards.

The Regional Water Boards will submit to the State Water Board the following information for each of the TMDLs listed in Attachment E:

- Proposed TMDL-specific permit requirements, including any applicable effluent limitations, implementation timelines, additional monitoring requirements, reporting requirements, an explanation of how an exceedance of an effluent limitation or a violation of the TMDL will be determined, and required deliverables consistent with the TMDL(s);
- An explanation of how the proposed TMDL-specific permit requirements, timelines, and deliverables are consistent with the assumptions and requirements of applicable waste load allocation(s) to implement the TMDL(s);
- Where a BMP-based approach is proposed, an explanation of how the proposed BMPs will be sufficient to implement applicable waste load allocations; and
- Where concentration-based monitoring is required, an explanation of how the required monitoring, reporting and calculation methodology for an exceedance of an effluent limitation or a violation of the TMDL(s) will be sufficient to demonstrate compliance with the TMDL(s).

Upon receipt of the information described above, the State Water Board will conduct a public comment period and reopen this General Permit to populate Attachment E, the Fact Sheet, and other provisions as necessary in order to incorporate these TMDL-specific permit requirements into this General Permit. Attachment E may also be reopened during the term of this General Permit to add additional TMDLs and corresponding implementation requirements.

This General Permit (Section X.G.2.a.ix) requires a Discharger to identify any additional industrial parameters that may be discharged to a waterbody with a 303(d) impairment identified in Appendix 3 as likely to be associated with industrial storm water.

⁵ Due to the workload associated with the implementation of this General Permit (e.g., training program development, NEC outreach, electronic enrollment and reporting via SMARTS) it is believed that two years is necessary for Staff to complete a comprehensive analysis and stakeholder process for TMDLs applicable to Dischargers under this General Permit.

Dischargers may need to implement additional monitoring for any applicable parameters (Section XI.B.6.e). Appendix 3 of this General Permit includes the water bodies with 303(d) impairments or TMDLs for pollutants that are likely to be associated with industrial storm water in black font, and those that are not likely to be associated with industrial storm water in red font. This determination is based on the pollutant or pollutants that are causing each impairment, and the State Water Board's general experience regarding the types of pollutants that are typically found in industrial storm water discharges. The list of waterbodies is from the State Water Boards statewide 2010 Integrated CWA Section 303(d) List / Section 305(b) Report.

Some of the water bodies with 303(d) impairments or TMDLs listed in Appendix 3 of this General Permit are not applicable to Dischargers covered under this General Permit. Appendix 3 indicates these water bodies Dischargers are not required to include in their pollutant source assessment (unless directed to do so by the Regional Water Board).

New Dischargers (as defined in Attachment C) applying for NOI coverage under this General Permit that will be discharging to an impaired water body with a 303(d) listed impairment are ineligible for coverage unless the Discharger submits data and/or information, prepared by a QISP, demonstrating that the facility will not cause or contribute to the impairment. Section VII.B of this General Permit describes the three different options New Dischargers have for making this determination. This General Permit requires a QISP to assist the New Discharger with this determination because individuals making this determination will need expertise in industrial storm water pollutant sources, BMPs and a thorough understanding of complying with U.S. EPA's storm water regulations and this General Permit's requirements. Not requiring New Dischargers to have a QISP assist in this demonstration would possibly lead to costly retrofits or closure of a new facility that has not demonstrated that the facility will not cause or contribute to the impairment.

G. Discharges Subject to the California Ocean Plan

1. Discharges to Ocean Waters

On October 16, 2012 the State Water Board amended the California Ocean Plan (California Ocean Plan) to require industrial storm water Dischargers with outfalls discharging to ocean waters to comply with the California Ocean Plan's model monitoring provisions. The amended California Ocean Plan requires industrial storm water dischargers with outfalls discharging to ocean waters to comply with the California Ocean Plan's model monitoring provisions. These provisions require Dischargers to: (a) monitor runoff for specific parameters at all outfalls from two storm events per year, and collect at least one representative receiving water sample per year, (b) conduct specified toxicity monitoring at certain types of outfalls at a minimum of once per year, and (c) conduct marine sediment monitoring for toxicity under specific circumstances (California Ocean Plan, Appendix III). The California Ocean Plan provides conditions under which some of the above monitoring provisions may be waived by the Water Boards.

This General Permit requires dischargers with outfalls that discharge to ocean waters to comply with the California Ocean Plan's model monitoring provisions and

any additional monitoring requirements established pursuant to Water Code section 13383. Dischargers who have not developed and implemented a monitoring program in compliance with the California Ocean Plan's model monitoring provisions by January 1, 2015 or seven (7) days prior to commencing operations, whichever is later, are ineligible to obtain coverage under this General Permit.

2. Areas of Special Biological Significance (ASBS) Exception

The State Water Board adopted the California Ocean Plan (California Ocean Plan) in 1972, and has subsequently amended the Plan. The California Ocean Plan prohibits the discharge of waste to designated ASBS. ASBS are ocean areas designated by the State Water Board as requiring special protection through the maintenance of natural water quality. The California Ocean Plan states that the State Water Board may grant an exception to California Ocean Plan provisions where the State Water Board determines that the exception will not compromise protection of ocean waters for beneficial uses and the public interest will be served.

On March 20, 2012, the State Water Board adopted Resolution 2012-0012 (ASBS Exception), which grants an exception to the California Ocean Plan prohibition on discharges to ASBS for a limited number of industrial storm water Discharger applicants. The ASBS Exception contains "Special Protections" to maintain natural water quality and protect the beneficial uses of the ASBS. In order to legally discharge into an ASBS, these Dischargers must comply with the terms of the ASBS Exception and obtain coverage under this General Permit. This General Permit incorporates the terms of the ASBS Exception and includes the applicable monitoring requirements for all Dischargers discharging to an ASBS under the ASBS Exception.

H. Training Qualifications

This General Permit and the previous permit both require Dischargers to ensure that personnel responsible for permit compliance have an acceptable level of knowledge. Stakeholders have observed that the previous permit did not adequately specify how to comply with various elements of the permit, such as selecting discharge locations representative of the facility storm water discharge and evaluating potential pollutant sources, nor did it provide a clearly outlined Discharger training program. Guidance that is available from outside sources can be complicated to understand or costly to obtain, which can result in many Dischargers developing and implementing deficient SWPPPs and conducting inadequate monitoring activities. Some Dischargers under the previous permit had the resources to hire professional environmental staff or environmental consultants to assist in compliance. Even in those cases, however, there was little certainty that Dischargers received training regarding implementation of the various BMPs being implemented and required monitoring activities under the previous permit. Through this General Permit, the State Water Board seeks to improve compliance and monitoring data quality, and expand each Discharger's understanding of this General Permit's requirements.

This General Permit establishes the Qualified Industrial Storm Water Practitioner (QISP) role. A QISP is someone who has completed a State Water Board sponsored or

approved QISP training course and has registered in SMARTS. A QISP is required to implement certain General Permit requirements at the facility once it has entered Level 1 status in the ERA process as described in Section XII of this General Permit. In some instances it may be advisable for a facility employee to take the training, or for a facility to hire a QISP prior to entering Level 1 status as the training will contain information on the new permit requirements and how to perform certain tasks such as selecting discharge locations representative of the facility storm water discharge, evaluating potential pollutant sources, and identifying inadequate SWPPP elements.

Some industry stakeholders have claimed that their staff is already adequately trained. These employees may continue to perform the basic permit functions (e.g. prepare SWPPPs, perform monitoring requirements, and prepare Annual Reports) without receiving any additional training if the facility's sampling and analysis results do not exceed the NALs. This requirement is structured in a manner to reduce the costs of compliance for facilities that may not negatively impact receiving water quality.

California licensed professional civil, industrial, chemical, and mechanical engineers and geologists have licenses that have professional overlap with the topics of this General Permit. The California Department of Consumer Affairs, Board for Professional Engineers, Land Surveyors and Geologists (CBPELSG) provides the licensure and regulation of professional civil, industrial, chemical, and mechanical engineers and professional geologists in California. The State Water Board is developing a specialized self-guided State Water Board-sponsored registration and training program specifically for these CPBELSG licensed engineers and geologists in good standing with CBPELSG. The CBPELSG has staff and resources dedicated to investigate and take appropriate enforcement actions in instances where a licensed professional engineer or geologist is alleged to be noncompliant with CBPELSG's laws and regulations. Actions that result in noncompliance with this General Permit may constitute a potential violation of the CBPELSG requirements and may subject a licensee to investigation by the CBPELSG.

A QISP may represent one or more facilities but must be able to perform the functions required by this General Permit at all times. It is advisable that this individual be limited to a specific geographic region due to the difficulty of performing the needed tasks before, during, and after qualifying storm events may be difficult or impossible if extensive travel is required. Dischargers are required to ensure that the designated QISP has completed the appropriate QISP training course.

This General Permit contains a mechanism that allows for the Water Boards' Executive Director or Executive Officer to rescind the registration of any QISPs who are found to be inadequately performing their duties as a QISP will no longer be able to do so. A QISP may ask the State Water Board to review any decision to revoke his or her QISP registration. Table 1 of this Fact Sheet below describes the different roles that the QISP and California licensed professional engineers have in this General Permit.

TABLE 1: Role-Specific Permit Requirements

Qualifications	Task
QISP	Assist New Dischargers determine coverage eligibility for Discharges to an impaired water body, Level 1 ERA Evaluation and report, Level 2 ERA Action Plan, and Technical Report, and the Level 2 ERA extension
California licensed professional engineer	Inactive Mining Operation Certification, SWPPPs for inactive mining, and annual re-certification of Inactive Mining Operation Certification, NONA Technical Reports, and Subchapter N calculations

I. Storm Water Pollution Prevention Plan (SWPPP)

1. General

This General Permit requires that all Dischargers develop, implement, and retain onsite a site-specific SWPPP. The SWPPP requirements generally follow U.S. EPA's five-phase approach to developing SWPPPs, which has been adapted to reflect the requirements of this General Permit in Figure 2 of this Fact Sheet. This approach provides the flexibility necessary to establish appropriate BMPs for different industrial activities and pollutant sources. This General Permit requires a Discharger to include in its SWPPP (Section X of this General Permit) a site map, authorized NSWDs at the facility, and an identification and assessment of potential pollutant sources resulting from exposure of industrial activities to storm water.

This General Permit requires that Dischargers clearly describe the BMPs that are being implemented in the SWPPP. In addition to providing descriptions, Dischargers must also describe who is responsible for the BMPs, where the BMPs will be installed, how often and when the BMPs will be implemented, and identify any pollutants of concern. Table 2 of this Fact Sheet provides an example of how a Discharger could assess potential pollution sources and provide a corresponding BMPs summary.

This General Permit requires that Dischargers select an appropriate facility inspection frequency beyond the required monthly inspections if necessary, and to determine if SWPPP revisions are necessary to address any physical or operational changes at the facility or make changes to the existing BMPs (Section X.H.4.a.vii and Section XI.A.4 of this General Permit). Facilities that are subject to multi-phased physical expansion or significant seasonal operational changes may require more frequent SWPPP updates and facility inspections. Facilities with very stable operations may require fewer SWPPP updates and facility inspections.

Failure to develop or implement an adequate SWPPP, or update or revise an existing SWPPP as required, is a violation of this General Permit. Failure to maintain the SWPPP on-site and have it available for inspection is also a violation of this General Permit.

Dischargers are also required to submit their SWPPPs and any SWPPP revisions via SMARTS; accordingly, BMP revisions made in response to observed compliance problems will be included in the revised SWPPP electronically submitted via SMARTS. Not all SWPPP revisions are significant and it is up to the Dischargers to distinguish between revisions that are significant and those that are not significant. If no changes are made at all to the SWPPP, the Discharger is not required to resubmit the SWPPP on any specific frequency.

- **Significant SWPPP Revisions:** Dischargers are required to certify and submit via SMARTS their SWPPP within 30 days of the significant revision(s). While it is not easy to draw a line generally between revisions that are significant and those that are not significant, Dischargers are not required to certify and submit via SMARTS any SWPPP revisions that are comprised of only typographical fixes or minor clarifications.
- **All Other SWPPP Revisions:** Dischargers are required to submit revisions to the SWPPP that are determined to not be significant every three (3) months in the reporting year.

FIGURE 2: Five Phases for Developing and Implementing an Industrial Storm Water Pollution Prevention Plan (SWPPP)

PLANNING AND ORGANIZATION

- *Form Pollution Prevention Team
- *Review other facility plans

ASSESSMENT

- *Develop a site map
- *Identify potential pollutant sources
- *Inventory of materials and chemicals
- *List significant spills and leaks
- *Identify Non-Storm Water Discharges
- *Assess pollutant risk

Best Management Practice (BMP) IDENTIFICATION

- *Identify minimum required BMPs
- *Identify any advanced BMPs

IMPLEMENTATION

- *Train employees for the Pollution Prevention Team
- *Implement BMPs
- *Collect and review records

EVALUATION / MONITORING

- *Conduct annual facility evaluation (Annual Evaluation)
- *Review monitoring information
- *Evaluate BMPs
- *Review and revise SWPPP

TABLE 2: Example - Assessment of Potential Industrial Pollution Sources and Corresponding BMPs Summary

Area	Activity	Pollutant Source	Industrial Pollutant	BMPs
Vehicle and Equipment Fueling	Fueling	Spills and leaks during delivery	Fuel oil	-Use spill and overflow protection
		Spills caused by topping off fuel tanks	Fuel oil	-Train employees on proper fueling, cleanup, and spill response techniques
		Hosing or washing down fuel area	Fuel oil	-Use dry cleanup methods rather than hosing down area -Implement proper spill prevention control program
		Leaking storage tanks	Fuel oil	-Inspect fueling areas regularly to detect problems
		Rainfall running off fueling area, and rainfall running onto and off fueling area	Fuel oil	-Minimize run-on of storm water into the fueling area, cover fueling area

2. Minimum and Advanced BMPs

Section V of this General Permit requires the Discharger to comply with technology-based effluent limitations (TBELs). In this General Permit, TBELs rely on implementation of BMPs for Dischargers to reduce and prevent pollutants in their discharge. The BMP effluent limitations have been integrated into the Section X.H of this General Permit and are divided into two categories – minimum BMPs which are generally non-structural BMPs that all Dischargers must implement to the extent feasible, and advanced BMPs which are generally structural BMPs that must be implemented if the minimum BMPs are inadequate to achieve compliance with the TBELs. Section X of this General Permit includes both substantive control requirements in the form of the BMPs listed in Section X.H, as well as various reporting and recordkeeping requirements. The requirement to implement BMPs “to the extent feasible” allows Dischargers flexibility when implementing BMPs, by not requiring the implementation of BMPs that are not technologically available and economically practicable and achievable in light of best industry practices.

The 2008 MSGP requires Dischargers to comply with 12 non-numeric technology-based effluent limits in Section 2.1.2 of the permit through the implementation of “control measures.” This requirement is an expansion of the general considerations outlined in the MSGP adopted in 2000. The control measures specified by the U.S. EPA in the 2008 MSGP are as follows (in order as listed in the 2008 MSGP):

1. Minimize Exposure
2. Good Housekeeping
3. Maintenance
4. Spill Prevention and Response Procedures
5. Erosion and Sediment Controls
6. Management of Runoff
7. Salt Storage Piles or Piles Containing Salt
8. Sector Specific Non-Numeric Effluent Limits
9. Employee Training
10. Non-Storm Water Discharges (NSWDs)
11. Waste, Garbage and Floatable Debris
12. Dust Generation and Vehicle Tracking of Industrial Materials

This General Permit addresses eleven of the above twelve control measures from the 2008 MSGP Section 2.1.2 Non-Numeric Technology-Based Effluent Limits (BPT/BAT/BCT). Eleven of the control measures are addressed as minimum BMPs that the State Water Board has determined to be most applicable to California’s Dischargers. Two of those eleven control measures (1- Minimize Exposure, 6 – Management of Runoff) are also identified as advanced BMPs (Section X.H.2 of this General Permit). This General Permit is not a sector-specific permit and therefore does not contain limitations to address control measure number 8 (Sector Specific Non-Numeric Effluent Limits).

The non-structural elements of the control measure to minimize exposure are addressed in the minimum BMP Section X.H.1 of this General Permit while structural control elements are addressed in the advanced BMP Section X.H.2 of this General Permit. The on-site diversion elements of the control measure to minimize exposure are addressed as minimum BMPs.

The runoff reduction elements of the control measure to minimize exposure are included as advanced BMPs. Advanced BMPs that are required to be implemented when a Discharger has implemented the minimum BMPs to the extent feasible and they are not adequate to comply with the TBELs. The advanced BMP categories are: (1) exposure minimization BMPs, (2) storm water containment and discharge reduction BMPs, (3) treatment control BMPs, and (4) additional advanced BMPs needed to meet the effluent limitations of this General Permit. Advanced BMPs are generally structural control measures and can include any BMPs that exceed the minimum BMPs. The control measure for Non-Storm Water Discharges (NSWDs) is addressed in both the discharge prohibitions (Section III) and authorized non-storm water discharges (Section IV) of this General Permit and essentially represents a minimum BMP.

This General Permit encourages Dischargers to utilize BMPs that infiltrate or reuse storm water where feasible. The State Water Board expects that these types of BMPs will not be appropriate for all industrial facilities, but recognizes the many possible benefits (e.g. increased aquifer recharge, reduces flooding, improvements to water quality) associated with the infiltration and reuse of storm water.

Encouraging the use of storm water infiltration and reuse BMPs is consistent with the statewide approach to managing storm water with lower impact methods.

The BMPs in this General Permit that coincide with the control measures in the 2008 MSGP are as follows (in order as listed in the 2008 MSGP):

a. Minimization of Exposure to Storm Water

Section 2.1.2.1 of the 2008 MSGP requires Dischargers to minimize the exposure of industrial materials and areas of industrial activity to rain, snow, snowmelt, and runoff. The 2008 MSGP mixes both structural and nonstructural BMPs and specifies particular BMPs to consider when minimizing exposure such as grading/berming areas to minimize runoff, locating materials indoors, spill clean up, contain vehicle fluid leaks or drain fluids before storing vehicles on-site, secondary containment of materials, conduct cleaning activities undercover, indoors or in bermed areas, and drain all wash water to a proper collection system.

This General Permit requires the evaluation of BMPs in the potential pollutant source assessment in the SWPPP (Section X.G.2). When the minimum BMPs are not adequate to comply with the TBELs, Dischargers are required to implement advanced BMPs (Section X.H.2.a). These advanced BMPs may include additional exposure minimization BMPs (Section X.H.2.b.1).

b. Good Housekeeping

Section 2.1.2.2 of the 2008 MSGP requires that Dischargers keep all exposed areas that may be a potential source of pollutants clean and orderly. This General Permit (Section X.H.1.a) seeks to define “clean and orderly” by specifying a required set of nine (9) minimum good housekeeping BMPs, which include: observations of outdoor/exposed areas, BMPs for controlling material tracking, BMPs for dust generated from industrial materials or activities, BMPs for rinse/wash water activities, covering stored industrial materials/waste, containing all stored non-solid industrial materials, preventing discharge of rinse/wash waters/industrial materials, prevent non-industrial area discharges from contact with industrial areas of the facility, and prevent authorized NSWDS from non-industrial areas from contact with industrial areas of the facility.

c. Preventative Maintenance

Section 2.1.2.3 of the 2008 MSGP requires that Dischargers regularly inspect, test, maintain, and repair all industrial equipment to prevent leaks, spills and releases of pollutants that may be exposed to storm water discharged to receiving waters. This General Permit (Section X.H.1.b) incorporates this

concept by requiring four (4) nonstructural BMPs which include: identification and inspection of equipment, observations of potential leaks in identified equipment, an equipment maintenance schedule, and equipment maintenance procedures.

d. Spill and Leak Prevention and Response

Section 2.1.2.4 of the 2008 MSGP requires that Dischargers minimize the potential for leaks, spills and other releases that may be exposed to storm water. Dischargers are also required to develop a spill response plan which includes procedures such as labeling of containers that are susceptible to a spill or a leakage, establishing containment measures for such industrial materials, procedures for stopping leaks/spills, and provisions for notification of the appropriate personnel about any occurrence. This General Permit (Section X.H.1.c) requires implementation of four (4) BMPs to address spills. These BMPs include: developing a set of spill response procedures to minimize spills/leaks, develop procedures to minimize the discharge of industrial materials generated through spill/leaks, identifying/describing the equipment needed and where it will be located at the facility, and identify/training appropriate spill response personnel.

e. Erosion and Sediment Controls

Section 2.1.2.5 of the 2008 MSGP requires the use of structural and/or non-structural control measures to stabilize exposed areas and contain runoff. Also required is the use of a flow velocity dissipation device(s) in outfall channels where necessary to reduce erosion and/or settle out pollutants. This General Permit (Section X.H.1.e) requires the implementation of (5) BMPs to prevent erosion and sediment discharges. The erosion and sediment control BMPs include: implementing effective wind erosion controls, providing for effective stabilization of erodible areas prior to a forecasted storm event, site entrance stabilization/prevent material tracking offsite and implement perimeter controls, diversion of run-on and storm water generated from within the facility away from all erodible materials, and ensuring compliance with the design storm standards in Section X.H.6. U.S. EPA has developed online resources for erosion and sediment controls.⁶

f. Management of Runoff

Section 2.1.2.6 of the 2008 MSGP requires the diversion, infiltration, reuse, containment, or otherwise reduction of storm water runoff, to minimize pollutants in discharges. This General Permit (Sections X.H.1.a.viii, X.H.1.d.iv., and

⁶ U.S. EPA. 2008 MSGP. <<http://cfpub.epa.gov/npdes/stormwater/msgp.cfm>> [as of February 4, 2014].
U.S. EPA. National Menu of BMPs. <<http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm>>.
[as of February 4, 2014].
U.S. EPA. National Management Measures to Control Nonpoint Source Pollution from Urban Areas
<<http://water.epa.gov/polwaste/nps/urban/index.cfm>>. [as of February 4, 2014].

X.H.1.e.iv) requires Dischargers to divert run-on from non-industrial sources and manage storm water generated within the facility away from industrial materials and erodible surfaces. Runoff reduction is required as an advanced BMP when minimum BMPs are not adequate to comply with the TBELs. The 2008 MSGP encouraged Dischargers to consult with EPA's internet-based resources relating to runoff management.⁷

g. Salt Storage Piles or Piles Containing Salt

Section 2.1.2.7 of the 2008 MSGP requires salt storage piles/piles containing salt that may be discharged to be enclosed or covered and to use BMPs when the salt is being used. This General Permit does not have a minimum BMP specifically for salt storage, however it does require all stockpiled/stored industrial materials be managed in a way to reduce or prevent industrial storm water discharges of the stored/stockpiled pollutants. The good housekeeping (Section X.H.1.a) and material handling and waste management (Section X.H.1.d) minimum BMPs in this General Permit require that all materials readily mobilized by storm water be covered, the minimization of handling of industrial materials or wastes that can be readily mobilized by contact with storm water during a storm event, and the diversion of run-on from stock piled materials.

h. Sector Specific Non-Numeric Effluent Limits

Section 2.1.2.8 of the 2008 MSGP requires Dischargers to achieve any additional non-numeric limits stipulated in the relevant sector-specific section(s) of Part 8 of the 2008 MSGP. This General Permit is not a sector-specific permit and does not contain sector-specific non-numeric effluent limitations like the 2008 MSGP. While this General Permit does not specify sector-specific BMPs, Dischargers are required to select and implement BMPs for their specific facility to reduce or prevent industrial storm water discharges of pollutants to comply with the technology-based effluent limitations. In addition, sectors with applicable ELGs must comply with those ELGs.

i. Employee Training Program

Section 2.1.2.9 of the 2008 MSGP requires all employees engaged in industrial activities or the handling of industrial materials that may affect storm water to obtain training covering implementation of this General Permit. This General Permit (Section X.D.1 and X.H.1.f) requires a facility to establish a Pollution Prevention Team (team members, collectively) responsible for implementing permit requirements such as the SWPPP, monitoring requirements, or BMPs.

⁷ U.S. EPA. Sector-Specific Industrial Stormwater Fact Sheet Series <www.epa.gov/npdes/stormwater/msgp>. [as of February 4, 2014].
U.S. EPA. National Menu of Stormwater BMPs <www.epa.gov/npdes/stormwater/menuofbmps> [as of February 4, 2014].
U.S. EPA. National Management Measures to Control Nonpoint Source Pollution from Urban Areas (and any similar State or Tribal publications) <www.epa.gov/owow/nps/urbanmm/index.html>. [as of February 4, 2014].

The five (5) minimum training BMPs include: ensuring that all team members are properly trained, preparing the proper training materials and manuals, identifying which individuals need to be trained, providing a training schedule, and maintaining documentation on the training courses and which individuals received the training.

This General Permit also requires a QISP to be assigned to each facility that reaches Level 1 status. One purpose of a QISP is to have an individual available who can provide compliance assistance with these training requirements. The QISP is responsible for training the appropriate team members. Appropriate team members are any team members involved in implementing this General Permit for drainage areas causing NAL exceedances, and any other team members identified by the QISP that need additional training to implement this General Permit.

j. NSWDs

Section 2.1.2.10 of the 2008 MSGP requires that unauthorized NSWDs are eliminated (Part 1.2.3 of the 2008 MSGP lists the NSWDs authorized by the 2008 MSGP). The good housekeeping minimum BMP (Section X.H.1.a.ix of this General Permit) requires that contact between authorized NSWDs and industrial areas of the facility be minimized. This General Permit (Section IV) also includes separate requirements for authorized NSWDs and (Section III) prohibits unauthorized NSWDs.

k. Material Handling and Waste Management

Section 2.1.2.11 of the 2008 MSGP requires that Dischargers ensure waste, garbage, and floatable debris are not discharged into receiving waters. The 2008 MSGP identifies keeping areas clean and intercepting such materials as ways to minimize such discharges. This General Permit (Section X.H.1.d) requires Dischargers to implement six (6) general BMPs that address material handling and waste management. These BMPs include: preventing or minimizing handling of waste or materials during a storm event that could potentially result in a discharge, containing industrial materials susceptible to being dispersed by the wind, covering industrial waste disposal containers when not in use to contain industrial materials, diversion of run-on and storm water generated from within the facility away from all stock piled materials, cleaning and managing spills of such wastes or materials (in accordance with Section X.H.1.e of this General Permit), and conducting observations of outdoor areas and equipment that may come into contact with such materials or waste and become contaminated.

l. Waste, Garbage and Floatable Debris

Section 2.1.2.11 of the 2008 MSGP requires that waste, garbage, and floatable debris are not discharged to receiving waters by keeping exposed areas free of such materials or by intercepting them before they are discharged. Material handling and waste management BMPs are included in Section X.H.1.d of this General Permit. Dischargers are required to: prevent handling of waste materials during a storm event that could result in a discharge, contain waste disposal

containers when not in use, clean and manage spills from waste, and observe outdoor areas and equipment that may come into contact with waste and become contaminated.

m. Dust Generation and Vehicle Tracking of Industrial Materials

Section 2.1.2.12 of the 2008 MSGP requires that generation of dust and off-site tracking of raw, final, or waste materials is minimized. This General Permit does not require minimization of dust generation and vehicle tracking of industrial materials as a minimum BMP directly. Dust generation and vehicle tracking of industrial materials BMPs are included in Section X.H.1.a (“good housekeeping”) of this General Permit where Dischargers must prevent dust generation from industrial materials or activities and contain all stored non-solid industrial materials that can be transported or dispersed via wind or come in contact with storm water, and Section X.H.1.d. (“material handling and waste management”) of this General Permit, which requires Dischargers to contain non-solid industrial materials or wastes that can be dispersed via wind erosion or come into contact with storm water during handling.

n. Quality Assurance and Record Keeping

Section 2.1.2 of the 2008 MSGP does not directly designate record keeping as a control measure. This General Permit (Section X.H.1.g) includes quality assurance and record keeping as a minimum BMP and requires Dischargers to implement three (3) general BMPs. These BMPs include: developing and implementing procedures to ensure that all elements of the SWPPP are implemented, develop a method of tracking and recording the implementation of all BMPs identified in the SWPPP, and a requirement to keep and maintain those records. This ensures that management procedures are designed and permit requirements are implemented by appropriate staff.

o. Implementation of BMPs in the SWPPP

Like the previous permit, this General Permit does not assign Dischargers a schedule to implement BMPs. Instead, this General Permit requires Dischargers to select the appropriate schedule to implement the minimum BMPs. In addition, this General Permit requires Dischargers to identify, as necessary, any BMPs that should be implemented prior to precipitation events. Although Dischargers are required to maintain internal procedures to ensure the BMPs are implemented according to schedule or prior to precipitation events, Dischargers are only required to certify in the Annual Report whether they complied with the BMP implementation requirements.

Dischargers are required to implement an effective suite of BMPs that meet the technology and water-quality based limitations of this General Permit. Based upon Regional Water Board staff inspections, there is significant variation between Dischargers’ interpretations of what BMPs were necessary to comply with the previous permit. This General Permit establishes a new requirement that Dischargers must implement, to the extent feasible, specific minimum BMPs

to reduce or prevent the presence of pollutants in their industrial storm water discharge. In addition, due to the wide variety of facilities conducting numerous and differing industrial activities throughout the state, this General Permit retains the requirement from the previous permit that Dischargers establish and implement additional BMPs beyond the minimum. Implementation of this General Permit's minimum BMPs, together with any necessary advanced BMPs, will result in compliance with the effluent limitations of this General Permit (Section V.A). All Dischargers must evaluate their facilities and determine the best practices within their industry considering technological availability and economic practicability and achievability to implement these minimum BMPs and any advanced BMPs.

The State Water Board has selected minimum BMPs that are generally applicable at all facilities. The minimum BMPs are consistent with the types of BMPs normally found in properly developed SWPPPs and, in most cases, should represent a significant portion of the effort required for a Discharger to achieve compliance. Due to the diverse industries covered by this General Permit, the development of a more comprehensive list of minimum BMPs is not currently feasible. The selection, applicability, and effectiveness of a given BMP is often related to industrial activity type and to facility-specific facts and circumstances. Advanced BMPs must be selected and implemented by Dischargers, based on the type of industry and facility-specific conditions, to the extent necessary to comply with the technology-based effluent limitation requirements of this General Permit.

Failure to implement all of the minimum BMPs to the extent feasible is a violation of this General Permit. (Section X.H.1.) Dischargers must justify any determination that it is infeasible to implement a minimum BMP in the SWPPP (Section X.H.4.b). Failure to implement advanced BMPs necessary to achieve compliance with either the technology or water quality standards requirements in this General Permit is a violation of this General Permit.

p. Temporary Suspension of Industrial Activities

The exception for inactive and unstaffed sites in section 6.2.1.3 of the 2008 MSGP does not require a Discharger with a facility that is inactive and unstaffed with no industrial materials or activities exposed to storm water (in accordance with the substantive requirements in 40 Code of Federal Regulations section 122.26(g)) to complete benchmark monitoring. The Discharger is required to sign and certify a statement in the SWPPP verifying that the site is inactive and unstaffed. If circumstances change and industrial materials or activities become exposed to storm water or the facility becomes active and/or staffed, this exception no longer applies and the Discharger is required to begin complying immediately with the applicable benchmark monitoring requirements under part 6.2 of the 2008 MSGP.

This General Permit allows Dischargers to temporarily suspend monitoring at facilities where industrial activities have been suspended in accordance with Section X.H.3. This is only intended for Dischargers with facilities where it is

infeasible to comply with this General Permit's monitoring while activities are suspended (e.g. remote, unstaffed, or inaccessible facilities during the time of such a suspension). Dischargers are required to update the facility's SWPPP with the BMPs being used to stabilize the site and submit the suspension dates and a justification for the suspension of monitoring via SMARTS.

3. Design Storm Standards for Treatment Control BMPs

It is the State Water Board's intent to minimize the regulatory uncertainty and costs concerning treatment control BMPs in order to encourage the implementation of treatment control BMPs when appropriate. Section X.H.6 of this General Permit specifies a design storm standard for use when treatment controls BMPs are installed. There is both a volume-based and flow-based design storm standard in this General Permit. Both are based on the 85th percentile 24-hour storm event. Without a design storm standard, Dischargers have installed treatment controls using a wide variety of designs that were sometimes either unnecessarily stringent/expensive, or deficient in complying with the requirements of the relevant permit. Some Dischargers have been hesitant to consider treatment options because of the uncertainty concerning acceptable treatment design. The design storm standards are generally expected to:

- Be consistent with the effluent limitations of this General Permit;
- Be protective of water quality;
- Be achievable for most pollutants and their associated treatment technologies; and,
- Reduce the costs associated with treating industrial storm water discharges beyond the levels necessary to achieve compliance with this General Permit.

In lieu of complying with the design storm standards for treatment control BMPs, Dischargers may certify and submit a Level 2 ERA Technical Report, including an Industrial Activity BMPs Demonstration (Section XII.D.2.a of this General Permit). The Level 2 ERA Technical Report requirement is based upon NAL exceedances. Under this option, a Discharger with Level 2 status must either implement BMPs to eliminate future NAL exceedances, or justify what BMPs must be implemented to comply with this General Permit even if the BMPs will not eliminate future exceedances of NALs. Dischargers who implement treatment control BMPs that vary from the design storm standards in Section X.H.6 must include an analysis showing that their treatment control BMPs comply with this General Permit's effluent limitations in the Industrial Activity BMP Demonstration.

This General Permit does not require Dischargers to retrofit existing treatment controls that do not meet the design storm standard, unless the Discharger determines that the existing treatment controls are not adequate to comply with this General Permit. In addition, once TMDL-specific implementation requirements are added to this General Permit, those Dischargers subject to TMDLs may need to add

new or retrofitted treatment control BMPs to meet the TMDL implementation requirements.

To arrive at these design storm standards, the State Water Board has relied heavily on previous Water Board decisions concerning treatment efficacy for municipalities, published documents, stakeholder comments, and reasonableness. In 2000, the State Water Board issued State Water Board Order WQ 2000-11, which upheld Los Angeles Regional Water Board's permit requirements which mandated that all new development and redevelopment exceeding certain size criteria design treatment BMPs based on a specific storm volume: the 85th percentile 24-hour storm event. This design storm standard was based on research demonstrating that the standard represents the maximized treatment volume cut-off at the point of diminishing returns for rainfall/runoff frequency.⁸ On the basis of this equation, the maximized runoff volume for 85 percent treatment of annual runoff volumes in California can range from 0.08 to 0.86 inch depending on the imperviousness of the watershed area and the mean amount of rainfall. This design storm standard is referred to as the Standard Urban Storm Water Mitigation Plan's volumetric criterion and there are multiple acceptable methods of calculating this volume. For more information, see the California Stormwater Best Management Practices Handbook.⁹

The San Diego Regional Water Board first established both volumetric and flow-based design storm criteria for NPDES MS4 permits. It is generally accepted by civil engineers doing hydrology work to use twice the peak hourly flow of a specific storm event to use as the basis for flow-based design of BMPs. This General Permit therefore establishes the flow-based design storm standard to be twice the peak hourly flow of the 85th percentile 24-hour storm event.

The primary objective of specifying a design storm standard is to properly size BMPs to, at a minimum, effectively treat the first flush of run-off from all storm events. The economic impacts of treating all storm water from a facility versus the minimal environmental benefit of complete treatment justify the design storm approach. It is unrealistic to require each facility to do a cost benefit analysis of their treatment structures. To simplify the requirements for design, the State Water Board reviewed research from the City of Portland¹⁰ and the City of San Jose¹¹ to determine the volume of each rain event compared to the amount of events that occur for that volume. The results of their findings show an inflection point that is typically found at approximately the 80 to 85 percentile of recorded storm events.

⁸ California Regional Water Quality Control Board Los Angeles Region, Standard Urban Storm Water Mitigation Plans and Numerical Design Standards for Best Management Practices - Staff Report and Record of Decision (Jan. 18, 2000) <http://www.swrcb.ca.gov/rwqcb4/water_issues/programs/stormwater/susmp/susmp_final_staff_report.pdf>. [as of February 4, 2014].

⁹ California Stormwater Quality Association, Stormwater Best Management Practice New Development and Redevelopment Handbook (2003) <<http://www.casqa.org/>>. [as of February 4, 2014].

¹⁰ City of Portland Oregon. Portland Stormwater Management Manual Appendix E.1: Pollution Reduction Methodology E.1-1 (August 1, 2008). <<http://www.portlandoregon.gov/bes/article/202909>>. [as of February 4, 2014].

¹¹ California Stormwater Quality Association (CASQA). CASQA BMP Handbook (January 2003) New Development and Redevelopment (Errata 9-04) <<http://www.casqa.org/>>. [as of February 4, 2014].

Dischargers should be aware of the potential unintended public health concerns associated with treatment control BMPs. Extensive monitoring studies conducted by the California Department of Public Health (CDPH) have documented that mosquitoes opportunistically breed in structural BMPs, particularly those that hold standing water for over 96 hours. BMPs that produce mosquitoes create potential public health concerns and increase the burden on local vector control agencies that are mandated to inspect for and abate mosquitoes and other vectors within their jurisdictional boundaries. These unintended consequences can be lessened when BMPs incorporate design, construction, and maintenance principles developed specifically to minimize standing water available to mosquitoes¹² while having negligible effects on the capacity of the structures to provide water quality improvements. The California Health and Safety Code prohibits landowners from knowingly providing habitat for or allowing the production of mosquitoes and other vectors, and gives local vector control agencies broad inspection and abatement powers.¹³

Dischargers who install any type of volume-based treatment device are encouraged to consider the BMPs in the California Department of Public Health's guidance manual published July 2012, "Best Management Practices for Mosquito Control in California" at <http://www.cdph.ca.gov/HealthInfo/discond/Documents/BMPforMosquitoControl07-12.pdf>.

4. Monitoring Implementation Plan

Dischargers are required to prepare and implement a Monitoring Implementation Plan (Section X.I of this General Permit). The Monitoring Implementation Plan requirements are designed to assist the Discharger in developing a comprehensive plan for the monitoring requirements in this General Permit and to assess their monitoring program. The Monitoring Implementation Plan includes a description of visual observation procedures and locations, as well as sampling procedures, locations, and methods. The Monitoring Implementation Plan shall be included in the SWPPP.

J. Monitoring and Reporting Requirements

1. General Monitoring Provisions

This General Permit requires Dischargers to develop and implement a facility-specific monitoring program. Monitoring is defined as visual observations, sampling and analysis. The monitoring data will be used to determine:

¹² California Department of Public Health. (2012). Best Management Practices for Mosquito Control in California. <<http://www.westnile.ca.gov/resources.php>>. [as of February 4, 2014]

¹³ California Health & Safety Code, Division 3, Section 2060 and following.

- a. Whether BMPs addressing pollutants in industrial storm water discharges and authorized NSWs are effective for compliance with the effluent and receiving water limitations of this General Permit,
- b. The presence of pollutants in industrial storm water discharges and authorized NSWs (and their sources) that may trigger the implementation of additional BMPs and/or SWPPP revisions; and,
- c. The effectiveness of BMPs in reducing or preventing pollutants in industrial storm water discharges and authorized NSWs.

Effluent sampling and analysis information may be useful to Dischargers when evaluating the need for improved BMPs. The monitoring requirements in this General Permit recognize the 2008 MSGP approach to visual observations as an effective monitoring method for evaluating the effectiveness of BMPs at most facilities. Section 6.2 of the 2008 MSGP limits its monitoring sampling requirements to certain industrial categories. Similar to the previous permit, this General Permit requires all Dischargers to sample unless they have obtained NEC coverage or have an inactive mining operation(s) certified as allowed under this General Permit Section XIII.

This General Permit defines a Qualifying Storm Event (QSE) to provide clarity to Dischargers of when sampling is required. The previous permit (Section B.5.a) specified that sampling was required within the first hour of discharge, however, this General Permit requires Dischargers to sample within four hours of the start of Discharge. Many Dischargers were not able to get samples of their discharge locations within one (1) hour under the previous permit so this general permit has expanded the timeframe allowed to provide enough time to sample all discharge locations. The previous permit required three working dry days before sampling and this General Permit defines this period as 48 hours, this timeframe was decreased to provide more opportunities for Dischargers to obtain samples. This General Permit does not specify a volume for sampling due to the complexity of using rain gauges and the limited access of rain gauge station data.

Dischargers are only required to obtain samples required during scheduled facility operating hours and when sampling conditions are safe in accordance with Section XI.C.6.a.ii of this General Permit. If a storm event occurs during unscheduled facility operating hours (e.g. during the weekend or night) and during the 12 hours preceding the scheduled facility operating hours, the Dischargers is still responsible for obtaining samples at discharge locations that are still producing a discharge at the start of facility operations. Under the previous permit, many Dischargers were unable to obtain samples due to rainfall beginning at night.

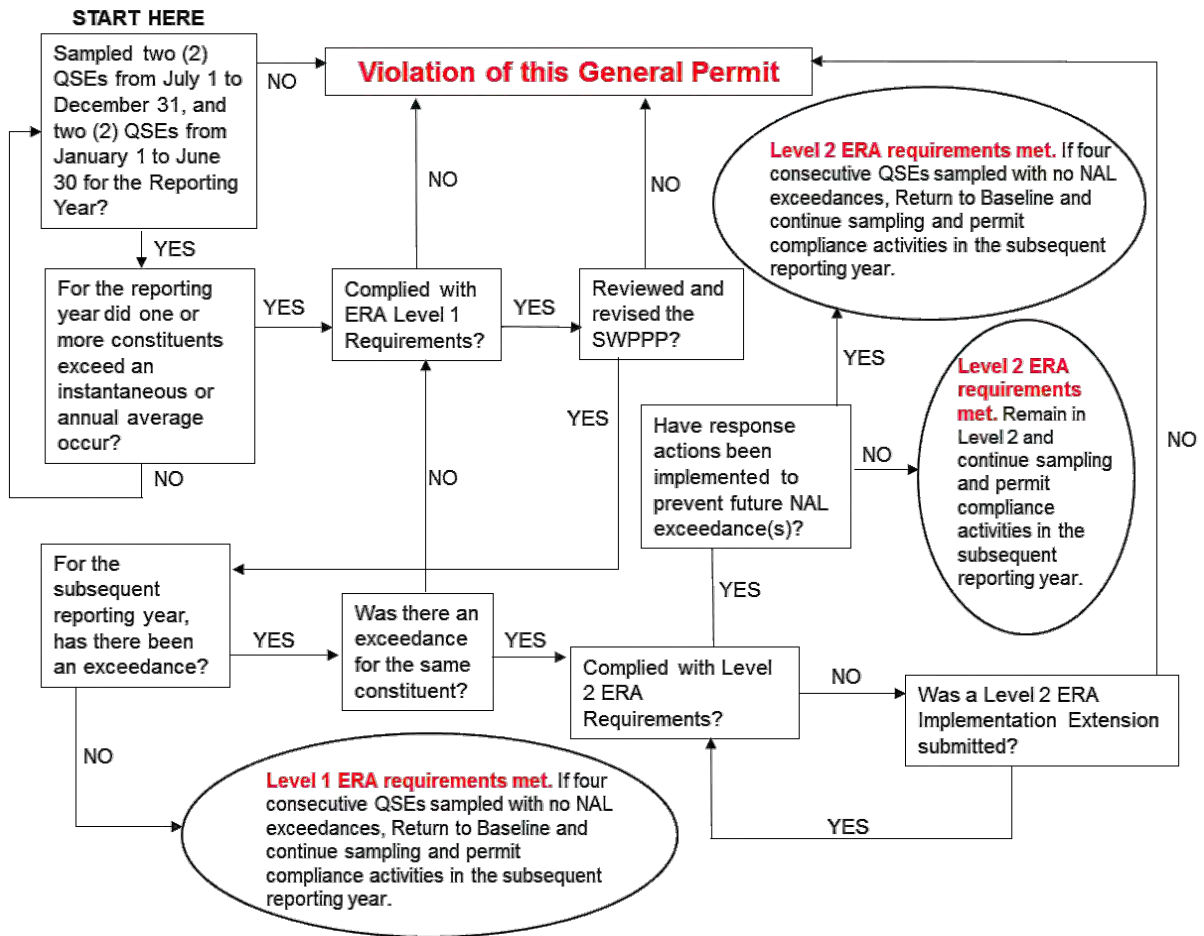
The State Water Board recognizes that it may not be feasible for all facilities to obtain four QSEs in a reporting year because there may not be enough qualifying storm events to do so. Therefore, a Discharger that is unable to collect and analyze storm water samples from two QSEs in each half of a reporting year due to a lack of QSEs is not in violation of Section XI.B.2. Dischargers that miss four QSEs during

a reporting year due to the fact that four QSEs did not occur are not required to make up these sampling events in subsequent reporting years.

The State Water Board recognizes that each facility has unique physical characteristics, industrial activities, and/or variations in BMP implementation and performance which warrants the requirement that each facility demonstrate its compliance. Figure 3 of this Fact Sheet provides a summary of all the monitoring-related requirements of this General Permit. This General Permit's monitoring requirements include sampling and analysis requirements for specific indicator parameters that indicate the presence of pollutants in industrial storm water discharges. The "indicator parameters" are oil and grease (for petroleum hydrocarbons), total suspended solids (for sediment and sediment bound pollutants) and pH (for acidic and alkaline pollutants). Additionally, Dischargers are required to evaluate their facilities and analyze samples for additional facility-specific parameters. These monitoring program requirements are designed to provide useful, cost-effective, timely, and easily obtained information to assist Dischargers as they identify their facility's pollutant sources and implement corrective actions and revise BMPs as necessary (Section XI.A.4 of this General Permit).

This General Permit requires a combination of visual observations and analytical monitoring. Visual observations provide Dischargers with immediate information indicating the presence of many pollutants and their sources. Dischargers must implement timely actions and revise BMPs as necessary (Section XI.A.4) when the visual observations indicate pollutant sources have not been adequately addressed in the SWPPP. Analytical monitoring provides an additional indication of the presence and concentrations of pollutants in storm water discharge. Dischargers are required to evaluate potential pollutant sources and corresponding BMPs and revise the SWPPP appropriately when specific types of NAL exceedances occur as described below.

FIGURE 3: Compliance Determination Flowchart



2. Visual Observations

There are two major changes to the visual observation requirements in this General Permit compared to the previous permit, which include:

a. Monthly Visual Observations

The previous permit required separate quarterly visual observations for unauthorized and authorized non-storm water discharges. It did not require periodic visual observations of the facility to determine whether all potential pollutant sources were being adequately controlled with BMPs. Prior drafts of this General Permit proposed the addition of pre-storm inspections. This was met with great resistance by Dischargers because of the complexity and burden of determining when a QSE would occur. Many of these Dischargers recommended that monthly BMP and non-storm water discharge visual observations should replace the proposed pre-storm inspections. This General Permit merges all visual observations into a single monthly visual observation.

b. Sampling Event Visual Observations

The previous permit required monthly storm water visual observations. This required Dischargers to conduct visual observations for QSEs that were not being sampled since only two QSEs were required to be sampled in the previous permit. As discussed below, the sampling requirement has been increased to four QSEs within each reporting year with two QSEs required in each half of the reporting year. We expect that this will result in more samples being collected and analyzed, since most of California experiences, on average, at least two QSEs per half year. This General Permit streamlines the storm water visual observation requirement by linking the visual observations to the time of sampling.

3. Sampling and Analysis

a. General

As part of the process for developing previous drafts of this General Permit, the State Water Board considered comments from numerous stakeholders concerning sampling and analysis. Sampling and analysis issues were the most dominant of all issues raised in the comments.

The State Water Board received stakeholder comments that fall into three primary categories concerning this General Permit's sampling and analysis approach:

- i. Comments supporting an intensive water quality sampling and analysis approach (with the goal of producing more accurate discharge-characterizing and pollutant concentration data) as the primary method of determining compliance with effluent limitations and receiving water limitations. Since this approach requires large amounts of high quality data to accurately quantify the characteristics of the discharges, it is referred to as the quantitative monitoring approach. Stakeholders supporting the quantitative approach generally also support the use of stringent NELs to evaluate compliance with this General Permit;
- ii. Comments supporting only visual observations as the primary method of determining compliance: These stakeholders generally assert that storm water sampling is an incomplete and not very cost effective means of determining water quality impacts on the receiving waters; and,
- iii. Comments supporting a combination of visual observations and cost-effective water quality sampling and analysis approach (sampling and analysis that would produce data indicating the presence of pollutants) to determine compliance (similar to the previous permit's approach). Since this approach uses more qualitative information to describe the quality and characteristics of the discharges, it is referred to as the qualitative monitoring approach.

Within each of the three categories, there are various recommendations and rationales as to the exact monitoring frequencies, procedures and methods, required to implement the approach. Stakeholders in favor of the quantitative monitoring approach commented that it is the only reliable and meaningful

method of assuring that: (1) BMPs are effective in reducing or preventing pollutants in storm water discharge in compliance with BAT/BCT, and (2) the discharge is not causing or contributing to an exceedance of a water quality standards. The stakeholders state that visual observations are not effective in measuring pollutant concentrations nor is it effective in determining the presence of colorless and/or odorless pollutants. The stakeholders state that qualitative monitoring (and the use of indicator parameters) will not provide results useful for calculating pollutant loading nor will it accurately characterize the discharge.

Stakeholders in favor of requiring only visual observations state that sampling and analysis is unnecessary because (1) the previous permit did not include NELs so the usefulness of sampling and analysis data is limited, (2) a significant majority of Dischargers should be able to develop appropriate BMPs without sampling and analysis data, (3) most pollutant sources and pollutants can be detected and mitigated through visual observations, (4) the costs associated with quantitative monitoring are excessive and disproportionate to any benefits, (5) U.S. EPA's storm water regulations do not require sampling, (6) The 2008 MSGP relies heavily on visual observations and requires only a limited number of specific industries to conduct sampling and analysis, and (7) the majority of Dischargers are small businesses and do not have sufficient training or understanding to perform accurate sampling and analysis.

Stakeholders in favor of requiring both visual observations and a cost-effective qualitative monitoring program state that (1) both are within the means and understanding of most Dischargers, and (2) monitoring results are useful for evaluating a Discharger's compliance without unnecessarily increasing the burden on the Discharger and without subjecting Dischargers to non-technical enforcement actions.

The State Water Board finds that it is feasible for the majority of Dischargers to develop appropriate BMPs without having to perform large amounts of quantitative monitoring, which can be very costly. In the absence of implementing NELs, the State Water Board has determined that the infeasibility and costs associated with developing quantitative monitoring programs at each of thousands industrial facilities currently permitted would outweigh the limited benefits. The primary difficulty associated with requiring intensive quantitative monitoring lies with the cost and the difficulty of accurately sampling industrial storm water discharges.

Stakeholders that support quantitative monitoring believe the data is necessary to determine pollutant loading, concentration, or contribution to water quality violations. In order to derive data necessary to support those goals, however, the data must be of high quality, meaning it must be accurate, precise and have an intact chain of custody. Many industrial facilities do not have well-defined storm water conveyance systems for sample collection. Storm water frequently discharges from multiple locations through sheet flow into nearby streets and adjoining properties. Sample collection from a portion of the sheet flow is an inexact measurement since not all of the flow is sampled. Requiring every Discharger to construct well-defined storm water conveyances may cost

anywhere from thousands to hundreds of thousands of dollars per facility depending on the size and nature of each industrial facility. At many facilities, the construction of such conveyances may also violate local building codes, create safety hazards, cause flooding, or increase erosion. In addition, eliminating sheet flow at some facilities could result in increased pollutant concentrations.

The State Water Board has considered the complexity and costs associated with quantitative monitoring. Unlike continuous point source discharges (e.g., publicly owned treatment works), storm water discharges are variable in intensity and duration. The concentration of pollutants discharged at any one time is dependent on many complex variables. The largest concentration of pollutants would be expected to discharge earlier in the storm event and taper off as discharges continue. Therefore, effective quantitative monitoring of storm water discharges would require that storm water discharges be collected and sampled until most or all of the pollutants have been discharged. Multiple samples would need to be collected over many hours. To determine the pollutant mass loading, the storm water discharge flow must also be measured each time a sample is collected.

For a quantitative monitoring approach to yield useful pollutant loading information, the installation of automatic sampling devices and flow meters at each discharge location would usually be necessary. In addition, qualified individuals would be needed to conduct the monitoring procedures, and to handle and maintain flow meters and automatic samplers are needed. A significant majority of storm water Dischargers under this General Permit do not possess the skills to manage such an effort. Dischargers will bear the cost of employing and/or training on-site staff to do this work, or the cost of contracting with environmental consultants and acquiring the required flow meters and automatic samplers. The cost to Dischargers to conduct quantitative monitoring varies depending on the number of outfalls, the number of storms, the length of each storm, the amount of staff training, and other variables.

To address these concerns, this General Permit includes a number of new items that bridge the gap between the previous permit's qualitative monitoring and the quantitative approach recommended by many commenters. This General Permit includes a requirement for all Dischargers to designate a QISP when they enter Level 1 status due to NAL exceedances. The QISP is required to be trained to: (1) more accurately identify discharge locations representative of the facility storm water discharge (2) select and implement appropriate sampling procedures (3) evaluate and develop additional BMPs to reduce or prevent pollutants in the industrial storm water discharges.

Dischargers that fail to develop and implement an adequate Monitoring Implementation Plan that includes both visual observations and sampling and analysis, are in violation of this General Permit. Dischargers that fail to comply with Level 1 status and Level 2 status ERA requirements, triggered by NAL exceedances, are in violation of this General Permit.

Water Code section 13383.5 requires that the State Water Board include (1) standardized methods for collection of storm water samples, (2) standardized methods for analysis of storm water samples, (3) a requirement that every sample analysis be completed by a State certified laboratory or in the field in accordance with Quality Assurance and Quality Control (QA/QC) protocols, (4) a standardized reporting format, (5) standardized sampling and analysis programs for QA/QC, and (6) minimum detection limits. The monitoring requirements in this General Permit (Section XI), as supplemented by SMARTS, address these requirements.

Under the previous permit, many Dischargers did not developed adequate sample collection and handling procedures, decreasing the quality of analytical results. In addition, Dischargers often selected inappropriate test methods, method detection limits, or reporting units. This General Permit requires all Dischargers to identify discharge locations that are representative of industrial storm water discharges and develop and implement reasonable sampling procedures to ensure that samples are not mishandled or contaminated.

It is infeasible for the State Water Board to provide a single comprehensive set of sample collection and handling procedures/instructions due to the wide variation in storm water conveyance and collection systems in use at facilities around the state. As an alternative, Attachment H of this General Permit provides minimum storm water sample collection and handling instructions that pertain to all facilities. Dischargers are required to develop facility-specific sample collection and handling procedures based upon these minimum requirements. Table 2 in this General Permit provides the minimum test methods that shall be used for a variety of common pollutants. Dischargers must be aware that use of more sensitive test methods (e.g., U.S. EPA Method 1631 for Mercury) may be necessary if they discharge to an impaired water body or are otherwise required to do so by the Regional Water Board. This General Permit allows Dischargers to propose an analytical test method for any parameter or pollutant that does not have an analytical test method specified in Table 2 or in SMARTS. Dischargers may also propose analytical test methods with substantially similar or more stringent method detection limits than existing approved analytical test methods. Upon approval, SMARTS will be updated over time to add additional acceptable analytical test methods.

The previous permit allowed Dischargers to reduce sampling analysis requirements for substantially similar drainage areas by either (1) combining samples for an unspecified maximum number of substantially similar drainage areas, or (2) sampling a reduced number of substantially similar drainage areas. The State Water Board provided this procedure to reduce analytical costs. The complexity associated with determining substantially similar drainage areas has led Dischargers to produce various, and sometimes questionable, analytical schemes. In addition, the previous permit did not establish a maximum number of samples that could be combined.

To standardize sample collection and analysis as required by Water Code section 13383.5, while continuing to offer a reduced analytic cost option, these

requirements have been revised. Section XI.B.4 of this General Permit requires Dischargers to collect samples from all discharge locations regardless of whether the discharges are substantially similar or not. Dischargers may analyze each sample collected, or may analyze a combined sample consisting of equal volumes, collected from as many as four (4) substantially similar discharge locations. A minimum of one combined sample shall be analyzed for every one (1) to four (4) discharge locations, and the samples shall be combined in the lab in accordance with Section XI.C.5 of this General Permit.

Representative sampling is only allowed for sheet flow discharges or discharges from drainage areas with multiple discharge locations. Dischargers shall select the appropriate location(s) to be sampled and intervals necessary to obtain samples representative of storm water associated with industrial activities generated within the corresponding drainage area. Dischargers are not required to sample discharge locations that have no exposure of industrial activities or materials as defined in Section XVII of this General Permit within the corresponding drainage area. However, Dischargers are required to conduct the monthly visual observations regardless of the selected locations to be sampled.

This General Permit defines a QSE as a precipitation event that produces a discharge from any drainage area that is preceded by 48 consecutive hours without a discharge from any drainage area. The previous permit did not include a QSE definition; instead, it utilized a different approach to defining the storm events that were required to be sampled. Under the previous permit, eligible storm events were storm events that occurred after three consecutive working days of dry weather. The three consecutive working days of dry weather definition in the previous permit led Dischargers to miss many opportunities to sample. Some Dischargers were unable to collect samples from two storm events in certain years under the previous definition. To resolve this difficulty, this General Permit increases the sampling requirements to four (4) QSEs per year, while decreasing the number of days without a discharge, resulting in additional opportunities for Dischargers to sample. Additionally, by eliminating the previous permit's reference to "dry weather," this General Permit allows some precipitation to occur between QSEs so long as there is no discharge from any drainage area. This change will result in more QSE sampling opportunities.

To improve clarity and consistency, the definitions contained in other storm water permits were considered with the goal of developing a standard definition for 'dry weather' for this General Permit. The 2008 MSGP sets a "measurable storm event" as one that produces at least 0.1 inches of precipitation and results in an actual discharge after 72 hours (three days) of dry weather. The State of Washington defines a "qualifying storm event" as a storm with at least 0.1 inches of precipitation preceded by at least 24 hours of no measurable precipitation, mirroring the definition found in the previous MSGP (2000 version). The State of Oregon requires that samples be taken in the first 12 hours of discharge and no less than 14 days apart. Review of other permits concludes that there is not a single commonly used approach to triggering sampling in industrial general permits. Therefore an enforceable sampling trigger is included in this General

permit that requires Dischargers to sample four storm events within each reporting year.

b. Effluent Water Quality Sampling and Analysis Parameters

Dischargers are required to sample and analyze their effluent for certain parameters. "Parameter" is a term used in laboratory analysis circles to represent a distinct, reportable measure of a particular type. For example, ammonia, hexavalent chromium, total nitrogen and chemical oxygen demand are all parameters that a laboratory can analyze storm water effluent for and report a quantity back. A parameter is also an indicator of pollution. In this General Permit, pH, total suspended solids and chemical oxygen demand are examples of indicator parameters. They are not direct measures of a water quality problem or condition of pollution but can be used to indicate a problem or condition of pollution. Indicator parameters can also be used to indicate practices and/or the presence of materials at a facility to bring forth information for compliance evaluation processes, like annual report review and inspection. For example, chemical oxygen demand concentrations can indicate the presence of dissolved organic compounds, like residual food from collected recycling materials.

Minimum parameter-specific monitoring is required for Dischargers, regardless of whether additional facility-specific parameters are selected. This General Permit requires some parameters to be analyzed and reported for the duration of permit coverage to develop comparable sampling data over time and over many storm events and to demonstrate compliance. The Regional Water Boards may use such data to evaluate individual facility compliance and assess the differences between various industries. Accordingly, the parameters selected correspond to a broad range of industrial facilities, are inexpensive to sample and analyze, and have sampling and analysis methods which are easy to understand and implement. Some analytical methods for field measurements of some parameters, such as pH, may be performed using relatively inexpensive field instruments and provides an immediate alert to possible pollutant sources.

The following three selected minimum parameters are considered indicator parameters, regardless of facility type. These parameters typically provide indication and/or the correlation of whether other pollutants are present in storm water discharge. These parameters were selected for the following reasons:

- i. pH is a numeric measurement of the hydrogen-ion concentration. Many industrial facilities handle materials that can affect pH. A sample is considered to have a neutral pH if it has a value of 7. At values less than 7, water is considered acidic; above 7 it is considered alkaline or basic. Pure rain water in California typically has a pH value of approximately 7.
- ii. Total Suspended Solids (TSS) is an indicator of the un-dissolved solids that are present in storm water discharge. Sources of TSS include sediment from erosion, and dirt from impervious (i.e., paved) areas. Many pollutants adhere to sediment particles; therefore, reducing sediment will reduce the amount of these pollutants in storm water discharge.

- iii. Oil and Grease (O&G) is a measure of the amount of O&G present in storm water discharge. At very low concentrations, O&G can cause sheen on the surface of water. O&G can adversely affect aquatic life, create unsightly floating material, and make water undrinkable. Sources of O&G include, but are not limited to, maintenance shops, vehicles, machines and roadways.

The previous permit allowed Dischargers to analyze samples for either O&G or Total Organic Carbon (TOC). This General Permit requires all Dischargers analyze samples for O&G since almost all Dischargers with outdoor activities operate equipment and vehicles can potentially generate insoluble oils and greases. Dischargers with water soluble-based organic oils may be required to also test for TOC. The TOC and O&G tests are not synonymous, duplicative or interchangeable.

This General Permit removes the requirement to analyze for specific conductance as part of the minimum analytic parameters. Specific conductance is not required by U.S. EPA for any industry type. Additionally, stakeholder comments indicate that there are many non-industrial sources that may cause high specific conductance and interfere with the efficacy of the test. For example, salty air deposition that occurs at facilities in coastal areas may raise the specific conductance in water over 500 micro-ohms per centimeter ($\mu\text{hos/cm}$). Dischargers are not prevented from performing a specific conductance test as a screening tool if it is useful to detect a particular pollutant of concern as required (e.g. salinity).

This General Permit requires Dischargers subject to Subchapter N ELGs for pH to analyze for pH using approved test methods in accordance with 40 Code of Federal Regulations part 136. These federal regulations specify that analysis of pH must take place within 15 minutes of sample collection. All other Dischargers may screen for pH using wide range litmus pH paper or other equivalent pH test kits within 15 minutes of sample collection. If in any reporting year a Discharger has two or more pH results outside of the range of 6.0 – 9.0 pH units, that Discharger is required to comply with the approved test methods in 40 Code of Federal Regulations part 136 in subsequent reporting years.

For almost all Dischargers, obtaining laboratory analysis within 15 minutes is logistically impossible. For many Dischargers, maintaining a calibrated pH meter is difficult, labor intensive, and error prone. Screening for pH will limit the number of additional Dischargers required to comply with 40 Code of Federal Regulations part 136 methods to those that have pH measures outside the range of 6.0-9.0 pH units. The use of wide range litmus pH paper or other equivalent pH test kits is not as accurate as a calibrated pH meter, however litmus paper is allowed in the 2008 MSGP, and when used properly it can provide an accurate screening measure to determine if further more-accurate pH sampling is necessary to determine compliance.

Review of available monitoring data shows that storm water discharges from most types of industrial facilities comply with the pH range of 6.0 to 9.0 pH units. There are specific types of industries, like cement or concrete manufacturers that

have shown a trend of higher pH values very close to 9.0 pH units. Rather than require all industries as a whole to monitor with the more costly 40 Code of Federal Regulations part 136 methods, this General Permit establishes a triggering mechanism for these more advanced pH test methods. The Regional Water Boards retain their authority to require more accurate test methods. Once a Discharger triggers the requirement to use the more accurate testing methods in 40 Code of Federal Regulations part 136, the Discharger may not revert back to screening for pH for the duration of coverage under this General Permit.

In the early 1990s, U.S. EPA, through its group application program, evaluated nationwide monitoring data and developed the listed parameters and SIC associations shown in Table 1 of this General Permit. The 2008 MSGP requires that Dischargers analyze storm water effluent for the listed parameters under certain conditions. In addition to the parameters in Table 1 of this General Permit, Dischargers are required to select additional facility-specific analytical parameters to be monitored, based upon the types of materials that are both exposed to and mobilized by contact with storm water. Dischargers must, at a minimum, understand how to identify industrial materials that are handled outdoors and which of those materials can easily dissolve or be otherwise transported via storm water.

The Regional Water Boards have the authority to revise the monitoring requirements for an individual facility or group of facilities based on site-specific factors including geographic location, industry type, and potential to pollute. For example, the Los Angeles Regional Water Board required all dismantlers (SIC Code 5015) within their jurisdiction to monitor for copper and zinc instead of aluminum and iron during the term of the previous permit. SMARTS will be programmed to incorporate any monitoring revisions required by the Regional Water Boards. Dischargers will receive email notification of the monitoring requirement revision and their SMARTS analytical reporting input screen will display the corresponding revisions. Dischargers may add, but not otherwise modify, the sampling parameters on their SMARTS input screen.

Dischargers are also required to identify pollutants that may cause or contribute to an existing exceedance of any applicable water quality standards for the receiving water. This General Permit requires Dischargers to control its discharge as necessary to meet the receiving water limitations, and to select additional monitoring parameters that are representative of industrial materials handled at the facility (regardless of the degree of storm water contact or relative mobility) that may be related to pollutants causing a water body to be impaired.

4. Methods and Exceptions

a. Storm Water Discharge Locations

Dischargers are required to visually observe and collect samples of industrial storm water discharges from each drainage area at all discharge locations. These samples must be representative of the storm water discharge leaving each drainage area. This is a change from the previous permit which allowed a

Discharger to reduce the number of discharge locations sampled if two or more discharge locations were substantially similar.

Dischargers are required to identify, when practicable, alternate discharge locations if: (1) the facility's industrial drainage areas are affected by storm water run-on from surrounding areas that cannot be controlled, or (2) discharge locations are difficult to observe or sample (e.g. submerged discharge outlets, dangerous discharge location accessibility).

b. Representative Sampling Reduction

Some stakeholders have indicated that there are unique circumstances where sampling a subset of representative discharge locations fully characterizes the full set of storm water discharges. Stakeholders provided examples related to drainage areas with multiple discharge locations where sampling only a subset of these discharge locations produces results that are representative of the drainage areas' storm water discharges. In such situations, this General Permit allows Dischargers to reduce the number of discharge locations. For each drainage area with multiple discharge locations (e.g. roofs with multiple downspouts, loading/unloading areas with multiple storm drain inlets), the Discharger may reduce the number of discharge locations to be sampled if the conditions in Section XI.C.4 of this General Permit are met.

c. Qualified Combined Samples

Dischargers may combine samples from up to four (4) discharge locations if the industrial activities within each drainage area and each drainage area's physical characteristics (i.e. grade, surface materials) are substantially similar.

Dischargers are required to provide documentation in the Monitoring Implementation Plan supporting that the above conditions have been evaluated and fulfilled. A Discharger may combine samples from more than four (4) discharge locations only with approval from the appropriate Regional Water Board.

d. Sample Collection and Visual Observation Exceptions

Dischargers are not required to collect samples or conduct visual observations during dangerous weather conditions such as flooding or electrical storms, or outside of scheduled facility operating hours. A Discharger is not precluded from conducting sample collection activities or visual observations outside of scheduled facility operating hours.

In the event that a Discharger is unable to collect the required samples or conduct visual observations due to the above exceptions, the Discharger must include an explanation of the conditions obstructing safe monitoring in its Annual Report. If access to a discharge location is dangerous on a routine basis, a Discharger must choose an alternative discharge location in accordance with General Permit Section XI.C.3.

e. Sampling Frequency Reduction

Facilities that do not have NAL exceedances for four (4) consecutive QSEs are unlikely to pose a significant threat to water quality. If the storm water from these facilities is also in full compliance with this General Permit, the Discharger is eligible for a reduction in sampling frequency. The Sampling Frequency Reduction allows a Discharger to decrease its monitoring from four (4) samples within each reporting year to one (1) QSE within the first half of each reporting year (July 1 to December 31) and one (1) QSE within the second half of each reporting year (January 1 to June 30). If a Discharger has a subsequent NAL exceedance after the Sampling Frequency Reduction, it must comply with the original sampling requirements of this General Permit. Only Dischargers that have baseline status or that have satisfied the Level 1 requirements are eligible for this sampling and analysis reduction.

A Discharger requesting to reduce its sampling frequency shall certify and submit a Sampling Frequency Reduction certification via SMARTS. The Sampling Frequency Reduction certification shall include documentation that the General Permit conditions for the Sampling Frequency Reduction have been satisfied.

Dischargers participating in a Compliance Group and certifying a Sampling Frequency Reduction are only required to collect and analyze storm water samples from one (1) QSE within each reporting year. These Dischargers must receive year-round compliance assistance from their Compliance Group Leader and must comply with all requirements of this General Permit.

5. Facilities Subject to Federal Storm Water Effluent Limitation Guidelines (ELGs)

Federal regulations at Subchapter N establish ELGs for industrial storm water discharges from facilities in eleven industrial sectors. For these facilities, compliance with the ELGs constitutes compliance with the technology standard of BPT, BAT, BCT, or New Source Performance Standards provided in the ELG for the specified pollutants, and compliance with the technology-based requirements in this General Permit for the specified pollutant.

K. Exceedance Response Actions (ERAs)

1. General

The previous permit did not incorporate the benchmarks from any of the MSGPs or NALs for Dischargers to evaluate sampling results. Unlike the requirements for industrial storm water discharges that cause or contribute to an exceedance of a water quality standards, the previous permit did not provide definitions, procedures or guidelines to assess sampling results. Many Regional Water Boards have formally or informally notified Dischargers that exceedances of the MSGP benchmarks should be used to determine whether additional BMPs are necessary. However, there was considerable confusion as to the extent to which a Discharger would be expected to implement actions in response to exceedances of these values, and the timelines that had to be met to prevent an enforcement action. The lack of specificity with regards to what constituted an exceedance, and what actions

are required in response to an exceedance, have been identified as a problem by the Water Boards, industry and environmental stakeholders.

This General Permit contains two (2) types of NALs. Annual NALs function similarly to, and are based upon, the values provided in the 2008 MSGP. Instantaneous maximum NALs target hot spots or episodic discharges of pollutants and are established based on California industrial storm water discharge monitoring data. When a Discharger exceeds an NAL it is required to perform ERAs. The ERAs are divided into two levels of responses and can generally be differentiated by the number of years in which a facility's discharge exceeds an NAL trigger. These two levels are explained further in Section XII of this General Permit. This ERA process provides Dischargers with an adaptive management-based process to develop and implement cost-effective BMPs that are protective of water quality and compliant with this General Permit. This process is also designed to provide Dischargers with a more defined pathway towards full compliance.

The ERA requirements in this General Permit were developed using best professional judgment and Water Board experience with the shortcomings of the previous permit's compliance procedures. Public comments received during State Water Board hearings on the 2002, 2005, 2011, 2012 and 2013 draft permits, and NPDES industrial storm water discharge permits from other states with well-defined ERA requirements were also considered by the State Water Board.

The State Water Board presumes that one single NAL exceedance for a particular parameter is not a clear indicator that a facility's discharge is out of compliance with the technology-based effluent limitations or receiving water limitations. This presumption recognizes the highly variable nature of storm water discharge and the limited value of a single quarterly grab sample to represent the quality of a facility's storm water discharge for an entire storm event and all other non-sampled storm events. With this presumption, the State Water Board is addressing costly monitoring requirements that do not bring forth valuable compliance and/or water quality information.

2. NALs and NAL Exceedances

a. This General Permit contains two types of NAL exceedances as follows:

Annual NAL exceedance - the Discharger is required to calculate the average annual concentration for each parameter using the results of all sampling and analytical results for the entire facility for the reporting year (i.e., all "effluent" data), and compare the annual average concentration to the corresponding Annual NAL values in Table 2 of this General Permit. An annual NAL exceedance occurs when the annual average of all the sampling results for a parameter taken within a reporting year exceeds the annual NAL value for that parameter listed in Table 2 of this General Permit.

For the purposes of calculating the annual average concentration for each parameter, this General Permit considers any sampling result that are a "non-detect" or less than the method detection limit as a zero (0) value. The reason to use zero (0) values instead of the detected but not quantifiable

value (minimum level or reporting limit) is that these values are very low and are unlikely to contribute to an NAL exceedance. There are statistical methods to include low values when calculations are for numeric criteria and limitations, however, the NALs in this General Permit are approximate values used to provide feedback to the Discharger on site performance, and are not numeric criteria or limitations. Therefore, it is not necessary to include these insignificant values in the calculations for the NALs. For Dischargers using composite sampling or flow measurement in accordance with standard practices, the average concentrations shall be calculated in accordance with the U.S. EPA Guidance Manual for the Monitoring and Reporting Requirements of the NPDES Multi-Sector Storm Water General Permit.¹⁴

- i. Instantaneous maximum NAL exceedance - the Discharger is required to compare all sampling and analytical results from each distinct sample (individual or combined) to the corresponding instantaneous maximum NAL values in Table 2 of this General Permit. An instantaneous maximum NAL exceedance occurs when two or more analytical results from samples taken for any parameter within a reporting year exceed the instantaneous maximum NAL value (for TSS and O&G), or are outside of the instantaneous maximum NAL range (for pH).

b. Instantaneous maximum NAL analysis

In its June 19, 2006 report, the Blue Ribbon Panel of Experts (Panel) made several specific recommendations for how to set numeric limitations in future industrial storm water general permit(s). For sites not subject to TMDLs, the Panel suggested that the numeric values be based upon industry types or categories, with the recognition that each industry has its own specific water quality issues and financial viability. Furthermore, the Panel concluded:

To establish Numeric Limits for industrial sites requires a reliable database, describing current emissions by industry types or categories, and performance of existing BMPs. The current industrial permit has not produced such a database for most industrial categories because of inconsistencies in monitoring or compliance with monitoring requirements. The Board needs to reexamine the existing data sources, collect new data as required and for additional water quality parameters (the current permit requires only pH, conductivity, total suspended solids, and either total organic carbon or oil and grease) to establish practical and achievable Numeric Limits.

The Panel suggested an alternative method that would allow the use of the existing Water Board dataset to establish action levels, referred to as the “ranked percentile” method. The Panel recommended:

¹⁴ U.S. EPA. NPDES Storm Water Sampling Guidance Document. Web. July 1992. <<http://www.epa.gov/npdes/pubs/owm0093.pdf>>. [as of February 4, 2014].

The ranked percentile approach (also a statistical approach) relies on the average cumulative distribution of water quality data for each constituent developed from many water quality samples taken for many events at many locations. The Action Level would then be defined as those concentrations that consistently exceed some percentage of all water quality events (i.e. the 90th percentile). In this case, action would be required at those locations that were consistently in the outer limit (i.e. uppermost 10th percentile) of the distribution of observed effluent qualities from urban runoff.

After performing various data analysis exercises with the Water Board dataset, State Water Board staff concluded that the Water Board dataset is not adequate to calculate instantaneous NAL values using the Panel's recommended method for all of parameters that have annual NAL values based on the U.S. EPA benchmarks. Additionally, public comments on the January 2011 draft of this General Permit suggest that it is problematic to calculate NAL values based on the existing data. Therefore, the Water Board dataset was not used to calculate instantaneous NAL values for all parameters.

However, since all Dischargers regulated under the previous permit were required to sample for TSS and O&G/TOC, State Water Board staff found that the existing dataset for these parameters is of sufficient quality to calculate instantaneous NAL values. State Water Board staff also found that this data was less prone to what appear to be data input errors. The final dataset used to calculate the instantaneous NALs in this General Permit had outlier values that were eliminated from the dataset by using approved test method detection limits ranges. The methods and corresponding method detection limit ranges used to screen outliers are as follows:

- O&G - EPA 413.1 Applicable Range: 5-1,000 mg/L
- O&G - EPA 1664 Applicable Range: 5-1,000 mg/L
- TSS - EPA 160.2 Applicable Range: 4-20,000 mg/L

The intent of the instantaneous maximum NAL is to identify specific drainage areas of concern or episodic sources of pollution in industrial storm water that may indicate inadequate storm water controls and/or water quality impacts. In the effort to add instantaneous NAL exceedances to the ERA process, the State Water Board explored different options for the development of an appropriate value (i.e. percentile approach, benchmarks times a multiplier, confidence intervals). The California Stormwater Quality Association's comments on the previous draft permit included a proposed method for calculating NAL values using a percentile approach. The State Water Board researched and evaluated this methodology and determined it is the most appropriate way to directly compare available electronic sampling data from Dischargers regulated under the previous permit. This percentile approach was used to establish the instantaneous maximum NALs in this General Permit, for discharges to directly compare with sampling results and identify drainage areas of water quality concern.

The percentile approach is a non-parametric approach identified in many statistical textbooks for determining highly suspect values. Highly suspect values are defined as values that exceed the limits of the outer fences of a box plot. Upper limits of the outer fence are calculated by adding three times the inter-quartile range (25th to 75th percentiles) to the upper-end of the inter-quartile range (the 75th percentile). The California Stormwater Quality Association calculated an NAL value of 401 mg/L for TSS using the percentile approach using the Water Board dataset. The State Water Board performed the same analysis with the same Water Board dataset and calculated a slightly different value of 396 mg/L; therefore, the instantaneous maximum NAL value for TSS of 400 mg/L was established. Applying the percentile approach to the existing O&G data results in the instantaneous maximum NAL value for O&G of 25 mg/L.

The State Water Board compared existing sampling data to the instantaneous maximum NAL values and concluded that seven (7) percent of the total samples exceeded the highly suspected value for TSS and 7.8 percent of the total samples exceeded the highly suspected value for O&G. These results suggest that the instantaneous maximum NAL values are adequate to identify drainage areas of concern statewide since they are not regularly exceeded. Using best professional judgment, the State Water Board concludes that an exceedance of these values twice within a reporting year is unlikely to be the result of storm event variability or random BMP implementation problems, and the use of the percentile approach is therefore appropriate.

Due to issues with the ranges of concentrations and the logarithmic nature of pH, statistical methods cannot be applied to pH in the same ways as other parameters. Review of storm water sampling data by the State Water Board and other stakeholders has shown that pH is not typically a parameter of concern for most industrial facilities. Accordingly, a range of pH limits established in Regional Water Board Basin Plans is implemented in this General Permit for the instantaneous maximum NAL values. Most Basin Plans set a water quality objective of 6.0 - 9.0 pH units for water bodies, an exceedance outside the range of 6.0 - 9.0 pH units is consistent with the water quality concerns for pH among Regional Water Boards. An industrial facility with proper BMP implementation is expected to have industrial storm water discharges within the range of 6.0 - 9.0 pH units.

High concentrations of TSS and O&G, or pH values outside the range of 6.0 – 9.0 pH units, in a discharge may be an indicator of potential BMP implementation or receiving water quality concerns with other pollutants with parameters that do not have an instantaneous maximum NAL value. The State Water Board may consider instantaneous maximum NAL values for other parameters in a subsequent reissuance of this General Permit, based on data collected during this General Permit term.

The percentile approach is considered by many stakeholders to be the best method to evaluate BMP performance and general effluent quality in a community or population where the vast majority of the industrial facilities are implementing sufficient pollutant control measures. The Water Board's current

dataset does not provide a way of evaluating actual BMP implementation at each facility when analyzing the data; therefore the monitoring information reported during the previous permit term cannot be linked to compliance with technology-based standards. The State Water Board intends to use data collected during this General Permit term to evaluate the percentile approach, improve the quality of collected data for other parameters, and further develop an understanding of how reported data relates to implemented BMP-control technologies.

Under this General Permit, a Discharger enters Level 1 status and must fulfill the Level 1 status ERA requirements following its first occurrence of any NAL exceedance. Level 2 status ERA requirements follow the second occurrence of an NAL exceedance for the same parameter in a subsequent reporting year. This ERA process provides Dischargers with an adaptive management-based process to develop and implement cost-effective BMPs that are protective of water quality and compliant with this General Permit. This General Permit's ERA process is designed to have a well-defined compliance end-point. It is not a violation of this General Permit to exceed the NAL values; it is a violation of the permit, however, to fail to comply with the Level 1 status and Level 2 status ERA requirements in the event of NAL exceedances.

The State Water Board acknowledges that storm water discharge concentrations are often highly variable and dependent upon numerous circumstances such as storm size, the time elapsed since the last storm, seasonal activities, and the time of sample collection. Since there are potential enforcement consequences for failure to comply with this General Permit's ERA process, the State Water Board's intention is to use NAL exceedances to solely require Dischargers with recurring annual NAL exceedances or drainage areas that produce recurring instantaneous maximum NAL exceedances to be subject to the follow-up ERA requirements.

If NALs exceedances do not occur, the State Water Board generally expects that the Discharger has implemented sufficient BMPs to control storm water pollution. When NAL exceedances do occur, however, the potential that the Discharger may not have implemented appropriate and/or sufficient BMPs increases, and the Discharger is required to implement escalating levels of ERAs. If NAL exceedances occur, this General Permit requires Dischargers to evaluate and potentially install additional BMPs, or re-evaluate and improve existing BMPs to be in compliance with this General Permit.

3. Baseline Status

At the beginning of a Discharger's NOI coverage under this General Permit, the Discharger has Baseline status. A Discharger demonstrating compliance with all NALs will remain at Baseline status and is not required to complete Level 1 status and Level 2 status ERA requirements.

If a Discharger has returned to Baseline status (from Level 2 status) and additional NAL exceedances occur, the Discharger goes into Level 1 status, then potentially

Level 2 status. Dischargers do not go directly into Level 2 status from Baseline status.

4. Level 1 Status

Regardless of when an NAL exceedance occurs during Baseline status, a Discharger's status changes from Baseline status to Level 1 status on July 1 of the subsequent reporting year. By October 1 following the commencement of Level 1 status, the Discharger is required to appoint a QISP to assist with the completion of the Level 1 Evaluation. The Level 1 Evaluation must include a review of the facility's SWPPP for compliance with the effluent and receiving water limitations of this General Permit, an evaluation of the industrial pollutant sources at the facility that are or may be related to the NAL exceedance(s), and identification of any additional BMPs that will eliminate future exceedances. When conducting the Level 1 Evaluation, a Discharger must ensure that all potential pollutant sources that could be causing or contributing to the NAL exceedance(s) are fully characterized, that the current BMPs are adequately described, that employees responsible for implementing BMPs are appropriately trained, and that internal procedures are in place to track that BMPs are being implemented as designed in the SWPPP. A Discharger is additionally required to evaluate the need for additional BMPs. Level 1 ERAs are designed to provide the Discharger the opportunity to improve existing BMPs or add additional BMPs to comply with the requirements of this General Permit.

By January 1 following commencement of Level 1 status, a Discharger is required to certify and submit via SMARTS a Level 1 ERA Report prepared by a QISP. The Level 1 ERA Report must contain a summary of the Level 1 Evaluation, all new or revised BMPs added to the SWPPP.

In most cases, the State Water Board believes that Level 1 status BMPs will be operationally related rather than structural and, therefore can be implemented without delay. Recognizing that a Discharger should not be penalized for sampling results obtained before implementing BMPs, sampling results for parameters and their corresponding drainage areas that caused the NAL exceedance up to October 1 or the date the BMPs were implemented, whichever is sooner, will not be used for calculating NAL exceedances. Although this General Permit allows up to January 1 to implement Level 1 status BMPs, the State Board has chosen an interim date of October 1 to encourage more timely Level 1 BMP implementation. Dischargers who implement Level 1 BMPs after October 1 may risk obtaining subsequent sampling results that may cause them to go into Level 2 status.

5. Level 2 Status

Level 2 ERAs are required during any subsequent reporting year in which the same parameter(s) has an NAL exceedance (annual average or instantaneous maximum), if this occurs, a Discharger's status changes from Level 1 status to Level 2 status on July 1 of the subsequent reporting year. Dischargers with Level 2 status must further evaluate BMP options for their facility. Dischargers may have to implement additional BMPs, which may include physical, structural, or mechanical devices that

are intended to prevent pollutants from contacting storm water. Examples of such controls include, but are not limited to:

- Enclosing and/or covering outdoor pollutant sources within a building or under a roofed or tarped outdoor area.
- Physically separating the pollutant sources from contact with run-on of uncontaminated storm water.
- Devices that direct contaminated storm water to appropriate treatment BMPs (e.g., discharge to sanitary sewer as allowed by local sewer authority).
- Treatment BMPs including, but not limited to, detention ponds, oil/water separators, sand filters, sediment removal controls, and constructed wetlands.

Dischargers may select the most cost-effective BMPs to control the discharge of pollutants in industrial storm water discharges. Where appropriate, BMPs can be designed and targeted for various pollutant sources (e.g., providing overhead coverage for one potential pollutant while discharging to a detention basin for another source may be the most cost-effective solution).

a. Level 2 ERA Action Plans

The State Water Board acknowledges that there may be circumstances that make it difficult, if not impossible, for a Discharger to immediately implement additional BMPs. For example, it may take time to get a contract for construction in place, obtain necessary building permits, and design and construct the BMPs. Dischargers may also suspect that pollutants are from a non-industrial or natural background source and need time to study their site. A Discharger is required to certify and submit an Action Plan prepared by a QISP via SMARTS by January 1 following the reporting year in which the NAL exceedance that resulted in the Discharger entering Level 2 occurred. The Level 2 ERA Action Plan requires a Discharger to propose actions necessary to complete the Level 2 ERA Technical Report, the demonstrations the Discharger has selected, and propose a time frame for implementation.

If a Discharger changes the QISP assisting with the Level 2 ERA requirements this General Permit requires the Discharger to update the QISP information via SMARTS. Current information on individuals assisting Dischargers with compliance of this General Permit provides the Water Boards with the necessary contact information if there are questions on the submitted documents, and for possible verification of a QISP's certification.

Dischargers are required to address each Level 2 NAL exceedance in an Action Plan. The State Water Board recognizes that Dischargers with Level 2 status may have multiple parameters or facility areas that have Level 2 NAL exceedances and the timing of the exceedances may make it very difficult to address all Level 2 NAL exceedances in one Action Plan. When Level 2 ERA exceedances occur in subsequent reporting years, after an Action Plan is

certified and submitted, a Discharger will need to develop an Action Plan for this new Level 2 NAL exceedance. This General Permit defines new Level 2 NAL exceedances as an exceedance for a new parameter in any drainage area at the facility, or an exceedance for the same parameter being addressed in an existing Action Plan, but where the exceedance occurred in a different drainage area than identified in the existing Action Plan.

b. Level 2 ERA Technical Reports

The Level 2 ERA Technical Report contains three different options that require a Discharger to submit demonstrations showing the cause of the NAL exceedance(s). This General Permit requires a Discharger to appoint a QISP to prepare the Level 2 ERA Technical Reports. The State Water Board acknowledges that there may be cases where a combination of the demonstrations may be appropriate; therefore a Discharger may combine any of the following three demonstration options in their Level 2 ERA Technical Report when appropriate. A Discharger is only required to annually update its Level 2 ERA Technical Report when necessary as defined in Section XII.D.3.c of this General Permit, and is not required to annually re-certify and re-submit the entire Level 2 ERA Technical Report. If there are no changes prompting an update of the Level 2 ERA Technical Report, as specified in Section XII.D.3.c of this General Permit, the Discharger will provide this certification in the Annual Report that there have been no changes warranting re-submittal of the Level 2 ERA Technical Report.

i. Industrial Activity BMPs Demonstration

The Industrial Activity BMPs Demonstration is for the following:

- Dischargers who decided to implement additional BMPs that are expected to eliminate future NAL exceedance(s) and that have been implemented in order to achieve compliance with the technology-based effluent limitations of this General Permit, and
- Dischargers who decided to implement additional BMPs that may not eliminate future NAL exceedance(s) and that have been implemented in order to achieve compliance with the technology-based effluent limitations of this General Permit.

When preparing the Industrial Activity BMPs Demonstration, the QISP shall identify and evaluate all individual pollutant source(s) associated with industrial activity that are or may be related to an NAL exceedance and all designed, information on the drainage areas associated with the Level 2 NAL exceedances, and installed BMPs that are implemented to reduce or prevent pollutants in industrial storm water discharges in compliance with this General Permit.

If an Industrial Activity BMPs Demonstration is submitted as the Level 2 ERA Technical Report and the Discharger is able to show reductions in pollutant concentrations below the NALs for four (4) subsequent consecutive QSEs, the Discharger returns to Baseline Status. A Discharger that submits an Industrial Activity BMPs Demonstration but has not installed additional BMPs that are expected to eliminate future NAL exceedance(s) will remain with Level 2 status but is not subject to additional ERAs unless directed by the Regional Water Board.

ii. Non-Industrial Pollutant Source Demonstration

A Non-Industrial Pollutant Source Demonstration is for a Discharger to demonstrate that the pollutants causing the NAL exceedances are not related to industrial activities conducted at the facility, and additional BMPs at the facility will not contribute to the reduction of pollutant concentrations.

Dischargers including the Non-Industrial Pollutant Demonstration in their Level 2 ERA Technical Report shall have a QISP determine that the sources of non-industrial pollutants in storm water discharges are not from industrial activity or natural background sources within the facility.

Sources of non-industrial pollutants that are discharged separately and are not comingled with storm water associated with industrial activity are not considered subject to this General Permit's requirements. When pollutants from non-industrial sources are comingled with storm water associated with industrial activity, the Discharger is responsible for all the pollutants in the combined discharge unless the technical report clearly demonstrates that the NAL exceedances due to the combined discharge are solely attributable to the non-industrial sources. The pollutant may also be present due to industrial activities, in which case the Discharger must demonstrate that the pollutant contribution from the industrial activities by itself does not result in an NAL exceedance. In most cases, the Non-Industrial Pollutant Source Demonstration will contain sampling data and analysis distinguishing the pollutants from non-industrial sources from the pollutants generated by industrial activity.

Once the Level 2 ERA Technical Report, including this demonstration is certified and submitted via SMARTS, the Discharger has satisfied all the requirements necessary for that pollutant for ERA purposes. A Discharger that submits a Non-Industrial Pollutant Demonstration remains with Level 2 status but is not subject to additional ERAs unless directed by the Regional Water Board.

iii. Natural Background Pollutant Source Demonstration

The benchmark monitoring schedule in section 6.2.1.2 of the 2008 MSGP allows a Discharger to determine that the exceedance of the benchmark is attributable solely to the presence of that pollutant in the natural background. A Discharger making this determination is not required to perform corrective

action or additional benchmark monitoring providing that the other 2008 MSGP requirements are met. The 2008 MSGP Fact Sheet requires Dischargers to include in the following in the SWPPP: 1) map(s) showing the reference site location, facility, available land cover information, reference site and test site elevation, available geology and soil information for reference and test sites, photographs showing site vegetation, site reconnaissance survey data and records. This General Permit requires this information to be included in the Natural Background Pollutant Source Demonstration in Section XII.D.2.c.

The Natural Background Pollutant Source Demonstration in this General Permit is for a Discharger that can demonstrate that pollutants causing the NAL exceedances are not related to industrial activities conducted at the facility, and are solely attributable to the presence of those pollutants in natural background. The pollutant may also be present due to industrial activities, in which case the Discharger must demonstrate that the pollutant contribution from the industrial activities by itself does not result in an NAL exceedance. Natural background pollutants include those substances that are naturally occurring in soils or groundwater that have not been disturbed by industrial activities. Natural background pollutants do not include legacy pollutants from earlier activity on a site, or pollutants in run-on from neighboring sources which are not naturally occurring. Dischargers are not required to reduce concentrations for pollutants in the effluent caused by natural background sources if these pollutants concentrations are not increased by industrial activity.

The 2008 MSGP Fact Sheet states that the background concentration of a pollutant in runoff from a non-human impacted reference site in the same watershed must be determined by evaluation of ambient monitoring data or by using information from a peer-reviewed publication or a local, state, or federal government publication specific to runoff or storm water in the immediate region. Studies that are in other geographic areas, or are clearly based on different topographies or soils, are not sufficient to meet this requirement. When such data is not available, and there are no known sources of the pollutant, the background concentration should be assumed to be zero.

In cases where historic monitoring data from a site are used for generating a natural background concentration, and the site is no longer accessible or able to meet reference site acceptability criteria, the Discharger must submit documentation (e.g., historic land use maps) indicating the site did meet reference site criteria (such as indicating the absence of human activity) during the time data collection occurred.

Once the Level 2 ERA Technical Report, including a Natural Background Demonstration meeting the conditions in Section XII.D.2.c of this General Permit is certified and submitted via SMARTS, the Discharger is no longer responsible for the identified background parameters(s) in the corresponding drainage area(s). A Discharger that submits this type of demonstration will

remain with Level 2 status but is not subject to additional ERAs unless directed by the Regional Water Board.

c. **Level 2 ERA Implementation Extension**

The State Water Board recognizes that there may be circumstances that make implementation of all necessary actions required in the Level 2 ERAs by the permitted due dates infeasible. In such circumstances a Discharger may request additional time by submitting a Level 2 ERA Implementation Extension. The Level 2 ERA Implementation Extension will automatically allow Dischargers up to an additional six (6) months to complete the tasks identified in the Level 2 ERA Action Plans while remaining in compliance with this General Permit. The Level 2 ERA Implementation Extension is subject to Regional Water Board review. If additional time is needed beyond the initial six (6) month extension, a second Level 2 ERA Implementation Extension may be submitted but is not effective unless it is approved by the Water Board.

L. Inactive Mining Operations

Inactive mining sites may need coverage under this General Permit. Inactive mining operations are mining sites, or portions of sites, where mineral mining and/or dressing occurred in the past with an identifiable Discharger (owner or operator), but are no longer actively operating. Inactive mining sites do not include sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined materials. A Discharger has the option to certify and submit via SMARTS that its inactive mining operations meet the conditions for an Inactive Mining Operation Certification in Section XIII of this General Permit. The Discharger must have a SWPPP for an inactive mine signed (wet signature with license number) by a California licensed professional engineer. The Inactive Mining Operation Certification in this General Permit is in lieu of performing certain identified permit requirements. This General Permit requires an annual inspection of an inactive mining site and an annual re-certification of the SWPPP. Any significant updates to the SWPPP shall be signed (wet signature and license number) by a California license professional engineer. The Discharger must certify and submit via SMARTS any significantly revised SWPPP within 30 days of the revision(s)

M. Compliance Groups and Compliance Group Leaders

Group Monitoring, as defined in the previous permit, has been eliminated in this General Permit and replaced with a new compliance option called Compliance Groups. The Compliance Group option differs from Group Monitoring as it requires (1) all Dischargers participating in a Compliance Group (Compliance Group Participants) sample two QSEs each year, (2) the Compliance Group Leader to inspect each Participant's facility within each reporting year, (3) the Compliance Group Leader must complete a State Water Board sponsored or approved training program for Compliance Group Leaders, and (4) the Compliance Group Leader to prepare Consolidated Level 1 ERA Reports, and individual Level 2 ERA Action Plans and Technical Reports. The Compliance Group option is similar to Group Monitoring as it retains a mechanism that

allows Dischargers of the same industry type to comply with this General Permit through shared resources in a cost saving manner.

This General Permit emphasizes sampling and analysis as a means to evaluate BMP performance and overall compliance, and the significantly reduced sampling requirements previously afforded to Group Monitoring Participants (two samples within a five-year period) does not provide the necessary information to achieve these goals. However, a moderate reduction in sampling requirements is included as an incentive for Compliance Group Participants while concurrently requiring sufficient individual facility sampling data to determine compliance. A Compliance Group Leader is required to provide the necessary sampling training and guidance to the Compliance Group Participants. This additional training requirement will increase sampling data quality that will offset the reduced sampling frequency for Compliance Groups.

Participation in Compliance Groups will provide additional cost savings for Dischargers in the preparation of the Consolidated Level 1 ERA Reports, and for Compliance Group Leader assistance in preparing the Level 2 ERA Action Plans and the individual Level 2 ERA Technical Reports. It is likely that many of the pollutant sources causing NAL exceedances, and the corresponding BMP cost evaluation and selection, when appropriate, will overlap for groups of facilities in a similar industry type. When these overlaps occur, a Compliance Group Leader should be able to more efficiently evaluate the pollutant sources and BMP options, and prepare the necessary reports.

The State Water Board believes that it is necessary for Compliance Group Leaders to have a higher level of industrial storm water compliance and training experience than the expectations of a QISP. Many stakeholder comments on this General Permit suggested various certifications to provide this higher level of experience; however, the State Water Board believes a process similar to the Trainer of Record process for the Construction General Permit training program will develop Compliance Group Leaders with the appropriate level of experience to fulfill the necessary qualifications.

The intent of the Compliance Groups is to have only one or a small number of Compliance Groups per industrial sector. The process for becoming a QISP trainer and/or a Compliance Group Leader is purposely similar to the Construction General Permit trainer of record process for consistency within storm water regulatory leaders. The formal process to qualify to conduct trainings for QISPs and/or to be a Compliance Group Leader will include the submittal of a statement of qualifications for review, a review fee, completion of an exam and training specific to this role. For more information see the Construction General Permit trainer of record process: <http://www.casqa.org/TrainingandEducation/ConstructionGeneralPermitTrainingQSDQSPToR/tabid/205/Default.aspx>

After the initial Compliance Group registration, Compliance Group Leaders are required to submit and maintain their list of Compliance Group Participants via SMARTS. There are no additional administrative documents required. The previous permit required group leaders to provide annual group evaluation reports and a letter of intent to continue group monitoring. The State Water Board found these items to be resource intensive and placed an unnecessary administrative burden on group leaders. The

Compliance Group requirements in this General Permit reduces the administrative burden on both the Compliance Group Leaders and Water Board staff.

The State Water Board's intent for the effluent data, BMP selection, cost, and performance information, and other industry specific information provided in Compliance Group reports is for evaluation of sector-specific permitting approaches and the use of NALs in the next reissuance of this General Permit.

N. Annual Evaluation

Federal regulations require NPDES industrial storm water Dischargers to evaluate their facility and SWPPP annually. Typically this requires an inspection of the facility to ensure: (1) the SWPPP site map is up to date, (2) control of all potential pollutant sources is included in the SWPPP, and (3) sampling data and visual observation records are used to evaluate if the proper BMPs are being implemented. As Dischargers are required to conduct monthly visual observation that partially overlap with the actions required by the annual evaluation requirements, Dischargers may perform the annual evaluation inspection concurrent with a monthly visual observation.

O. Annual Report

All Dischargers shall certify and submit via SMARTS an Annual Report no later than July 15 following each reporting year. The reporting requirements for this General Permit's Annual Report are streamlined in comparison to the previous permit. The Annual Report now consists of two primary parts: (1) a compliance checklist indicating which permit requirements were completed and which were not (e.g., a Discharger who completes the required sampling of four QSEs during the reporting year, versus a Discharger who is only able to sample two QSEs during the reporting year), and (2) an explanation for items on the compliance checklist that were determined incomplete by the Discharger. Unlike the previous permit, the Annual Report does not require Dischargers to provide the details of each visual observation (such as name of observer, time of observation, observation summary, corrective actions, etc.) or provide the details of the Annual Comprehensive Site Evaluation. Dischargers, however, continue to be required to retain those records and have them available upon request. The Annual Report is further simplified through the immediate electronic reporting via SMARTS of sampling data and copies of the original laboratory reports instead of such information being included in the Annual Report.

P. Conditional Exclusion - No Exposure Certification (NEC) Requirements

This General Permit's conditional exclusion requirements are similar to the requirements provided in 40 C.F.R. section 122.26(g)(3). Clarifications were added in this General Permit, however, to the types of "storm resistant shelters" and the periods when "temporary shelters" may be used in order to avert regulatory confusion. California does not have operating coal power plants, which are a major contributor to acid rain elsewhere in the United States. California does have nonpoint sources or atmospheric deposition that may locally impact the pH of the rain water, however this is

not categorized as acid rain as referred to by the U.S. EPA for the NEC coverage requirements. The No Exposure Guidance Document¹⁵ developed by the U.S. EPA mentions acid rain as a potential source of contaminants to consider for NEC coverage. The acid rain leachate language was not included in this General Permit's Appendix 2 to clarify that Dischargers may qualify for NEC coverage, even if the facility has metal buildings or structures.

The Discharger shall certify and submit complete PRDs for NEC coverage via SMARTS. Based upon the State Water Board's experience with reissuing and implementing the 2009 Construction General Permit, the transition for existing Dischargers to register under this new General Permit is staff resource intensive. The State Water Board staff is available to assist Dischargers requiring assistance with enrolling under this General Permit, both for NOI coverage and NEC coverage. The State Water Board has also experienced that more time is needed for its staff to assist Dischargers registering for NEC coverage. To provide better customer service to all Dischargers, three months have been added to the NEC coverage PRD submittal schedule for new and existing Dischargers (Section II.B.4 of this General Permit, extending the NEC coverage registration date to October 1, 2015).

Dischargers must annually inspect their facility to ensure continued compliance with NEC requirements, and annually re-certify and submit an NEC via SMARTS. Based on its regulatory experience, the State Water Board has determined that a five-year NEC re-certification period is inadequate. A significant percentage of facilities may revise, expand, or relocate their operations in any given year. Furthermore, a significant percentage of facilities experience turnover of staff knowledgeable of the NEC requirements and limitations. Accordingly, the State Water Board believes that annual NEC evaluation and re-certification requirements are appropriate to continually assure adequate program compliance.

Q. Special Requirements - Plastic Materials

Water Code section 13367 requires the Water Boards to implement measures that control discharges of preproduction plastic from point and nonpoint sources. The State Water Board intends to use this General Permit to regulate discharges of preproduction plastics from areas of facilities that are subject to this General Permit. A Regional Water Board may designate facilities, or areas of facilities, that are not otherwise subject to this General Permit, pursuant to Section XIX.F. For example, a Regional Water Board may designate Plastic Materials handling areas of a transportation facility that are not associated with vehicle maintenance as requiring coverage under this General Permit.

Preproduction plastics used by the plastic manufacturing industry are small in size and have the potential to mobilize in storm water. Preproduction plastic washed into storm water drains can move to waters of the United States where it contributes to the growing problem of plastic debris in inland and coastal waters. Water Code section 13367

¹⁵ U.S. EPA. Guidance Manual for Conditional Exclusion from Storm Water Permitting Based On "No Exposure" of Industrial Activities to Storm Water. Web. June 2000. < <http://www.epa.gov/npdes/pubs/noxguide.pdf>>. [as of January 31, 2014].

outlines five mandatory BMPs that are required for all facilities that handle preproduction plastic. These mandatory BMPs are included in this General Permit.

The State Water Board has received comments regarding the Water Code requirements for Plastics Facilities to install a containment system for on-site storm drain locations that meet 1mm capture and 1-year 1-hour storm flow requirement standards. As a result, this General Permit includes the option under Water Code section 13367 that allows a plastics facility to propose an alternative BMP or suite of BMPs that can meet the same performance and flow requirements as a 1mm capture and 1-year 1-hour storm flow containment system standards. These alternative BMPs are to be submitted to the Regional Water Board for approval. This alternative is intended to allow the facility to develop BMPs that focus on pollution prevention measures that can perform as well as, or better than, the containment system otherwise required by the statute.

The State Water Board also includes two additional containment system alternatives in this General Permit that are considered to be equivalent to, or better than, the 1mm capture and 1-year 1-hour storm flow requirements:

- An alternative allowing plastic facilities to implement a suite of eight BMPs addressing the majority of potential sources of plastic discharges. This suite of BMPs is based on industry and U.S. EPA recommendations and Water Board experience with storm water inspections, violations, and enforcement cases throughout California.
- An alternative allowing a facility to operate in a manner such that all preproduction plastic materials are used indoors and pose no potential threat for discharge off-site. The facility is required to notify the Regional Water Board of the intent to seek this exemption and of any changes to the facility or operations that may disqualify the facility for the exemption. The exemption may be revoked by the Regional Water Board at any time.

Plastics facilities may use preproduction plastic materials that are less than 1mm in size, or produce materials, byproducts, or waste that is smaller than 1mm in size. These small size materials will pass through the 1mm capture containment system required by Water Code section 13367. Plastics facilities with sub-1mm materials must design a containment system to capture the smallest size material onsite with a 1-year 1-hour storm flow requirement, or propose alternative BMPs for Regional Water Board approval that meet the same requirements.

The remaining BMPs required by Water Code section 13367 are consistent with recommendations for handling and clean-up of preproduction plastics in the American Chemistry Council publication, *Operation Clean Sweep* and U.S. EPA's publication *Plastic Pellets in the Aquatic Environment: Sources and Recommendations*. The State Water Board believes that the entire approach in this General Permit for plastic materials is consistent with Water Code section 13367.

R. Regional Water Board Authorities

The Regional Water Boards retain discretionary authority over many issues that may arise from industrial discharges within their respective regions. This General Permit

emphasizes the authority of the Regional Water Boards over specific requirements of this General Permit that do not meet region-specific water quality protection regulatory needs.

S. Special Conditions: Requirements for Dischargers Claiming the “No Discharge” Option in the Notice of Non-Applicability

1. General

Entities that operate facilities generating storm water associated with industrial activities that is not discharged to waters of the United States are not required to obtain General Permit coverage. Entities that have contacted the Water Boards to inquire what is necessary to avoid permit coverage have received inconsistent guidance. This has resulted in regulatory inconsistency and uncertainty as to whether they are in compliance if their industry operates without General Permit coverage. Depending upon how each Regional Water Board handles “No Discharge” claims, some facilities with advanced containment design may be required to obtain General Permit coverage while other facilities with less advanced containment design may be allowed to operate without General Permit coverage. Some stakeholders have complained that this type of regulatory inconsistency puts some facilities at an economically-competitive disadvantage given the costs associated with permit compliance.

U.S. EPA regulations do not provide a design standard, definition, or guidance as to what constitutes “No Discharge.” Unlike Conditional Exclusion requirements, U.S. EPA regulations do not require an entity to submit technical justification or certification that a facility does not discharge to waters of the United States (U.S.). Therefore entities have previously been allowed to self-determine that their facility does not discharge to water of the U.S. when using any containment design standard. The State Water Board does not have available information showing that most entities have adequately performed hydraulic calculations to determine the frequency of discharge corresponding to their containment controls or have had these hydraulic calculations reviewed or completed by a California licensed professional engineer. Although U.S. EPA makes clear that an unpermitted discharge to waters of the U.S. is a violation of the CWA, this leaves regulatory agencies with the very difficult task of knowing when any given facility discharges in order to carry-out enforcement actions.

In 1998, the Water Code was amended to require entities who are requested by the Water Boards to obtain General Permit coverage, but that have a valid reason to not obtain General Permit coverage, to submit a Notice of Non-Applicability (NONA). (Wat. Code, § 13399.30, subd. (a)(2)). The NONA covers multiple reasons why an entity is not required to be permitted including (1) facility closure, (2) not the legal owner, (3) incorrect SIC code, (4) eligibility for the Conditional Exclusion (No Exposure Certification), and (5) the facility not discharging to water of the U.S. (“No Discharge”). The previous permit contained definitions, requirements, and guidance that entities may reference to determine whether they are eligible to select any of the first four NONA reasons for not obtaining General Permit coverage. However, neither the previous permit nor the Water Code provide definitions, requirements,

and guidance for entities to determine whether they are eligible to indicate “No Discharge” on the NONA as a reason for not obtaining General Permit coverage.

This General Permit addresses and resolves the issues discussed above by establishing consistent, statewide eligibility requirements in Section XX.C for entities submitting NONAs indicating “No Discharge.” When requested by the Water Boards to obtain General Permit coverage, entities must meet these “No Discharge” eligibility requirements or obtain General Permit coverage. The Water Boards retain enforcement authority if a facility subsequently discharges.

2. “No Discharge” Eligibility Requirements

The entity must certify submit in SMARTS a NONA Technical Report signed (wet signature and license number) by a California licensed professional engineer that contains the analysis and details of the containment design supporting the “No Discharge” eligibility determination. Because containment design will require hydraulic calculations, soil permeability analysis, soil stability calculations, appropriate safety factor consideration, and the application of other general engineering principles, state law requires the technical report to be signed (wet signature and license number) by a California licensed professional engineer.

The State Water Board has selected a containment design target that, as properly applied will result in few, if any, discharges. The facility must either be:

- a. Engineered and constructed to contain all storm water associated with industrial activities from discharging to waters of the United States. (The determination of what is a water of the United States can be complicated, and in certain circumstances, a discharge to groundwater that has a direct hydrologic connection to waters of the United States may constitute a discharge to a water of the United States.) Dischargers must base their information upon maximum historic precipitation event data (or series of events) from the nearest rain gauges as provided by the National Oceanic and Atmospheric Administration’s (NOAA) website, or other nearby precipitation data available from other government agencies. At a minimum, Dischargers must ensure that the containment design addresses maximum 1-hour, 24-hour, weekly, monthly, and annual precipitation data for the duration of the exclusion.

Design storm events are generally specified as a one-time expected hydraulic failure over a reoccurrence of years for a specified storm event. For example, if a design storm standard is a 100 year 24-hour event, then a facility’s containment system designed to contain the maximum volume of water would be expected to fall in 24 hours once every 100 years. Design standards vary dependent upon the regulatory program and the level of protection needed. Since California has considerable variations in climate/topography/soil conditions across the state, the “No Discharge” NONA eligibility requirements have been created so that each facility’s containment design can incorporate unique site specific circumstances to meet the requirement that discharges will not occur based upon past historical precipitation data. Facilities that are not designed to not meet the “No Discharge” eligibility requirements must obtain General Permit coverage.

- b. Located in basins or other physical locations that are not hydrologically connected to waters of the United States.

The State Water Board considered allowing Entities to review United States Army Corp of Engineer maps to determine, without a California licensed professional engineer, whether their facility location is within a basin and/or other physical location that is not hydrologically connected to waters of the United States. The State Water Board believes that this determination can be difficult in some cases, or is likely to be performed incorrectly. In addition, there may be areas of the state that are not hydrologically connected to waters of the United States, but are not on United States Army Corps of Engineer maps. Therefore, all “No Discharge” Technical Reports must be signed (wet signature and license number) by a California licensed professional engineer.

3. Additional Considerations

The “No Discharge” determination does not cover storm water containment systems that transfer industrial pollutants to groundwater. Entities must determine whether designs that incorporate infiltration may discharge to and contaminate groundwater. If there is a threat to groundwater, Entities must contact the Regional Water Boards prior to construction of infiltration design elements.

Entities that have not eliminated all discharges that are subject to General Permit coverage (NOI Coverage or NEC Coverage) are ineligible to submit NONAs indicating “No Discharge.”

ATTACHMENT A

FACILITIES COVERED BY NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITIES (GENERAL PERMIT)

1. Facilities Subject To Storm Water Effluent Limitations Guidelines, New Source Performance Standards, or Toxic Pollutant Effluent Standards Found in 40 Code of Federal Regulations, Chapter I, Subchapter N (Subchapter N):

Cement Manufacturing (40 C.F.R. Part 411); Feedlots (40 C.F.R. Part 412); Fertilizer Manufacturing (40 C.F.R. Part 418); Petroleum Refining (40 C.F.R. Part 419), Phosphate Manufacturing (40 C.F.R. Part 422), Steam Electric (40 C.F.R. Part 423), Coal Mining (40 C.F.R. Part 434), Mineral Mining and Processing (40 C.F.R. Part 436), Ore Mining and Dressing (40 C.F.R. Part 440), Asphalt Emulsion (40 C.F.R. Part 443), Landfills (40 C.F.R. Part 445), and **Airport Deicing (40 C.F.R. Part 449)**.
2. Manufacturing Facilities:

Facilities with Standard Industrial Classifications (SICs) 20XX through 39XX, 4221 through 4225. (This category combines categories 2 and 10 of the previous general permit.)
3. Oil and Gas/Mining Facilities:

Facilities classified as SICs 10XX through 14XX, including active or inactive mining operations (except for areas of coal mining operations no longer meeting the definition of a reclamation area under 40 Code of Federal Regulations. 434.11(1) because the performance bond issued to the facility by the appropriate Surface Mining Control and Reclamation Acts authority has been released, or except for areas of non-coal mining operations which have been released from applicable State or Federal reclamation requirements after December 17, 1990) and oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge storm water contaminated by contact with or that has come into contact with any overburden, raw material, intermediate products, finished products, by-products, or waste products located on the site of such operations. Inactive mining operations are mining sites that are not being actively mined, but which have an identifiable owner/operator. Inactive mining sites do not include sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined material; or sites where minimal activities are undertaken for the sole purpose of maintaining a mining claim.
4. Hazardous Waste Treatment, Storage, or Disposal Facilities:

Hazardous waste treatment, storage, or disposal facilities, including any facility operating under interim status or a general permit under Subtitle C of the Federal Resource, Conservation, and Recovery Act.
5. Landfills, Land Application Sites, and Open Dumps:

Landfills, land application sites, and open dumps that receive or have received industrial waste from any facility within any other category of this Attachment; including facilities subject to regulation under Subtitle D of the Federal Resource, Conservation, and Recovery Act, and facilities that have accepted wastes from construction activities (construction activities include any clearing, grading, or excavation that results in disturbance).
6. Recycling Facilities:

Facilities involved in the recycling of materials, including metal scrapyards, battery reclaimers, salvage yards, and automobile junkyards, including but limited to those classified as Standard Industrial Classification 5015 and 5093.
7. Steam Electric Power Generating Facilities:

Any facility that generates steam for electric power through the combustion of coal, oil, wood, etc.
8. Transportation Facilities:

Facilities with SICs 40XX through 45XX (except 4221-25) and 5171 with vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. Only those portions of the facility involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication) or other operations identified under this Permit as associated with industrial activity.
9. Sewage or Wastewater Treatment Works:

Facilities used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge, that are located within the confines of the facility, with a design flow of one million gallons per day or more, or required to have an approved pretreatment program under 40 Code of Federal Regulations part 403. Not included are farm lands, domestic gardens, or lands used for sludge management where sludge is beneficially reused and are not physically located in the confines of the facility, or areas that are in compliance with Section 405 of the Clean Water Act.

ATTACHMENT B

ACRONYM LIST

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR STORM WATER DISCHARGES
ASSOCIATED WITH INDUSTRIAL ACTIVITIES
(GENERAL PERMIT)

ASBS	Areas of Special Biological Significance
BAT	Best Available Technology Economically Achievable
BCT	Best Conventional Pollutant Control Technology
BMP	Best Management Practices
BOD	Biochemical Oxygen Demand
BPT	Best Practicable Control Technology Currently Available
CBPELSG	California Board for Professional Engineers, Land Surveyors and Geologists
DWQ	Division of Water Quality
ELGs	Effluent Limitations Guidelines and New Source Performance Standards
ERA	Exceedance Response Action
MS4	Municipal Separate Storm Sewer System
MSGP	Multi Sector General Permit
NAL	Numeric Action Level
NAICS	North American Industrial Classification System
NEC	No Exposure Certification
NEL	Numeric Effluent Limitation
NOI	Notice of Intent
NONA	Notice of Non Applicability
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
NSPS	New Source Performance Standards
NSWD	Non Storm Water Discharges
O&G	Oil and Grease
PRDs	Permit Registration Documents
QA/QC	Quality Assurance/Quality Control
QISP	Qualified Industrial Storm water Practitioner
QSE	Qualifying Storm Event
SIC	Standard Industrial Classification
SMARTS	Storm Water Multiple Application and Report Tracking System
SWPPP	Storm Water Pollution Prevention Plan
TBEL	Technology Based Effluent Limitation
TDS	Total Dissolved Solids
TMDL	Total Maximum Daily Load
TOC	Total Organic Carbon
TSS	Total Suspended Solids
U.S. EPA	United States Environmental Protection Agency
WDID	Waste Discharge Identification Number
WQBEL	Water Quality Based Effluent Limitation

ATTACHMENT C

GLOSSARY

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR STORM WATER DISCHARGES
ASSOCIATED WITH INDUSTRIAL ACTIVITIES
(GENERAL PERMIT)

Adoption Date April 1, 2014

Aerial Deposition

Total suspended particulate matter found in the atmosphere as solid particles or liquid droplets. Chemical composition of particulates varies widely, depending on location and time of year. Sources of airborne particulates include but are not limited to: dust, emissions from industrial processes, combustion products from the burning of wood and coal, combustion products associated with motor vehicle or non-road engine exhausts, and reactions to gases in the atmosphere. Deposition is the act of these materials being added to a landform.

Beneficial Uses

As defined in the California Water Code, beneficial uses of the waters of the state that may be protected against quality degradation, include but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.

Best Available Technology Economically Achievable (BAT)

As defined by United States Environmental Protection Agency (U.S. EPA), BAT is a technology-based standard established by the Clean Water Act (CWA) as the most appropriate means available on a national basis for controlling the direct discharge of toxic and nonconventional pollutants to navigable waters. The BAT effluent limitations guidelines, in general, represent the best existing performance of treatment technologies that are economically achievable within an industrial point source category or subcategory.

Best Conventional Pollutant Control Technology (BCT)

As defined by U.S. EPA, BCT is a technology-based standard for the discharge from existing industrial point sources of conventional pollutants including biochemical oxygen demand (BOD), total suspended sediment (TSS), fecal coliform, pH, oil and grease.

Best Professional Judgment (BPJ)

The method used by permit writers to develop technology-based NPDES permits conditions on a case-by-case basis using all reasonably available and relevant data.

GLOSSARY

Best Management Practices (BMPs)

Scheduling of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants. BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Chain of Custody

Form used to track sample handling as samples progress from sample collection to the laboratory. The chain of custody is also used to track the resulting analytical data from the laboratory to the client. Chain of custody forms can be obtained from an analytical laboratory upon request.

Debris

Litter, rubble, discarded refuse, and remains of destroyed inorganic anthropogenic waste.

Detected Not Quantifiable

A sample result that is between the Method Detection Limit (MDL) and the Minimum Level (ML).

Discharger

A person, company, agency, or other entity that is the operator of the industrial facility covered by this General Permit.

Drainage Area

The area of land that drains water, sediment, pollutants, and dissolved materials to a common discharge location.

Effective Date

The date, set by the State Water Resources Control Board (State Water Board), when at least one or more of the General Permit requirements take effect and the previous permit expires. This General Permit requires most of the requirements (such as SMARTs submittals, minimum BMPs, sampling and analysis requirements) to take effect on July 15, 2015.

Effluent

Any discharge of water either to the receiving water or beyond the property boundary controlled by the Discharger.

Effluent Limitation

Any numeric or narrative restriction imposed on quantities, discharge rates, and concentrations of pollutants that are discharged from point sources into waters of the United States, waters of the contiguous zone, or the ocean.

GLOSSARY

Erosion

The process by which soil particles are detached and transported by the actions of wind, water or gravity.

Erosion Control BMPs

Vegetation, such as grasses and wildflowers, and other materials, such as straw, fiber, stabilizing emulsion, protective blankets, etc., placed to stabilize areas of disturbed soils, reduce loss of soil due to the action of water or wind, and prevent water pollution.

Facility

A collection of industrial processes discharging storm water associated with industrial activity within the property boundary or operational unit.

Field Measurements

Testing procedures performed in the field with portable field-testing kits or meters.

Good Housekeeping BMPs

BMPs designed to reduce or eliminate the addition of pollutants through analysis of pollutant sources, implementation of proper handling/disposal practices, employee education, and other actions.

Industrial Materials

Includes, but is not limited to: raw materials, recyclable materials, intermediate products, final products, by product, waste products, fuels, materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under Section 101(14) of Comprehensive Environmental Response, Compensation, and Liability Act (CERLCA); any chemical the facility is required to report pursuant to Section 313 of Title III of Superfund Amendments and Reauthorization Act (SARA); fertilizers; pesticides; and waste products such as ashes, slag, and sludge and that are used, handled, stored, or disposed in relation to a facility's industrial activity.

Method Detection Limit

The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero.

Minimum Level

The lowest level at which the entire analytical system must give a recognizable signal and acceptable calibration point for the analyte. It is equivalent to the concentration of the lowest calibration standard, assuming that all method-specified sample weights, volumes, and cleanup procedures have been employed.

Monitoring Implementation Plan

Planning document included in the Storm Water Pollution Prevention Plan (SWPPP). Dischargers are required to record information on the implementation of the monitoring requirements in this General Permit. The MIP should include relevant information on:

GLOSSARY

the Monthly Visual Observation schedule, Sampling Parameters, Representative Sampling Reduction, Sample Frequency Reduction, and Qualified Combined Samples.

Monitoring Requirements

Includes sampling and analysis activities as well as visual observations.

Natural Background

Pollutants including substances that are naturally occurring in soils or groundwater. Natural background pollutants do not include legacy pollutants from previous activity at a facility, or pollutants in run-on from neighboring sources which are not naturally occurring.

New Discharge(r)

A facility from which there is a discharge, that did not commence the discharge at a particular site prior to August 13, 1979, which is not a new source as defined in 40 Code of Federal Regulations 122.29, and which has never received a finally effective NPDES permit for discharges at that site. See 40 Code of Federal Regulations 122.2.

Numeric Action Level (NAL) Exceedance

Annual NAL exceedance - the Discharger shall determine the average concentration for each parameter using the results of all the sampling and analytical results for the entire facility for the reporting year (i.e., all "effluent" data) and compare this to the corresponding Annual NAL values in Table 2. For Dischargers using composite sampling or flow measurement in accordance with standard practices, the average concentrations shall be calculated in accordance with the U.S. EPA Guidance Manual for the Monitoring and Reporting Requirements of the NPDES Multi-Sector Storm Water General Permit.¹ An annual NAL exceedance occurs when the average of all the analytical results for a parameter from samples taken within a reporting year exceeds an annual NAL value for that parameter listed in Table 2 (or is outside the NAL pH range);

Instantaneous maximum NAL exceedance - the Discharger shall compare all sampling and analytical results from each distinct sample (individual or composite) to the corresponding Instantaneous maximum NAL values in Table 2. An instantaneous maximum NAL exceedance occurs when two or more analytical results from samples taken for any parameter within a reporting year exceed the instantaneous maximum NAL value (for TSS and O&G), or are outside of the instantaneous maximum NAL range (for pH).

Non Detect

Sample result is less than Method Detection Limit; Analyte being tested cannot be detected by the equipment or method.

¹ U.S. EPA. NPDES Storm Water Sampling Guidance Document. <<http://www.epa.gov/npdes/pubs/owm0093.pdf>>. [as of July 3, 2013]

GLOSSARY

Non-Storm Water Discharges (NSWDs)

Discharges that do not originate from precipitation events. Including but not limited to, discharges of process water, air conditioner condensate, non-contact cooling water, vehicle wash water, sanitary wastes, concrete washout water, paint wash water, irrigation water, or pipe testing water.

Numeric Action Level (NAL)

Pollutant concentration levels used to evaluate if best management practices are effective and if additional measures are necessary to control pollutants. NALs are not effluent limits. The exceedance of an NAL is not a permit violation.

Operator

In the context of storm water associated with industrial activity, any party associated with an industrial facility that meets either of the following two criteria:

- a. The party has operational control over the industrial SWPPP and SWPPP specifications, including the ability to make modifications to those plans and specifications
- b. The party has day-to-day operational control of activities at the facility which are necessary to ensure compliance with a SWPPP for the facility or other permit conditions (e.g., authorized to direct workers at a site to carry out activities required by the SWPPP or comply with other permit conditions).

pH

Unit universally used to express the intensity of the acid or alkaline condition of a water sample. The pH of natural waters tends to range between 6.0 and 9.0, with neutral being 7.0.

Plastic Materials

Plastic Materials are virgin and recycled plastic resin pellets, powders, flakes, powdered additives, regrind, dust, and other similar types of preproduction plastics with the potential to discharge or migrate off-site.

Qualified Industrial Storm Water Practitioner (QISP)

Only required once a Discharger reaches Level 1 status, a QISP is the individual assigned to ensure compliance with this General Permit or to assist New Dischargers with determining coverage eligibility for discharges to an impaired water body. A QISP's responsibilities include implementing the SWPPP, performing the Annual Comprehensive Facility Compliance Evaluation (Annual Evaluation), assisting in the preparation of Annual Reports, performing ERAs, and training appropriate Pollution Prevention Team members. The individual must take the appropriate state approved or sponsored training to be qualified. Dischargers shall ensure that the designated QISP is geographically located in an area where they will be able to adequately perform the permit requirements at all of the facilities they represent.

GLOSSARY

Qualifying Storm Event (QSE)

A precipitation event that:

- a. Produces a discharge for at least one drainage area; and
- b. Is preceded by 48 hours with no discharge from any drainage area.

Regional Water Board

Includes the Executive Officer and delegated Regional Water Board staff.

Runoff Control BMPs

Measures used to divert run-on from offsite and runoff within the site.

Run-on

Discharges that originate offsite and flow onto the property of a separate facility or property or, discharges that originate onsite from areas not related to industrial activities and flow onto areas on the property with industrial activity.

Scheduled Facility Operating Hours

The time periods when the facility is staffed to conduct any function related to industrial activity, but excluding time periods where only routine maintenance, emergency response, security, and/or janitorial services are performed.

Sediment

Solid particulate matter, both mineral and organic, that is in suspension, is being transported, or has been moved from its origin by air, water, gravity, or ice and has come to rest on the earth's surface either above or below sea level.

Sedimentation

Process of deposition of suspended matter carried by water, wastewater, or other liquids that flow by gravity. Control of sedimentation is accomplished by reducing the velocity of the liquid below the point at which it can transport the suspended material.

Sediment Control BMPs

Practices that trap soil particles after they have been eroded by rain, flowing water, or wind. Includes those practices that intercept and slow or detain the flow of storm water to allow sediment to settle and be trapped (i.e., silt fence, sediment basin, fiber rolls, etc.).

Sheet Flow

Flow of water that occurs overland in areas where there are no defined channels and where the water spreads out over a large area at a uniform depth.

Source

Any facility or building, property, road, or area that causes or contributes to pollutants in storm water.

GLOSSARY

Storm Water

Storm water runoff, snowmelt runoff, and storm water surface runoff and drainage.

Storm Water Discharge Associated With Industrial Activity

The discharge from any conveyance which is used for collecting and conveying storm water and which is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant as identified in Attachment A of this General Permit. The term does not include discharges from facilities or activities excluded from the NPDES program. The term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials; manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process wastewaters (as defined at 40 C.F.R. section 401); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and finished products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water. The term does not include discharges from facilities or activities excluded from the NPDES program under 40 C.F.R. section 122.

Material handling activities include the: storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, finished product, by-product, or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas. Industrial facilities (including industrial facilities that are federally, State, or municipally owned or operated that meet the description of the facilities listed in this paragraph) include those facilities designated under 40 C.F.R. section 122.26(a)(1)(v).

Structural Controls

Any structural facility designed and constructed to mitigate the adverse impacts of storm water and urban runoff pollution.

Total Suspended Solids (TSS)

The measure of the suspended solids in a water sample including inorganic substances such as soil particles, organic substances such as algae, aquatic plant/animal waste, and particles related to industrial/sewage waste, etc. The TSS test measures the concentration of suspended solids in water by measuring the dry weight of a solid material contained in a known volume of a sub-sample of a collected water sample. Results are reported in mg/L.

GLOSSARY

Toxicity

The adverse response(s) of organisms to chemicals or physical agents ranging from mortality to physiological responses, such as impaired reproduction or growth anomalies.

Trade Secret

Information, including a formula, pattern, compilation, program, device, method, technique, or process, that: (1) derives independent economic value, actual or potential, from not being generally known to the public or to other persons who can obtain economic value from its disclosure or use; and (2) is the subject of efforts that are reasonable under the circumstances to maintain its secrecy.

Turbidity

The cloudiness of water quantified by the degree to which light traveling through a water column is scattered by the suspended organic and inorganic particles it contains. The turbidity test is reported in Nephelometric Turbidity Units (NTU) or Jackson Turbidity Units (JTU).

Waters of the United States

Generally refers to surface waters, as defined for the purposes of the federal Clean Water Act.

Water Quality Objectives

Defined in the California Water Code as limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area.

Water Quality Standards

Consists of beneficial uses, water quality objectives to protect those uses, an antidegradation policy, and policies for implementation. Water quality standards are established in Regional Water Quality Control Plans (Basin Plans) and statewide Water Quality Control Plans. U.S. EPA has also adopted water quality criteria (the same as objectives) for California in the National Toxics Rule and California Toxics Rule.

ATTACHMENT D

PERMIT REGISTRATION DOCUMENTS (PRDs)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITIES (GENERAL PERMIT)

This Attachment provides an example of the information Dischargers are required to submit in the PRDs via the Storm Water Multiple Application and Report Tracking System (SMARTS). The actual PRD requirements are in Section II of this General Permit.

A. Who Must Submit PRDs

All Dischargers that operate facilities as described in Attachment A of this General Permit are subject to either Notice of Intent (NOI) or No Exposure Certification (NEC) Coverage and shall comply with the PRD requirements in this General Permit.

B. Who Is Not Required to Submit PRDs

Dischargers that operate facilities described below are not required to submit PRDs:

1. Facilities that are not described in Attachment A;
2. Facilities that are described in Attachment A but do not have discharges of storm water associated with industrial activity to waters of the United States; or,
3. Facilities that are already covered by an NPDES permit for discharges of storm water associated with industrial activity.

C. Annual Fees for NOI and NEC Coverage

Annual Fees for NOI and NEC coverage are established through regulations adopted by the State Water Board and are subject to change (see California Code of Regulations, title 23, section 2200 et seq.).

D. When and How to Apply

Dischargers proposing to conduct industrial activities subject to this General Permit must electronically certify and submit PRDs via the Storm Water Multiple Application

PERMIT REGISTRATION DOCUMENTS (PRDS)

Reporting and Tracking System (SMARTS)¹ no less than seven (7) days prior to the commencement of industrial activity. Existing Dischargers must submit PRDs for NOI coverage by July 1, 2015 or for NEC coverage by October 1, 2015.

E. PRD Requirements for NOI Coverage

1. Notice of Intent (NOI) and Signed Electronic Authorization Form.
2. Site Map (Section X.E of this General Permit).
3. Storm Water Pollution Prevention Plan (see Section X of this General Permit).

F. Description of PRDs for NOI Coverage

1. The Notice of Intent (NOI) requires the following information:

- a. Operator/Owner Information

Operator/Owner Company or Organization Name
 Contact First Name
 Contact Last Name
 Title
 Street Address
 Address Line 2
 City/State/Zip
 Phone (e.g. 999-999-9999)
 E-mail (e.g. abc@xyz.com)
 Federal Tax ID

- b. Facility Information

Facility Name
 WDID Number (if applicable)
 Contact First Name
 Contact Last Name
 Title
 Street Address
 Address Line 2
 City
 County
 Phone (e.g. 999-999-9999)

¹ The State Water Board has developed the SMARTS online database system to handle registration and reporting under this General Permit. More information regarding SMARTS and access to the database is available online at <https://smarts.waterboards.ca.gov>. [as of June 26, 2013].

PERMIT REGISTRATION DOCUMENTS (PRDS)

Emergency Phone (e.g. 999-999-9999)
 E-mail (abc@xyz.com)
 State/Zip CA
 Total Site Size (Acres)
 Latitude (Decimal degrees only, minimum 5 significant digits, e.g. 99.99999)
 Longitude (Decimal degrees only, minimum 5 significant digits, e.g. 99.99999)
 Total Percentage Site Imperviousness Area of Facility (Acres)
 Total Areas of Industrial Activities and Materials Exposed to Precipitation
 Primary SIC Code
 Secondary SIC Code
 Tertiary SIC Code
 Regional Water Board

c. Billing Information

Billing Name
 Contact First Name
 Contact Last Name
 Title
 Street Address
 Address Line 2
 City/State/Zip
 Phone (e.g. 999-999-9999)
 E-mail (e.g. abc@xyz.com)

d. Receiving Water Information

Does your facility's storm water flow directly or indirectly into waters of the US such as river, lake, ocean, etc. (check box for directly or indirectly)

- i. Indirectly to waters of the US
- ii. Storm drain system - Enter owner's name:
- iii. Directly to waters of the US (e.g., river, lake, creek, stream, bay, ocean, etc.)
- iv. Name of the receiving water: _____

PERMIT REGISTRATION DOCUMENTS (PRDS)

2. The Site Map(s) shall include the following Information:
 - a. The facility boundary;
 - b. Storm water drainage areas within the facility boundary;
 - c. Portions of any drainage area impacted by discharges from surrounding areas and flow direction of each drainage area;
 - d. On-facility surface water bodies;
 - e. Areas of soil erosion;
 - f. Location(s) of nearby water bodies (such as rivers, lakes, wetlands, etc.);
 - g. Location(s) of municipal storm drain inlets that may receive the facility's industrial storm water discharges and authorized Non-Storm Water Discharges (NSWDs);
 - h. Locations of storm water collection and conveyance systems and associated points of discharge, and direction of flow;
 - i. Any structural control measures (that affect industrial storm water discharges, authorized NSWDs, and run-on);
 - j. All impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures;
 - k. Locations where materials are directly exposed to precipitation;
 - l. Locations where significant spills or leaks identified (Section X.G.1.d of this General Permit) have occurred;
 - m. Areas of industrial activity subject to this General Permit;
 - n. All storage areas and storage tanks;
 - o. Shipping and receiving areas;
 - p. Fueling areas;

PERMIT REGISTRATION DOCUMENTS (PRDS)

- q. Vehicle and equipment storage/maintenance areas;
 - r. Material handling and processing areas;
 - s. Waste treatment and disposal areas;
 - t. Dust or particulate generating areas;
 - u. Cleaning and material reuse areas; and,
 - v. Any other areas of industrial activity which may have potential pollutant sources.
3. The Storm Water Pollution Prevention Plan (SWPPP) must be prepared in accordance with Section X of this General Permit.
 4. A NOI Certification by the Discharger that all PRDs submitted are correct and true.
 5. SMARTS Electronic Authorization Form (Signed by any user authorized to certify and submit data electronically).

G. PRD Requirements for NEC Coverage

1. No Exposure Certification and Signed Electronic Authorization Form.
2. No Exposure Certification Checklist Consistent with Requirements in Section XVII.F.2 of this General Permit.
3. Current Site Map Consistent with Requirements in Section X.E of this General Permit.

H. Description of PRDs for NEC Coverage

1. The No Exposure Certification requires the following information:
 - a. Operator/Owner Information
 - Operator/Owner Name
 - Contact First Name
 - Contact Last Name
 - Title

PERMIT REGISTRATION DOCUMENTS (PRDS)

Street Address
 Address Line 2
 City/State/Zip
 Phone Ex (999-999-9999)
 E-mail (abc@xyz.com)
 Federal Tax ID

b. Facility Information

Facility Name
 Contact First Name
 Contact Last Name
 Title
 Street Address
 Address Line 2
 City
 County
 Phone Ex (999-999-9999)
 Emergency Phone Ex (999-999-9999)
 E-mail (abc@xyz.com)
 State/Zip CA
 Total Site Size (Acres)
 Latitude (Decimal degrees only, minimum 5 significant digits, Ex 99.99999)
 Longitude (Decimal degrees only, minimum 5 significant digits, Ex 99.99999)
 Percent of Site Imperviousness (%)
 Primary SIC Code
 Secondary SIC Code
 Tertiary SIC Code
 Regional Water Board

c. Billing Information

Billing Name (if different than Operator/Owner)
 Contact First Name
 Contact Last Name
 Title
 Street Address
 Address Line 2
 City/State/Zip
 Phone E.g. (999-999-9999)
 E-mail (e.g. abc@xyz.com)

d. SMARTS Electronic Authorization Form - Signed by any user authorized to certify and submit data electronically.

PERMIT REGISTRATION DOCUMENTS (PRDS)

- e. Certification by the Discharger that all PRDs submitted are correct and true and that the conditions of no-exposure have been met.
2. The NEC Checklist (Section XVII.F.2 of this General Permit) must be prepared to demonstrate that, based upon a facility inspection and evaluation, none of the following industrial materials or activities are, or will be in the foreseeable future, exposed to precipitation:
 - a. Activities such as using, storing, or cleaning industrial machinery or equipment, and areas with materials or residuals from these activities;
 - b. Materials or residuals on the ground or in storm water inlets from spills/leaks;
 - c. Materials or products from past industrial activity;
 - d. Material handling equipment (except adequately maintained vehicles);
 - e. Materials or products during loading/unloading or transporting activities;
 - f. Materials or products stored outdoors (except final products intended for outside use, e.g., new cars, where exposure to storm water does not result in the discharge of pollutants);
 - g. Materials contained in open, deteriorated or leaking storage drums, barrels, tanks, and similar containers;
 - h. Materials or products handled/stored on roads or railways owned or maintained by the Discharger;
 - i. Waste material (except waste in covered, non-leaking containers, e.g., dumpsters). Application or disposal of processed wastewater (unless already covered by an NPDES permit); and,
 - j. Particulate matter or visible deposits of residuals from roof stacks/vents evident in the storm water outflow.
 3. The Site Map(s) shall include the following information (see Section X.E of this General Permit):
 - a. The facility boundary;
 - b. Storm water drainage areas within the facility boundary;
 - c. Portions of any drainage area impacted by discharges from surrounding areas and flow direction of each drainage area;

PERMIT REGISTRATION DOCUMENTS (PRDS)

- d. On-facility surface water bodies;
- e. Areas of soil erosion;
- f. Location(s) of nearby water bodies (such as rivers, lakes, wetlands, etc.);
- g. Location(s) of municipal storm drain inlets that may receive the facility's industrial storm water discharges and authorized NSWDs;
- h. Locations of storm water collection and conveyance systems and associated points of discharge, and direction of flow;
- i. Any structural control measures (that affect industrial storm water discharges, authorized NSWDs, and run-on);
- j. All impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures;
- k. Locations where materials are directly exposed to precipitation and the locations where significant spills or leaks identified (Section X.G.1.d of this General Permit) have occurred;
- l. Areas of industrial activity subject to this General Permit;
- m. All storage areas and storage tanks;
- n. Shipping and receiving areas;
- o. Fueling areas;
- p. Vehicle and equipment storage/maintenance areas;
- q. Material handling and processing areas;
- r. Waste treatment and disposal areas;
- s. Dust or particulate generating areas;
- t. Cleaning and material reuse areas; and,
- u. Any other areas of industrial activity which may have potential pollutant sources.

PERMIT REGISTRATION DOCUMENTS (PRDS)**I. Obtaining Coverage**

To obtain coverage under this General Permit PRDs must be included and completed. If any of the required items are missing, the PRD submittal is considered incomplete and will be rejected. Upon receipt of a complete PRD submittal, the State Water Board will process the application package in the order received and assign a (WDID) number.

J. Additional Information

The Water Board may require the submittal of additional information in SMARTS if required to determine the appropriate fee for the facility as specified by the fee regulations.

K. Questions

If you have any questions on completing the PRDs or about SMARTS, please email stormwater@waterboards.ca.gov or call (866) 563-3107.

ATTACHMENT E

LIST OF TOTAL MAXIMUM DAILY LOADS (TMDLS) APPLICABLE TO INDUSTRIAL STORM WATER DISCHARGERS

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITIES (GENERAL PERMIT)

The following table contains a list of Regional Water Board adopted and/or U.S. EPA established/approved TMDLs, as of the adoption date of this General Permit, that are applicable to industrial storm water Dischargers. TMDLs adopted/established after the effective date of the General Permit may, at the Water Boards discretion, be included in this General Permit. This General Permit may be reopened to amend TMDL-specific permit requirements in this Attachment E, or to incorporate new TMDLs adopted during the term of this General Permit that include requirements applicable to Dischargers covered by this General Permit.

Water Body	Pollutant
<u>San Francisco Bay Regional Water Quality Control Board</u>	
Napa River	Sediment
Sonoma Creek	Sediment
<u>Los Angeles Regional Water Quality Control Board</u>	
Santa Clara River Reach 3	Chloride
Santa Clara River	Nutrients
Los Angeles River	Metals
Los Angeles River	Nutrients
San Gabriel River	Metals and Selenium
Santa Monica Bay	Nearshore Debris
Machado Lake	Nutrient
Harbor Beaches of Ventura	Bacteria
Ballona Creek	Metals
Ballona Creek Estuary	Toxic Pollutants
Los Angeles Harbor	Bacteria
Marina del Rey Back Basins	Bacteria
Santa Clara River	Bacteria
Walker Creek,	Mercury
Oxnard Drain No. 3	Pesticides, PCBs ¹ and Sediment Toxicity
Long Beach City Beaches and Los Angeles River Estuary	Indicator Bacteria
Los Angeles and Long Beach Harbors	Toxic and Metals

¹ Polychlorinated biphenyls

**LIST OF TOTAL MAXIMUM DAILY LOADS (TMDLS) APPLICABLE TO
INDUSTRIAL STORM WATER DISCHARGERS**






Los Angeles Area Lakes	Nitrogen, Phosphorus, Mercury, Trash, Organochlorine Pesticides and PCBs
Santa Monica Bay	DDTs and PCBs
Machado Lake	Toxics
Colorado Lagoon	Pesticides, Polycyclic aromatic hydrocarbons, PCBs, and Metals
Calleguas Creek Watershed	Salts
Calleguas Creek Watershed	Metals and Selenium
Ballona Creek, Ballona Estuary, and Sepulveda Channel	Bacteria
Marina Del Rey Harbor-Back Basins	Copper, Lead, Zinc, and Chlordane, and Total PCBs
Los Cerritos Channel	Metals
<u>Santa Ana Regional Water Quality Control Board</u>	
San Diego Creek and Newport Bay	Toxic Pollutants
<u>San Diego Regional Water Quality Control Board</u>	
Chollas Creek	Diazinon
Chollas Creek	Copper, Lead, and Zinc
Los Peñasquitos Lagoon	Sediment
Rainbow Creek	Total Nitrogen and Total Phosphorus
Shelter Island Yacht Basin	Dissolved Copper
Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in SD Bay	Indicator Bacteria
Twenty Beaches and Creeks	Indicator Bacteria

ATTACHMENT F

EFFLUENT LIMITATION GUIDELINES (ELGs)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR STORM WATER DISCHARGES
ASSOCIATED WITH INDUSTRIAL ACTIVITIES
(GENERAL PERMIT)

The following Parts of federal regulations at 40 Code of Federal Regulations Chapter I Subchapter N (Subchapter N) contain ELGs approved by US EPA for specific categories of industrial storm water discharges:

Point Source Category	ELGs ¹
Part 411 - Cement Manufacturing	 411.pdf
Part 418 - Fertilizer Manufacturing	 418.pdf
Part 419 - Petroleum Refining	 419.pdf
Part 422 - Phosphate Manufacturing	 422.pdf
Part 423 - Steam Electric Power Generating	 423.pdf

¹ The applicable ELGs are attached to this Attachment F. To view the attachments from an electronic (pdf) version of this Attachment F, left-click on the paper clip icon to the left of this pdf file to make the attachment window appear, then double-click on the icons of the attached pdf files. The attachments are also available on the Industrial Storm Water program pages of the State Water Resources Control Board's website (www.waterboards.ca.gov).

EFFLUENT LIMITATION GUIDELINES (ELGs)

Point Source Category	ELGs ²
Part 429 - Wetting of logs at wet deck storage areas	 429.pdf
Part 434 - Coal Mining	 434.pdf
Part 436 - Mineral Mining And Processing	 436.pdf
Part 440 - Ore Mining And Dressing	 440.pdf
Part 443 - Paving And Roofing Materials (Tars And Asphalt)	 443.pdf
Part 445 - Landfills	 445.pdf
Part 449 - Airport Deicing	 449.pdf

² The applicable ELGs are attached to this Attachment F. To view the attachments from an electronic (pdf) version of this Attachment F, left-click on the paper clip icon to the left of this pdf file to make the attachment window appear, then double-click on the icons of the attached pdf files. The attachments are also available on the Industrial Storm Water program pages of the State Water Resources Control Board's website (www.waterboards.ca.gov).

EFFLUENT LIMITATION GUIDELINES (ELGs)

New Source Performance Standards

New source performance standards (NSPS) represent the best available demonstrated control technology standards. US EPA has established NSPS guidelines for the industries found in the Table below. The intent of NSPS guidelines is to set effluent limitations that represent state-of-the-art treatment technology for new sources.³

Table 1 - Storm Water Specific NSPS Effluent Limitation Guidelines

Regulated Discharge	40 CFR Section	Multi Sector General Permit Sector	NSPS	Date New Source Data Established
Discharge resulting from spray down or intentional wetting of logs as wet deck storage areas	Part 429, Subpart I	A	Yes	1/26/81
Runoff from phosphate fertilizer manufacturing facilities that comes into contact with any raw materials, finished products, by-products or waste products (SIC 2874)	Part 418, Subpart A	C	Yes	4/8/74
Runoff from asphalt emulsion facilities	Part 443, Subpart A	D	Yes	7/28/75
Runoff from materials storage piles at cement manufacturing facilities	Part 411, Subpart C	E	Yes	2/20/74
Mine dewatering discharges at crushed stone, construction sand and gravel, or industrial sand mining facilities	Part 436, Subparts B, C, D	J	No	N/A
Runoff from hazardous waste and non-hazardous waste landfills	Part 445, Subparts A and B	K, L	Yes	2/2/00
Runoff from coal storage piles at steam electric generating facilities	Part 423	O	Yes	11/19/82 & 10/8/74
Discharges from primary airports with over 1,000 annual jet departures that conduct deicing operations.	Part 449, Subpart A	S	Yes	NA

³ New source means any building, structure, facility, or installation from which there is or may be a "discharge of pollutants," the construction of which commenced: (1) After promulgation of standards of performance under section 306 of CWA which are applicable to such source, or (2) After proposal of standards of performance in accordance with section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with section 306 within 120 days of their proposal as defined in 40 C.F.R section 122.26.

ATTACHMENT G

REQUIREMENTS FOR DISCHARGERS WHO HAVE BEEN GRANTED AN OCEAN PLAN EXCEPTION FOR DISCHARGES TO ASBS

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITIES (GENERAL PERMIT)

A. Areas of Special Biological Significance (ASBS)

1. ASBS are defined in the California Ocean Plan as “those areas designated by the State Water Board as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable.”
2. The California Ocean Plan prohibits the discharge of waste to ASBS.
3. The California Ocean Plan authorizes the State Water Board to grant an exception to Ocean Plan provisions where the board determines that the exception will not compromise protection of ocean waters for beneficial uses and the public interest will be served.
4. On March 20, 2012, the State Water Board adopted Resolution 2012-0012 (amended by Resolution 2012-0031 on June 19, 2012) which contained a general exception to the California Ocean Plan for discharges of storm water and non-point sources (ASBS Exception). This resolution also contains the Special Protections that are to be implemented for direct discharges to ASBS. Resolution 2012-0012 is hereby incorporated by reference and its requirements must be complied with by industrial storm water Dischargers discharging directly to ASBS.
5. This General Permit requires Dischargers who have been granted an Ocean Plan exception for discharges to ASBS to comply with the requirements contained in the Special Protections. These requirements are contained below.

B. ASBS Non-Storm Water Discharges

1. The term “ASBS Non-Storm Water Discharges” means any waste discharges from a municipal separate storm sewer system (MS4) or other NPDES permitted storm drain system to an ASBS that are not comprised entirely of storm water.
2. Only the following ASBS Non-Storm Water Discharges are allowed, provided that the discharges are essential for emergency response purposes, structural stability, slope stability or occur naturally:

REQUIREMENTS FOR DISCHARGERS WHO HAVE BEEN GRANTED AN OCEAN PLAN EXCEPTION FOR DISCHARGES TO ASBS

- a. Discharges associated with emergency fire fighting operations.
 - b. Foundation and footing drains.
 - c. Water from crawl space or basement pumps.
 - d. Hillside dewatering.
 - e. Naturally occurring groundwater seepage via a storm drain.
 - f. Non-anthropogenic flows from a naturally occurring stream via a culvert or storm drain, as long as there are no contributions of anthropogenic runoff.
3. Authorized ASBS Non- Storm Water Discharges shall not cause or contribute to a violation of the water quality objectives in Chapter II of the Ocean Plan nor alter natural ocean water quality in an ASBS.
 4. At the San Clemente Island ASBS, discharges incidental to military training and research, development, test, and evaluation operations are allowed. Discharges incidental to underwater demolition and other in-water explosions are not allowed in the two military closure areas in the vicinity of Wilson Cove and Castle Rock. Discharges must not result in a violation of the water quality objectives, including the protection of the marine aquatic life beneficial use, anywhere in the ASBS.
 5. At the San Nicolas Island and Begg Rock ASBS, discharges incidental to military research, development, testing, and evaluation of, and training with, guided missile and other weapons systems, fleet training exercises, small-scale amphibious warfare training, and special warfare training are allowed. Discharges incidental to underwater demolition and other in-water explosions are not allowed. Discharges must not result in a violation of the water quality objectives, including the protection of the marine aquatic life beneficial use, anywhere in the ASBS.

C. ASBS Compliance Plan

1. State Water Board Resolution 2012-0012 grants an exception to the Ocean Plan's prohibition on discharges to ASBS (ASBS Exception) to applicants who were identified as Dischargers of industrial storm water to ASBS (ASBS Dischargers). Each ASBS Discharger shall specifically address the prohibition of ASBS Non-Storm Water Discharges and the requirement to maintain natural water quality for industrial storm water discharges to an ASBS in an ASBS Compliance Plan to be included in the ASBS Discharger's SWPPP. The ASBS Compliance Plan is subject to approval by the Executive Director of the State Water Board. The ASBS Compliance Plan shall include:

**REQUIREMENTS FOR DISCHARGERS WHO HAVE BEEN GRANTED AN
OCEAN PLAN EXCEPTION FOR DISCHARGES TO ASBS**

- a. A map of surface drainage of storm water runoff, showing areas of sheet runoff and priority discharges, and a description of any structural Best Management Practices (BMPs) already employed and/or BMPs to be employed in the future. Priority discharges are those that pose the greatest water quality threat and which are identified as requiring installation of structural BMPs. The map shall also show the storm water conveyances in relation to other features such as service areas, sewage conveyances and treatment facilities, landslides, areas prone to erosion, and waste and hazardous material storage areas, if applicable. The SWPPP shall also include a procedure for updating the map and plan when changes are made to the storm water conveyance facilities.

- b. A description of the measures by which all unauthorized ASBS Non-Storm Water Discharges (e.g., dry weather flows) has been eliminated, how these measures will be maintained over time, and how these measures are monitored and documented.

- c. A description of how pollutant reductions in storm water runoff, that are necessary to comply with these special conditions, will be achieved through BMPs. Structural BMPs need not be installed if the Discharger can document to the satisfaction of the Executive Director that such installation would pose a threat to health or safety. BMPs to control storm water runoff discharges (at the end-of-pipe) during a design storm shall be designed to achieve on average the following target levels:
 - 1) Table B Instantaneous Maximum Water Quality Objectives in Chapter II of the Ocean Plan; or
 - 2) A 90% reduction in pollutant loading during storm events, for the applicant's total discharges.

The baseline date for the reduction is March 20, 2012 (the effective date of the ASBS Exception), except for those structural BMPs installed between January 1, 2005 and the adoption of these special protections. The reductions must be achieved and documented by March 20, 2018.

- d. A description of how the ASBS Discharger will address erosion and the prevention of anthropogenic sedimentation in the ASBS. The natural habitat conditions in the ASBS shall not be altered as a result of anthropogenic sedimentation.

- e. A description of the non-structural BMPs currently employed and planned in the future (including those for construction activities), and include an implementation schedule. The ASBS Compliance Plan shall also describe the structural BMPs, including any low impact development (LID) measures, currently employed and planned for higher threat discharges and include an

REQUIREMENTS FOR DISCHARGERS WHO HAVE BEEN GRANTED AN OCEAN PLAN EXCEPTION FOR DISCHARGES TO ASBS

implementation schedule. To control storm water runoff discharges (at the end-of-pipe) during a design storm, ASBS Dischargers must first consider using LID practices to infiltrate, use, or evapotranspiration storm water runoff on-site. The BMPs and implementation schedule shall be designed to ensure that natural water quality conditions in the receiving water are achieved and maintained by either reducing flows from impervious surfaces or reducing pollutant loading, or some combination thereof.

D. Reporting

If the results of the receiving water monitoring described in Section F. below (Sampling and Analysis Requirements) indicate that the storm water runoff is causing or contributing to an alteration of natural ocean water quality in the ASBS, the ASBS Discharger shall submit a report to the State Water Board within 30 days of receiving the results.

1. The report shall identify the constituents in storm water runoff that alter natural ocean water quality and the sources of these constituents.
2. The report shall describe BMPs that are currently being implemented, BMPs that are identified in the SWPPP for future implementation, and any additional BMPs that may be added to the SWPPP to address the alteration of natural water quality. The report shall include a new or modified implementation schedule for the BMPs.
3. Within 30 days of the approval of the report by the Executive Director, the ASBS Discharger shall revise its ASBS Compliance Plan to incorporate any new or modified BMPs that have been or will be implemented, the implementation schedule, and any additional monitoring required.
4. As long as the ASBS Discharger has complied with the procedures described above and is implementing the revised SWPPP, the Discharger does not have to repeat the same procedure for continuing or recurring exceedances of natural ocean water quality conditions due to the same constituent.
5. Compliance with this section does not excuse violations of any term, prohibition, or special condition contained in the Special Protections of the ASBS Exception.

E. Compliance Schedule

1. As of March 20, 2012, all unauthorized ASBS Non-Storm Water Discharges (e.g., dry weather flow) were effectively prohibited.
2. By September 20, 2013, the Discharger shall submit a draft written ASBS Compliance Plan to the Executive Director that describes its strategy to comply with these special conditions, including the requirement to maintain natural water

REQUIREMENTS FOR DISCHARGERS WHO HAVE BEEN GRANTED AN OCEAN PLAN EXCEPTION FOR DISCHARGES TO ASBS

quality in the affected ASBS. The ASBS Compliance Plan shall include a description of appropriate non-structural controls and a time schedule to implement structural controls (implementation schedule) to comply with these special conditions for inclusion in the Discharger's SWPPP.

3. By September 20, 2014, the Discharger shall submit the final ASBS Compliance Plan, including a description and final schedule for structural controls based on the results of runoff and receiving water monitoring.
4. By September 20, 2013, any non-structural controls that are necessary to comply with these special conditions shall be implemented.
5. By March 20, 2018, any structural controls identified in the ASBS Compliance Plan that are necessary to comply with these special conditions shall be operational.
6. By March 20, 2018, all Dischargers must comply with the requirement that their discharges into the affected ASBS maintain natural ocean water quality. If the initial results of post-storm receiving water quality testing indicate levels higher than the 85th percentile threshold of reference water quality data and the pre-storm receiving water levels, then the Discharger must re-sample the receiving water, pre- and post-storm. If after re-sampling the post-storm levels are still higher than the 85th percentile threshold of reference water quality data, and the pre-storm receiving water levels, for any constituent, then natural ocean water quality is exceeded. See Flowchart at the end of this Attachment.
7. The Executive Director may only authorize additional time to comply with the special conditions 5 and 6, above if good cause exists to do so. Good cause means a physical impossibility or lack of funding

If a Discharger claims physical impossibility, it shall notify the Board in writing within thirty (30) days of the date that the Discharger first knew of the event or circumstance that caused or would cause it to fail to meet the deadline in 5. or 6. The notice shall describe the reason for the noncompliance or anticipated noncompliance and specifically refer to this Section of these requirements. It shall describe the anticipated length of time the delay in compliance may persist, the cause or causes of the delay as well as measures to minimize the impact of the delay on water quality, the measures taken or to be taken by the Discharger to prevent or minimize the delay, the schedule by which the measures will be implemented, and the anticipated date of compliance. The Discharger shall adopt all reasonable measures to avoid and minimize such delays and their impact on water quality.

The Discharger may request an extension of time for compliance based on lack of funding. The request for an extension shall require:

**REQUIREMENTS FOR DISCHARGERS WHO HAVE BEEN GRANTED AN
OCEAN PLAN EXCEPTION FOR DISCHARGES TO ASBS**

- a. for municipalities, a demonstration of significant hardship to Discharger ratepayers, by showing the relationship of storm water fees to annual household income for residents within the Discharger's jurisdictional area, and the Discharger has made timely and complete applications for all available bond and grant funding, and either no bond or grant funding is available, or bond and/or grant funding is inadequate; or
- b. for other governmental agencies, a demonstration and documentation of a good faith effort to acquire funding through that agency's budgetary process, and a demonstration that funding was unavailable or inadequate.

F. Additional Requirements – Waterfront and Marine Operations

In addition to the above provisions, a Discharger with waterfront and marine operations shall comply with the following:

- 1. For discharges related to waterfront and marine operations, the Discharger shall develop a Waterfront and Marine Operations Management Plan (Waterfront Plan). This plan shall contain appropriate Management Measures/Practices to address nonpoint source pollutant discharges to the affected ASBS.
 - a. The Waterfront Plan shall contain appropriate Management Measures/Practices for any waste discharges associated with the operation and maintenance of vessels, moorings, piers, launch ramps, and cleaning stations in order to ensure that beneficial uses are protected and natural water quality is maintained in the affected ASBS.
 - b. For discharges from marinas and recreational boating activities, the Waterfront Plan shall include appropriate Management Measures, described in The Plan for California's Nonpoint Source Pollution Control Program, for marinas and recreational boating, or equivalent practices, to ensure that nonpoint source pollutant discharges do not alter natural water quality in the affected ASBS.
 - c. The Waterfront Plan shall include Management Practices to address public education and outreach to ensure that the public is adequately informed that waste discharges to the affected ASBS are prohibited or limited by special conditions in these Special Protections. The management practices shall include appropriate signage, or similar measures, to inform the public of the ASBS restrictions and to identify the ASBS boundaries.
 - d. The Waterfront Plan shall include Management Practices to address the prohibition against trash discharges to ASBS. The Management Practices shall include the provision of adequate trash receptacles for marine recreation areas, including parking areas, launch ramps, and docks. The plan shall also include appropriate Management Practices to ensure that the receptacles are

**REQUIREMENTS FOR DISCHARGERS WHO HAVE BEEN GRANTED AN
OCEAN PLAN EXCEPTION FOR DISCHARGES TO ASBS**

- adequately maintained and secured in order to prevent trash discharges into the ASBS. Appropriate Management Practices include covering the trash receptacles to prevent trash from being windblown, staking or securing the trash receptacles so they don't tip over, and periodically emptying the receptacles to prevent overflow.
- e. The Discharger shall submit its Waterfront Plan to the State Water Board Executive Director by September 20, 2012. The Waterfront Plan is subject to approval by the State Water Board Executive Director. The plan must be fully implemented within by September 20, 2013.
2. The discharge of chlorine, soaps, petroleum, other chemical contaminants, trash, fish offal, or human sewage to ASBS is prohibited. Sinks and fish cleaning stations are point source discharges of wastes and are prohibited from discharging into ASBS. Anthropogenic accumulations of discarded fouling organisms on the sea floor must be minimized.
 3. Limited-term activities, such as the repair, renovation, or maintenance of waterfront facilities, including, but not limited to, piers, docks, moorings, and breakwaters, are authorized only in accordance with Chapter III.E.2 of the Ocean Plan.
 4. If the Discharger anticipates that the Discharger will fail to fully implement the approved Waterfront Plan within the 18 month deadline, the Discharger shall submit a technical report as soon as practicable to the Executive Director. The technical report shall contain reasons for failing to meet the deadline and propose a revised schedule to fully implement the plan.
 5. The State Water Board may, for good cause, authorize additional time to comply with the Waterfront Plan. Good cause means a physical impossibility or lack of funding.

If a Discharger claims physical impossibility, it shall notify the Board in writing within thirty (30) days of the date that the Discharger first knew of the event or circumstance that caused or would cause it to fail to meet the deadline in Section F.1.e above. The notice shall describe the reason for the noncompliance or anticipated noncompliance and specifically refer to this Section of this Attachment. It shall describe the anticipated length of time the delay in compliance may persist, the cause or causes of the delay as well as measures to minimize the impact of the delay on water quality, the measures taken or to be taken by the Discharger to prevent or minimize the delay, the schedule by which the measures will be implemented, and the anticipated date of compliance. The Discharger shall adopt all reasonable measures to avoid and minimize such delays and their impact on water quality. The Discharger may request an extension of time for compliance based on lack of funding. The request for an extension shall require:

REQUIREMENTS FOR DISCHARGERS WHO HAVE BEEN GRANTED AN OCEAN PLAN EXCEPTION FOR DISCHARGES TO ASBS

- a. a demonstration of significant hardship by showing that the Discharger has made timely and complete applications for all available bond and grant funding, and either no bond or grant funding is available, or bond and/or grant funding is inadequate.
- b. for governmental agencies, a demonstration and documentation of a good faith effort to acquire funding through that agency's budgetary process, and a demonstration that funding was unavailable or inadequate.

G. Sampling and Analysis Requirements

1. Monitoring is mandatory for all ASBS Dischargers to assure compliance with the Ocean Plan. Monitoring requirements include both: (1) Core Discharge Monitoring and (2) Ocean Receiving Water Monitoring (see Sections H. and I. below). The State and Regional Water Boards must approve sampling site locations and any adjustments to the monitoring programs. All ocean receiving water and reference area monitoring must be comparable with the Water Boards' Surface Water Ambient Monitoring Program (SWAMP).
2. Safety concerns: Sample locations and sampling periods must be determined considering safety issues. Sampling may be postponed upon notifying the Executive Director that hazardous conditions prevail.
3. Analytical Chemistry Methods: All constituents must be analyzed using the lowest minimum detection limits comparable to the Ocean Plan water quality objectives. For metal analysis, all samples, including storm water effluent, reference samples, and ocean receiving water samples, must be analyzed by the approved analytical method with the lowest minimum detection limits (currently Inductively Coupled Plasma/Mass Spectrometry) described in the Ocean Plan.

H. Core Discharge Monitoring Program

1. General sampling requirements for timing and storm size:

Runoff must be collected during a storm event that is greater than 0.1 inch and generates runoff, and at least 72 hours from the previously measurable storm event. Runoff samples shall be collected during the same storm and at approximately the same time when post-storm receiving water is sampled, and analyzed for the same constituents as receiving water and reference site samples as described in Section I. below.

2. Runoff flow measurements

- a. For industrial storm water outfalls in existence as of December 31, 2007, 18 inches (457mm) or greater in diameter/width (including multiple outfall pipes in combination having a width of 18 inches, runoff flows must be

**REQUIREMENTS FOR DISCHARGERS WHO HAVE BEEN GRANTED AN
OCEAN PLAN EXCEPTION FOR DISCHARGES TO ASBS**

- measured or calculated, using a method acceptable to and approved by the Executive Director.
- b. This will be reported annually for each precipitation season to the Executive Director.
3. Runoff samples – storm events
- a. For outfalls equal to or greater than 18 inches (0.46m) in diameter or width:
 - 1) samples of storm water runoff shall be collected during the same storm as receiving water samples and analyzed for oil and grease, total suspended solids, and, if within the range of the southern sea otter, indicator bacteria or some other measure of fecal contamination; and 2) samples of storm water runoff shall be collected and analyzed for critical life stage chronic toxicity (one invertebrate or algal species) at least once during each storm season when receiving water is sampled in the ASBS.
 - b. For outfalls equal to or greater than 36 inches (0.91m) in diameter or width:
 - 1) samples of storm water runoff shall be collected during the same storm as receiving water samples and analyzed for oil and grease, total suspended solids, and, if within the range of the southern sea otter, indicator bacteria or some other measure of fecal contamination; and
 - 2) samples of storm water runoff shall be further collected during the same storm as receiving water samples and analyzed for Ocean Plan Table B metals (provided at the end of this Attachment) for protection of marine life, Ocean Plan polynuclear aromatic hydrocarbons (PAHs), current use pesticides (pyrethroids and OP pesticides), and nutrients (ammonia, nitrate and phosphates); and
 - 3) samples of storm water runoff shall be collected and analyzed for critical life stage chronic toxicity (one invertebrate or algal species) at least once during each storm season when receiving water is sampled in the ASBS.
 - 4) if an ASBS Discharger has no outfall greater than 36 inches, then storm water runoff from the applicant's largest outfall shall be further collected during the same storm as receiving water samples and analyzed for Ocean Plan Table B metals (provided at the end of this Attachment) for protection of marine life, Ocean Plan polynuclear aromatic hydrocarbons (PAHs), current use pesticides (pyrethroids and OP pesticides), and nutrients (ammonia, nitrate and phosphates).
 - c. For an applicant not participating in a regional integrated monitoring program [see below in Section I.3.] in addition to the sampling requirements in Section H.3.a. and b. above, a minimum of the two largest outfalls or 20 percent of the

REQUIREMENTS FOR DISCHARGERS WHO HAVE BEEN GRANTED AN OCEAN PLAN EXCEPTION FOR DISCHARGES TO ASBS

larger outfalls, whichever is greater, shall be sampled (flow weighted composite samples) at least three times annually during wet weather (storm event) and analyzed for all Ocean Plan Table A constituents, Table B constituents (Table A and B constituents are provided at the end of this Attachment) for marine aquatic life protection (except for toxicity, only chronic toxicity for three species shall be required), DDT, PCBs, Ocean Plan PAHs, OP pesticides, pyrethroids, nitrates, phosphates, and Ocean Plan indicator bacteria. For parties discharging to ASBS in more than one Regional Water Board region, at a minimum, one (the largest) such discharge shall be sampled annually in each Region.

- d. The Executive Director may reduce or suspend core monitoring once the storm runoff is fully characterized. This determination may be made at any point after the discharge is fully characterized, but is best made after the monitoring results from the first permit cycle are assessed.

I. Ocean Receiving Water and Reference Area Monitoring Program

1. In addition to performing the Core Discharge Monitoring Program in Section H. above, all ASBS Dischargers must perform ocean receiving water monitoring. In order to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within their ASBS, ASBS Dischargers may choose either (1) an individual monitoring program, or (2) participation in a regional integrated monitoring program.
2. Individual Monitoring Program: The requirements listed below are for those ASBS Dischargers who elect to perform an individual monitoring program to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within the affected ASBS. In addition to Core Discharge Monitoring, the following additional monitoring requirements shall be met:
 - a. Three times annually, during wet weather (storm events), the receiving water at the point of discharge from the outfalls described in Section H.3. above shall be sampled and analyzed for Ocean Plan Table A constituents, Table B constituents (Table A and B constituents are provided at the end of this Attachment) for marine aquatic life, DDT, PCBs, Ocean Plan PAHs, OP pesticides, pyrethroids, nitrates, phosphates, salinity, chronic toxicity (three species), and Ocean Plan indicator bacteria.

The sample location for the ocean receiving water shall be in the surf zone at the point of discharges; this must be at the same location where storm water runoff is sampled. Receiving water shall be sampled prior to (pre-storm), and during (or immediately after) the same storm (post-storm). Post-storm sampling shall be during the same storm and at approximately the same time as when the runoff is sampled. Reference water quality shall also be

REQUIREMENTS FOR DISCHARGERS WHO HAVE BEEN GRANTED AN OCEAN PLAN EXCEPTION FOR DISCHARGES TO ASBS

- sampled three times annually and analyzed for the same constituents pre-storm and post-storm, during the same storm seasons when receiving water is sampled. Reference stations will be determined by the State Water Board's Division of Water Quality and the applicable Regional Water Board(s).
- b. Sediment sampling shall occur at least three times during every five (5) year period. The subtidal sediment (sand or finer, if present) at the discharge shall be sampled and analyzed for Ocean Plan Table B constituents (provided at the end of this Attachment) for marine aquatic life, DDT, PCBs, PAHs, pyrethroids, and OP pesticides. For sediment toxicity testing, only an acute toxicity test using the amphipod *Eohaustorius estuarius* must be performed.
 - c. A quantitative survey of intertidal benthic marine life shall be performed at the discharge and at a reference site. The survey shall be performed at least once every five (5) year period. The survey design is subject to approval by the Regional Water Board and the State Water Board's Division of Water Quality. The results of the survey shall be completed and submitted to the State Water Board and Regional Water Board at least six months prior to the end of the permit cycle.
 - d. Once during each five (5) year period, a bioaccumulation study shall be conducted to determine the concentrations of metals and synthetic organic pollutants at representative discharge sites and at representative reference sites. The study design is subject to approval by the Regional Water Board and the State Water Board's Division of Water Quality. The bioaccumulation study may include California mussels (*Mytilus californianus*) and/or sand crabs (*Emerita analoga* or *Blepharipoda occidentalis*). Based on the study results, the Regional Water Board and the State Water Board's Division of Water Quality, may adjust the study design in subsequent permits, or add or modify additional test organisms (such as shore crabs or fish), or modify the study design appropriate for the area and best available sensitive measures of contaminant exposure.
 - e. Marine Debris: Representative quantitative observations for trash by type and source shall be performed along the coast of the ASBS within the influence of the ASBS Discharger's outfalls. The design, including locations and frequency, of the marine debris observations is subject to approval by the Regional Water Board and State Water Board's Division of Water Quality.
 - f. The monitoring requirements of the Individual Monitoring Program in this Section are minimum requirements. After a minimum of one (1) year of continuous water quality monitoring of the discharges and ocean receiving waters, the Executive Director of the State Water Board may require additional monitoring, or adjust, reduce or suspend receiving water and reference station monitoring. This determination may be made at any point

REQUIREMENTS FOR DISCHARGERS WHO HAVE BEEN GRANTED AN OCEAN PLAN EXCEPTION FOR DISCHARGES TO ASBS

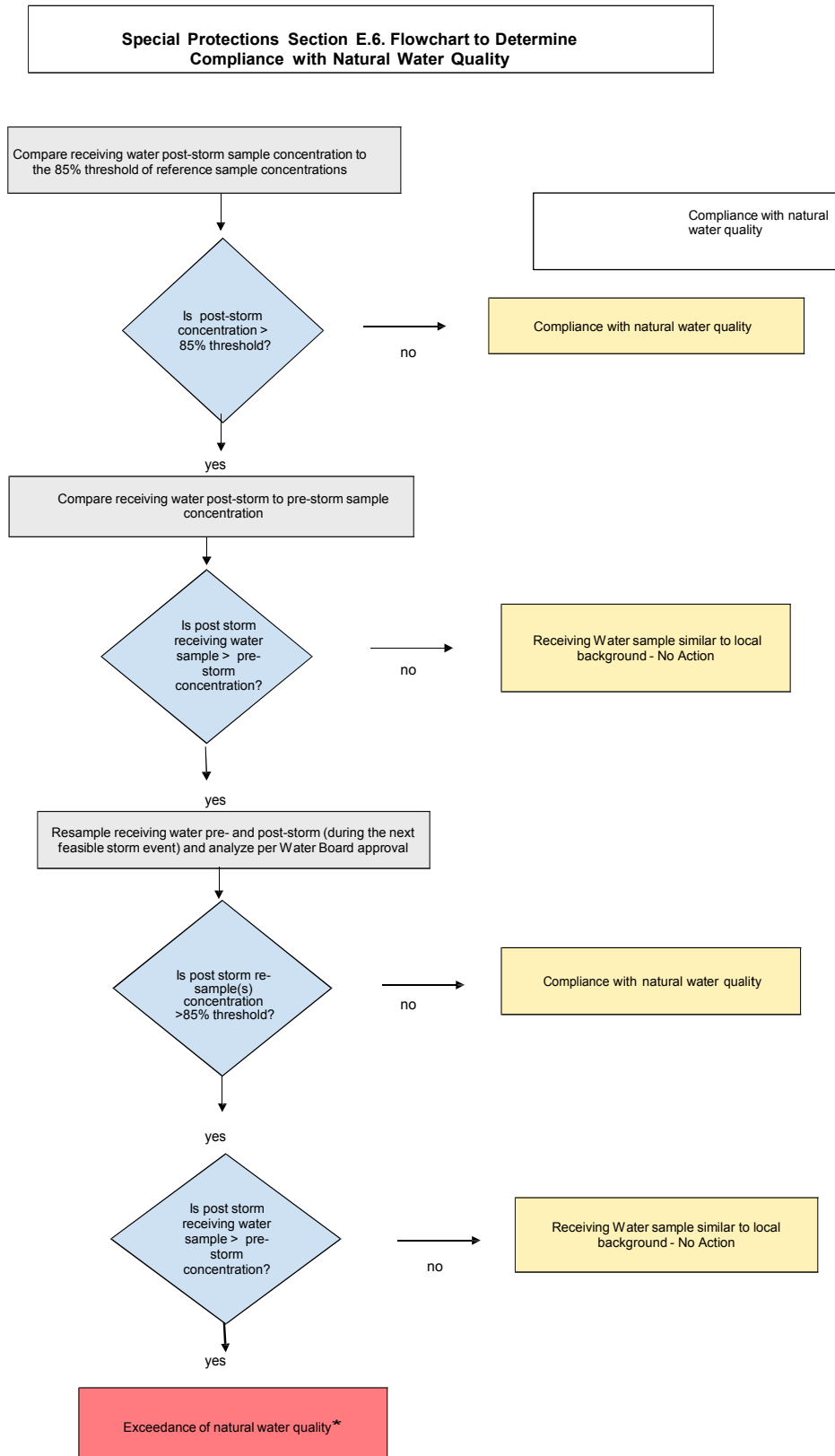
after the discharge and receiving water is fully characterized, but is best made after the monitoring results from the first permit cycle are assessed.

3. Regional Integrated Monitoring Program: ASBS Dischargers may elect to participate in a regional integrated monitoring program, in lieu of an individual monitoring program, to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within their ASBS. This regional approach shall characterize natural water quality, pre- and post-storm, in ocean reference areas near the mouths of identified open space watersheds and the effects of the discharges on natural water quality (physical, chemical, and toxicity) in the ASBS receiving waters, and should include benthic marine aquatic life and bioaccumulation components. The design of the ASBS stratum of a regional integrated monitoring program may deviate from the otherwise prescribed individual monitoring approach (in Section I.2.) if approved by the State Water Board's Division of Water Quality and the Regional Water Boards.
 - a. Ocean reference areas shall be located at the drainages of flowing watersheds with minimal development (in no instance more than 10% development), and shall not be located in CWA Section 303(d) listed waterbodies or have tributaries that are 303(d) listed. Reference areas shall be free of wastewater discharges and anthropogenic non-storm water runoff. A minimum of low threat storm runoff discharges (e.g. stream highway overpasses and campgrounds) may be allowed on a case-by-case basis. Reference areas shall be located in the same region as the ASBS receiving water monitoring occurs. The reference areas for each Region are subject to approval by the participants in the regional integrated monitoring program, the State Water Board's Division of Water Quality and the applicable Regional Water Board(s). A minimum of three ocean reference water samples must be collected from each station, each from a separate storm during the same storm season that receiving water is sampled. A minimum of one reference location shall be sampled for each ASBS receiving water site sampled per responsible party. For parties discharging to ASBS in more than one Regional Water Board region, at a minimum, one reference station and one receiving water station shall be sampled in each region.
 - b. ASBS ocean receiving water must be sampled in the surf zone at the location where the runoff makes contact with ocean water (i.e. at "point zero"). Ocean receiving water stations must be representative of worst-case discharge conditions (i.e. co-located at a large drain greater than 36 inches, or if drains greater than 36 inches are not present in the ASBS then the largest drain greater than 18 inches.) Ocean receiving water stations are subject to approval by the participants in the regional monitoring program and the State Water Board's Division of Water Quality and the applicable Regional Water Board(s). A minimum of three ocean receiving water samples must be collected during each storm season from each station, each from a separate

**REQUIREMENTS FOR DISCHARGERS WHO HAVE BEEN GRANTED AN
OCEAN PLAN EXCEPTION FOR DISCHARGES TO ASBS**

- storm. A minimum of one receiving water location shall be sampled in each ASBS per responsible party in that ASBS. For parties discharging to ASBS in more than one Regional Water Board region, at a minimum, one reference station and one receiving water station shall be sampled in each region.
- c. Reference and receiving water sampling shall commence during the first full storm season following the adoption of these special conditions, and post-storm samples shall be collected during the same storm event when storm water runoff is sampled. Sampling shall occur in a minimum of two storm seasons. For those ASBS Dischargers that have already participated in the Southern California Bight 2008 ASBS regional monitoring effort, sampling may be limited to only one storm season.
- d. Receiving water and reference samples shall be analyzed for the same constituents as storm water runoff samples. At a minimum, constituents to be sampled and analyzed in reference and discharge receiving waters must include oil and grease, total suspended solids, Ocean Plan Table B metals (provided at the end of this Attachment) for protection of marine life, Ocean Plan PAHs, pyrethroids, OP pesticides, ammonia, nitrate, phosphates, and critical life stage chronic toxicity for three species. In addition, within the range of the southern sea otter, indicator bacteria or some other measure of fecal contamination shall be analyzed.

REQUIREMENTS FOR DISCHARGERS WHO HAVE BEEN GRANTED AN OCEAN PLAN EXCEPTION FOR DISCHARGES TO ASBS



* When an exceedance of natural water quality occurs, the Discharger must comply with Section D. Note, when sampling data is available, end-of-pipe effluent concentrations will be considered by the Water Boards in making this determination.

ASBS Monitoring

TABLE A
Monitoring Constituent List
(excerpted from California Ocean Plan dated 2009)

Constituent	Units
Grease and Oil	mg/L
Suspended Solids	Mg/L
Settleable Solids	mL/L
Turbidity	NTU
PH	

TABLE B
Monitoring Constituent List
(Excerpted from California Ocean Plan dated 2009)

Constituent	Units
Arsenic	µg/L
Cadmium	µg/L
Chromium	µg/L
Copper	µg/L
Lead	µg/L
Mercury	µg/L
Nickel	µg/L
Selenium	µg/L
Silver	µg/L
Zinc	µg/L
Cyanide	µg/L
Total Chlorine Residual	µg/L
Ammonia (as N)	µg/L
Acute Toxicity	TUa
Chronic Toxicity	TUc
Phenolic Compounds (non-chlorinated)	µg/L
Chlorinated Phenolics	µg/L
Endosulfan	µg/L
Endrin	µg/L
HCH	µg/L

Analytical Chemistry Methods: All constituents shall be analyzed using the lowest minimum detection limits comparable to the Ocean Plan water quality objectives. For metal analysis, all samples, including storm water effluent, reference samples, and ocean receiving water samples, shall be analyzed by the approved analytical method with the lowest minimum detection limits (currently Inductively Coupled Plasma/Mass Spectrometry) described in the Ocean Plan.

ATTACHMENT H

SAMPLE COLLECTION AND HANDLING INSTRUCTIONS

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR STORM WATER DISCHARGES
ASSOCIATED WITH INDUSTRIAL ACTIVITIES
(GENERAL PERMIT)

For more detailed guidance, Dischargers should refer to the U.S. EPA's "Industrial Stormwater Monitoring and Sampling Guide," dated March 2009, available at: http://www.epa.gov/npdes/pubs/msgp_monitoring_guide.pdf and the "NPDES Storm Water Sampling Guidance Document," dated July 1992, available at: <http://www.epa.gov/npdes/pubs/owm0093.pdf>.

1. Identify the sampling parameters required to be tested and the number of storm water discharge points that will be sampled. Request the analytical testing laboratory to provide the appropriate number and type of sample containers, sample container labels, blank chain of custody forms, and sample preservation instructions.
2. Determine how samples will be transported to the laboratory. The testing laboratory should receive samples within 48 hours of the physical sampling (unless otherwise required by the laboratory). The Discharger may either deliver the samples to the laboratory, arrange for the laboratory to pick up the samples, or overnight ship the samples to the laboratory. All sample analysis shall be done in accordance with 40 Code of Federal Regulations part 136. Samples for pH have a holding time of 15 minutes.¹
3. Qualified Combined Samples shall be combined by the laboratory and not by the Discharger. Sample bottles must be appropriately labeled to instruct the laboratory on which samples to combine.
4. Unless the Discharger can provide flow weighted information, all combined samples shall be volume weighted.
5. For grab samples, use only the sample containers provided by the laboratory to collect and store samples. Use of any other type of containers may contaminate samples.
6. For automatic samplers that are not compatible with bottles provided by the laboratory, the Discharger is required to send the sample container included with the automatic sampler to the laboratory for analysis.

¹ 40 C.F.R. section 136.3, Table II - Required Containers, Preservation Techniques, and Holding Times.

SAMPLE COLLECTION AND HANDLING INSTRUCTIONS

7. The Discharger can only use automatic sampling device to sample parameters that the device is designed to. For pH, Dischargers can only use automatic sampling devices with the ability to read pH within 15 minutes of sample collection.
8. The Discharger is prohibited from using an automatic sampling device for Oil and Grease, unless the automatic sampling device is specifically designed to sample for Oil and Grease.
9. To prevent contamination, do not touch inside of sample container or cap or put anything into the sample containers before collecting storm water samples.
10. Do not overfill sample containers. Overfilling can change the analytical results.
11. Tightly screw on the cap of each sample container without stripping the threads of the cap.
12. Complete and attach a label for each sample container. The label shall identify the date and time of sample collection, the person taking the sample, and the sample collection location or discharge point. The label should also identify any sample containers that have been preserved.
13. Carefully pack sample containers into an ice chest or refrigerator to prevent breakage and maintain temperature during shipment. Remember to place frozen ice packs into shipping containers. Samples should be kept as close to 4 degrees Celsius (39 degrees Fahrenheit) as possible until arriving to the laboratory. Do not freeze samples.
14. Complete a Chain of Custody form for each set of samples. The Chain of Custody form shall include the Discharger's name, address, and phone number, identification of each sample container and sample collection point, person collecting the samples, the date and time each sample container was filled, and the analysis that is required for each sample container.
15. Upon shipping/delivering the sample containers, obtain both the signatures of the persons relinquishing and receiving the sample containers.
16. Dischargers shall designate and train personnel to collect, maintain, and ship samples in accordance with the sample protocols and laboratory practices.
17. Refer to Table 1 in the General Permit for test methods, detection limits, and reporting units.
18. All sampling and sample preservation shall be in accordance with 40 Code of Federal Regulations part 136 and the current edition of "Standard Methods for

SAMPLE COLLECTION AND HANDLING INSTRUCTIONS

the Examination of Water and Wastewater” (American Public Health Association). All monitoring instruments and equipment (including Discharger field instruments for measuring pH or specific conductance if identified as an additional sampling parameter) shall be calibrated and maintained in accordance with manufacturers’ specifications to ensure accurate measurements. All laboratory analyses shall be conducted according to approved test procedures under 40 Code of Federal Regulations part 136, unless other test procedures have been specified by the Regional Water Quality Control Board. All metals shall be reported as total metals. Dischargers may conduct their own field analysis of pH (or specific conductance if identified as an additional sampling parameter) if the Discharger has sufficient capability (qualified and trained employees, properly calibrated and maintained field instruments, etc.) to adequately perform the field analysis. With the exception of field analysis conducted by Dischargers for pH (or specific conductance if identified as an additional sampling parameter), all analyses shall be sent to and conducted at a laboratory certified for such analyses by the California Department of Public Health. Dischargers are required to report to the Water Board any sampling data collected more frequently than required in this General Permit (Section XXI.J.2)

APPENDIX 1

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) CHECKLIST

NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR STORM WATER DISCHARGES
ASSOCIATED WITH INDUSTRIAL ACTIVITIES
(GENERAL PERMIT)

FACILITY NAME: _____

Waste Discharge Identification (WDID) #: _____

	FACILITY CONTACT	Consultant/Qualified Industrial Storm Water Practitioner (QISP)
Name		
Title		
Company		
Street Address		
City, State		
Zip		

SWPPP (General Permit Section)	Not Applicable	SWPPP Page # or Reference Location	Date Implemented or Last Revised
Signed Certification (Section II.A)			
Pollution Prevention Team (Section X.D.1)			
Existing Facility Plans (Section X.D.2)			
Site Map(s) (Section X.E)			
Facility boundaries (Section X.E.3.a)			
Drainage areas (Section X.E.3.a)			
Direction of flow (Section X.E.3.a)			
On-facility water bodies (Section X.E.3.a)			

**STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
CHECKLIST**

SWPPP (General Permit Section)	Not Applicable	SWPPP Page # or Reference Location	Date Implemented or Last Revised
Areas of soil erosion (Section X.E.3.a)			
Nearby water bodies (Section X.E.3.a)			
Municipal storm drain inlets (Section X.E.3.a)			
Points of discharge (Section X.E.3.b)			
Sampling Locations (Section X.E.3.b)			
Structural control measures (Section X.E.3.c)			
Impervious areas (Section X.E.3.d)			
Location of Directly Exposed Materials (Section X.E.3.e)			
Locations of significant spills and leaks (Section X.E.3.e)			
Areas of Industrial Activity (Section X.E.3.f)			
Areas of industrial activity (Section X.E.3.f)			
Storage areas/storage tanks (Section X.E.3.f)			
Shipping and receiving areas (Section X.E.3.f)			
Fueling areas (Section X.E.3.f)			
Vehicle and equipment storage/maintenance (Section X.E.3.f)			
Material handling/processing (Section X.E.3.f)			
Waste treatment/disposal (Section X.E.3.f)			
Dust or particulate generation (Section X.E.3.f)			
Cleaning and material reuse (Section X.E.3.f)			

**STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
CHECKLIST**

SWPPP (General Permit Section)	Not Applicable	SWPPP Page # or Reference Location	Date Implemented or Last Revised
Other areas of industrial activities (Section X.E.3.f)			
List of Industrial Materials (Section X.F)			
Storage location			
Quantity			
Frequency			
Receiving and shipping location			
Quantity			
Frequency			
Handling location			
Quantity			
Frequency			
Potential Pollution Sources (Section X.G)			
Description of Potential Pollution Sources (Section X.G.1)			
Industrial processes (Section X.G.1.a)			
Material handling and storage areas (Section X.G.1.b)			
Dust & particulate generating activities (Section X.G.1.c)			
Significant spills and leaks (Section X.G.1.d)			
Non-storm water discharges (Section X.G.1.e)			
Erodible surfaces (Section X.G.1.f)			
Assessment of Potential Pollutant Sources (Section X.G.2)			
Narrative assessment of likely sources of pollutants (Section X.G.2.a)			
Narrative assessment of likely pollutants present in storm water discharges (Section X.G.2.a)			
Identification of additional BMPs Section X.G.2.b)			

**STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
CHECKLIST**

SWPPP (General Permit Section)	Not Applicable	SWPPP Page # or Reference Location	Date Implemented or Last Revised
Identification of drainage areas with no exposure (Section X.G.2.c)			
Identification of additional parameters (Section X.G.2.d)			
Storm Water Best Management Practices (Section X.H)			
Minimum BMPs (Section X.H.1)			
Good housekeeping (Section X.H.1.a)			
Preventative maintenance (Section X.H.1.b)			
Spill response (Section X.H.1.c)			
Material handling and waste management (Section X.H.1.d)			
Erosion and sediment controls (Section X.H.1.e)			
Employee training program (Section X.H.1.f)			
Quality assurance and record keeping (Section X.H.1.g)			
Advanced BMPs (Section X.H.2)			
Implement advanced BMPs at the facility (Section X.H.2.a)			
Exposure Minimization BMPs (Section X.H.2.b.i)			
Storm Water containment and discharge reduction BMPS (Section X.H.2.b.ii)			
Treatment Control BMPs (Section X.H.2.b.iii)			
Other advance BMPs (Section X.H.2.b.iv)			
Temporary Suspension of Activities (Section X.H.3)			
BMPs necessary for stabilization of the facility (Section X.H.3)			

**STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
CHECKLIST**

SWPPP (General Permit Section)	Not Applicable	SWPPP Page # or Reference Location	Date Implemented or Last Revised
BMP Descriptions (Section X.H.4)			
Pollutant that a BMP reduces or prevents (Section X.H.4.a.i)			
Frequency of BMP implementation (Section X.H.4.a.ii)			
Location of BMP (Section X.H.4.a.iii)			
Person implementing BMP (Section X.H.4.a.iv)			
Procedures/maintenance/ instructions for BMP implementation (Section X.H.4.a.v)			
Equipment and tools for BMP implementation (Section X.H.4.a.vi)			
BMPs needing more frequent inspections (Section X.H.4.a.vii)			
Minimum BMP/applicable advanced BMPs not implemented at the facility (Section X.H.4.b)			
BMPs implemented in lieu of minimum or applicable advanced BMPs (Section X.H.4.c)			
BMP Summary Table (Section X.H.5)			
Monitoring Implementation Plan (Section X.I)			
Team members assisting in developing the MIP (Section X.I.1)			
Summary of visual observation procedures, locations, and details (Section X.I.2)			
Justifications if applicable for: Alternative discharge locations, Representative Sampling Reduction or, Qualified Combined Samples (Section X.I.3)			
Procedures for field instrument calibration (Section X.I.4)			

**STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
CHECKLIST**

SWPPP (General Permit Section)	Not Applicable	SWPPP Page # or Reference Location	Date Implemented or Last Revised
Example of Chain of Custody (Section X.I.5)			
Annual Comprehensive Facility Compliance Evaluation (Section XV)			
Review of all visual inspection and monitoring records and sampling and analysis results conducted during the previous reporting year (Section XV.A)			
Visual inspection of all areas of industrial activity and associated potential pollutant sources (Section XV.B)			
Visual inspection of all drainage areas previously identified as having no-exposure to industrial activities and materials in accordance with the definitions in Section XVII (Section XV.C)			
Visual inspection of equipment needed to implement the BMPs (Section XV.D)			
Visual inspection of any structural and/or treatment control BMPs (Section XV.E)			
Review and assessment of all BMPs for each area of industrial activity and associated potential pollutant sources (Section XV.F)			
Assessment of other factors needed to complete the information described in Section XVI.B (Section XV.G)			

APPENDIX 2

INSTRUCTIONS FOR NO EXPOSURE CERTIFICATION (NEC)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITIES (GENERAL PERMIT)

This Attachment provides general guidance instructions and guidance for obtaining NEC coverage. The actual NEC requirements are primarily contained in Section XVII of this General Permit.

A. INSTRUCTIONS:

Who May File for NEC Coverage

Sections 301 and 402(p) of the Clean Water Act (CWA), and Sections 1311 and 1342(p) of 33 United States Code prohibit the discharge of storm water associated with industrial activity to waters of the United States without a National Pollutant Discharge Elimination System (NPDES) permit. However, NPDES permit coverage is “conditionally excluded” for discharges of storm water associated with industrial activities (industrial storm water discharges) if the Discharger can certify that a condition of “No Exposure” exists at the industrial facility. A condition of “No Exposure” means that a Discharger’s industrial activities and materials are not exposed to storm water. Industrial storm water discharges from construction and land disturbance activities are ineligible for the NEC coverage. Dischargers who file valid NECs in accordance with these instructions are not required to implement Best Available Technology Economically Achievable /Best Conventional Pollutant Control Technology and comply with the Storm Water Pollution Prevention Plan (SWPPP) and monitoring requirements of this General Permit.

Obtaining and Maintaining NEC Coverage

A Discharger must electronically certify and submit NEC Permit Registration Documents (PRDs) via State Water Resources Control Board’s (State Water Board’s) Storm Water Multi-Application and Report Tracking System (SMARTS) to obtain NEC coverage. This conditional exclusion does not become effective until the PRDs are submitted and the annual fee is paid. Upon receipt of the annual fee, the Discharger will electronically receive an NEC acceptance notification via SMARTS, which will include a Waste Discharge Identification (WDID) number. A Discharger must maintain a condition of “No Exposure” at the facility for the conditional exclusion to remain applicable. The Discharger must annually electronically re-certify the NEC via SMARTS to confirm that the conditions of “no exposure” are being maintained. If conditions change resulting in the exposure of materials and activities to storm water, the Discharger must electronically certify and submit PRDs via SMARTS for Notice of Intent (NOI) coverage under the General Permit for Storm Water Discharges Associated with Industrial Activities (General Permit).

Fees

First time NEC coverage PRDs and the annual re-certification require a fee. Fees may be changed by State Water Board regulation, independent of this General Permit.

How to Prepare and Submit PRDs for NEC Coverage

A Discharger must electronically certify and submit PRDs for NEC coverage in accordance with the instructions provided at the State Water Board web site for SMARTS:

<https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.jsp>

A Discharger with multiple facilities that satisfy the conditions of “No Exposure” must certify and submit PRDs for each facility. The Discharger is required to inspect and evaluate each individual facility to determine the condition of No-Exposure. The Discharger must retain an electronic or paper copy of the NEC coverage acceptance notification for their records.

The following information is required in the PRDs:

Discharger Information

1. The legal business name of the business entity, public organization, or any other entity that operates the facility described in the certification. The name of the operator may or may not be the same as the name of the facility. The operator is the legal entity that controls the facility operations, not the plant or site manager.
2. The mailing address of the facility operator, including the city, state, and zip code.
3. The facility operator contact person, telephone number and e-mail address.

INSTRUCTIONS FOR NO EXPOSURE CERTIFICATION (NEC)

Facility Information

4. The legal business name of the facility.
5. The total acreage of the facility associated with industrial activity. (Facility size in acres is calculated by taking the square feet and dividing by 43,560.)
6. The complete physical street address (e.g. the street address used for express deliveries), including the city, State, and zip code. Do not use a P.O. Box number. If a physical street address does not exist, describe the location or provide the latitude and longitude of a point within the facility boundary. Latitude and longitude are available from United States Geological Survey quadrangle or topographic maps, or may be found using a mapping site on the internet.
7. The facility contact person, telephone number, and e-mail address.
8. The 4-digit Standard Industrial Classification (SIC) code that represents the facility primary industrial activity. Provide a brief description of the primary industrial activity. If applicable, enter other significant SIC codes and descriptions. To obtain these codes, see the 1987 SIC Manual or the Occupational Health and Safety Administration's site:

<http://www.osha.gov/pls/imis/sicsearch.html>
9. If the facility is currently covered under the General Permit, include the WDID number. The WDID number will be used at a later date to terminate the facility's coverage under the General Permit as necessary.

Facility Mailing or Billing Address

Completion of this item is required the facility mailing address or billing address differs from the physical facility address provided above. The Discharger must indicate which address the annual fee invoice must be sent to if the State Water Board is unable to transmit the invoice electronically.

Site Maps

Site maps must be prepared and submitted in accordance with the requirements in Section X.E of this General Permit.

NEC Checklist

The Discharger must evaluate the eleven major areas that storm water exposure may occur, per the listing at the end of this appendix. The Discharger must be able to certify

that none of these major areas have potential for exposure. If the Discharger cannot certify that every one of the eleven major areas do not have exposure, a potential for exposure exists at the facility and the facility is not eligible for NEC coverage. The Discharger must obtain (or continue) NOI coverage under this General Permit if the facility is not eligible for NEC coverage. After obtaining NOI coverage, the Discharger may implement facility modifications to eliminate the potential for a discharge of storm water exposed to industrial activity, and then change their NOI coverage to NEC coverage by certifying the conditions of "No Exposure" are met.

Certification

Federal and state statutes provide for severe penalties for Dischargers that submit false information on the PRDs. Dischargers shall certify and submit PRDs via SMARTS for NEC coverage in accordance with Electronic Signature and Certification Requirements in Section XXI.K of this General Permit.

B. GUIDANCE:

Contact your local Regional Water Quality Control Board (Regional Water Board) office with questions regarding this guidance.

1. Who is Eligible to Qualify for the No Exposure Certification (NEC) - Conditional Exclusion?

All industrial categories listed in Attachment A of this General Permit (excluding construction) are eligible to apply for the NEC coverage.

2. Limitations on Eligibility for NEC coverage

In addition to construction projects not being eligible, the following situations limit the applicability of NEC coverage:

- a. NEC coverage is available on a facility-wide basis only, not for individual drainage areas or discharge locations. Generally, if any exposed industrial materials or activities exist, or have a potential to exist, anywhere at a facility, NEC coverage is not applicable to the facility. If the Regional Water Board determines that a facility does have exposure or the facility's storm water discharges have a reasonable potential to cause or contribute to an exceedance of applicable water quality objectives/standards, the Regional Water Board can deny NEC coverage.
- b. If changes at a facility result in potential exposure of industrial activities or materials, the facility is no longer eligible for NEC coverage. Dischargers

INSTRUCTIONS FOR NO EXPOSURE CERTIFICATION (NEC)

shall register for NOI coverage under this General Permit prior to a planned facility change that will cause exposure, or within seven (7) calendar days after unplanned exposure occurs. If an unplanned exposure occurs due to an emergency response or one-time event that is unlikely to re-occur, a Discharger may contact the Regional Water Board to discuss whether the requirement to obtain NOI coverage can be waived. Unless the Discharger receives a written waiver from the Regional Water Board, the Discharger shall electronically certify and submit PRDs to obtain NOI coverage.

- c. Current contamination resulting from historic industrial practices at the facility (e.g., soil contamination, groundwater contamination, etc.) represents a condition of exposure to waters of the United State; therefore a facility with historic contamination is not eligible for NEC coverage.

3. What is the Definition of No Exposure?

- a. No Exposure means all industrial materials and activities are protected by a storm-resistant shelter to prevent exposure to rain, snow, snowmelt and/or runoff.
- b. Industrial materials and activities include, but are not limited to, material-handling equipment or activities; industrial machinery; raw materials, intermediate products, by-products, and final products; or waste products.
- c. Material handling activities include storage, loading and unloading, transport, or conveyance of any raw material, intermediate product, by-product, final product, or waste product.
- d. Final products intended to be used outdoors (e.g., automobiles) typically pose little risk of polluting storm water since not typically contaminated with pollutants that become mobilized by contact with storm water. Final products are exempt from the requirement for protection by a storm-resistant shelter to qualify for no exposure. Similarly, containers, racks, and other transport platforms (e.g., wooden pallets) used for the storage or conveyance of final products may also be stored outside if pollutant-free or pollutants do not mobilize via contact with storm water.
- e. Storm-resistant shelters include: (1) completely roofed and walled buildings or structures, (2) structures with only a top cover (no side coverings) supported by permanent supports, provided material within the structure is not subject to wind dispersion (sawdust, powders, etc.) or being tracked out of the facility, and is not a source of pollutants in the industrial storm water discharges.

4. Industrial Materials/Activities Not Requiring a Storm-Resistant Shelter

The intent of the “No Exposure” exclusion is to maintain a condition of permanent “No Exposure”. A storm-resistant shelter is not required for the following industrial materials and activities:

- a. Drums, Barrels, Tanks, and Similar Containers that are sealed (“sealed” means banded or otherwise secured and without operational taps or valves), are not exposed provided those containers are not deteriorated, do not contain residual materials on the outside surfaces, and do not leak. Drums, barrels, etc., that are not opened while outdoors, or are not deteriorated or leaking, and that do not pose a risk of contaminating storm water runoff. Consider the following when making a “No Exposure” determination:
 - i. Materials shall not be added or withdrawn to/from containers while outdoors
 - ii. Simply moving containers while outside does not create exposure unless exposure occurs when pollutants are “tracked out” by the container handling equipment or vehicles.
 - iii. All outdoor containers shall be inspected to ensure they are not open, deteriorated, or leaking. When an outdoor container is observed as opened, deteriorated, or leaking, the container must immediately be closed, replaced, or sheltered. Frequent detection of open, deteriorated, or leaking containers, or failure to immediately close, replace, or shelter opened, deteriorated or leaking containers will cause a condition of exposure.
 - iv. Containers, racks, and other transport platforms (e.g., wooden pallets) used with drums, barrels, etc., can be stored outside providing they are contaminant-free and in good repair.
- b. Above Ground Storage Tanks (ASTs) In addition to generally being considered as not exposed, ASTs may also be exempt from the prohibition against adding or withdrawing material to/from external containers. ASTs typically use transfer valves to dispense materials that support facility operations (e.g., heating oil, propane, butane, chemical feedstock) or fuel for delivery vehicles (gasoline, diesel, compressed natural gas). For operational

INSTRUCTIONS FOR NO EXPOSURE CERTIFICATION (NEC)

ASTs to qualify for “No Exposure”, the following must be satisfied:

- i. The tank(s) shall be physically separated from and not associated with vehicle maintenance operations.
 - ii. There shall be no leaks from piping, pumps, or other equipment that has the potential to come in contact with storm water.
 - iii. Wherever feasible, the tank(s) shall have secondary containment (e.g., an impervious dike, berm or concrete retaining structure) to prevent runoff in the event of a structural failure or leaking transfer valve. Note: any resulting unpermitted discharge is in violation of the CWA.
- c. Lidded Dumpsters. Lidded dumpsters containing waste materials, providing the containers are completely covered and nothing can drain out holes in the bottom, spilled when loaded into the dumpster, or spilled in loading into a garbage truck. Industrial waste materials and trash that is stored uncovered is considered exposed.
- d. Adequately maintained vehicles, such as trucks, automobiles, forklifts, trailers or other general-purpose vehicles found onsite - but not industrial machinery that are not leaking, are in good repair or are not otherwise a potential source of contaminants:
- i. Vehicles passing between buildings may be exposed to storm water, however if the vehicles are adequately maintained, a condition of exposure may not exist. Similarly, non-leaking vehicles awaiting maintenance at vehicle maintenance facilities are not considered as potential exposure. However, vehicles that have been washed or rinsed that are not completely dry prior to outside exposure have the potential to cause a condition of exposure. Vehicles that track materials out of the facility are considered to be mobilizing pollutants. Vehicles that exit maintenance bays are also considered to cause exposure.
 - ii. The mere conveyance between buildings of materials / products that are otherwise not allowed to be stored outdoors, does not create a condition of exposure, provided the materials/products are adequately protected from storm water and do not have the potential to be released as a result of a leak or spill.
- e. Final products built and intended for use outdoors (e.g., new cars), provided the final products have not deteriorated, are not contaminated, or are not otherwise potential sources of contaminants.
- Types of final products not qualifying for a certification of “No Exposure”:
- i. Products that may be mobilized in storm water discharges (e.g., rock salt).
 - ii. Products, which may, when exposed, oxidize, deteriorate, leak, or otherwise be a potential source of contaminants (e.g., junk cars, stockpiled train rails).
 - iii. “Final” products that are, in actuality, “intermediate” products. Intermediate products are those used in the composition of yet another product (i.e., sheet metal, tubing, and paint used in making tractors).
 - iv. Even if the intermediate product is “final” for a manufacturer and destined for incorporation in a “final product intended for use outdoors,” the product is not allowed to be exposed because they may be chemically treated or are insufficiently impervious to weathering.
- f. Special Conditions for Construction Activities
Permanent, uninterrupted sheltering of industrial activities or materials may not always be possible during facility renovation or construction. When such circumstances exist, the Discharger is not required to obtain coverage under an NPDES permit as long as the following conditions are met:
- i. Materials and activities are protected with temporary covers or shelters (i.e. tarpaulins);
 - ii. Temporary covers or shelters prevent the contact of storm water to materials and activities;
 - iii. Materials are subject to wind dispersion are not stored under temporary sheltering;
 - iv. Temporary shelters are only used when necessary during facility renovation or construction and until permanent storm-resistant shelters as described above are available; and,
 - v. Temporary shelters are only used for a single period of ninety days or less. (Facilities with construction and renovation projects that will need the use of temporary shelters beyond 90 days, or that will require multiple periods of ninety

INSTRUCTIONS FOR NO EXPOSURE CERTIFICATION (NEC)

days or less, are required to be covered by an NPDES permit.)

5. Other Potential Sources of Contaminants

- a. Particulate Emissions from Roof Stacks and/or Vents: Deposits of particles or residuals from roof stacks/vents that have the potential to be mobilized by storm water runoff are considered exposed.
- b. Pollutants Potentially Mobilized by Wind Windblown materials cause a condition of exposure. Materials sheltered from precipitation are be deemed exposed if the materials has a potential to be mobilized by wind.

6. Certifying a Condition of “No Exposure”

To obtain the NEC coverage, the Discharger must electronically certify and submit PRDs via SMARTS that the facility meets the definition of “No Exposure” and pay an annual fee. The Discharger must **submit PRDs for NEC coverage even if the Discharger was not previously required to file for NEC coverage under the previous General Permit**. These PRDs include a checklist requiring the Discharger to evaluate eleven major areas to determine whether there is exposure of industrial activities and materials at the facility. To qualify for NEC coverage the Discharger must satisfy all the NEC coverage conditions in this General Permit and certify that there is “No Exposure”. The checklist: 1) aids the Discharger in determining if its facility is eligible for NEC coverage, and 2) furnishes the necessary documentation supporting relief from the General Permit’s requirement of NOI coverage. Additionally, Dischargers with NEC coverage are not required to develop and implement SWPPPs or comply with the monitoring requirements.

If a Discharger cannot certify that there is “No Exposure” at the facility, the Discharger must make appropriate changes at the facility to eliminate exposure prior to registering for future NEC coverage. Facility changes must remove all potential for pollutant exposure to storm water.

An annual inspection and evaluation, re-certification and fee are required thereafter.

7. Other NEC coverage Facts:

- a. NEC coverage is only valid if the condition of “No Exposure” exists and is reasonably expected to continue to exist. Dischargers shall electronically certify and submit PRDs for NOI coverage when the condition of “No Exposure” is no longer expected to exist.
- b. Dischargers must file PRDs for NEC coverage for each qualifying facility.
- c. An NEC must be submitted for each separate facility qualifying for the “No Exposure” conditional exclusion.
- d. An NEC is non-transferable. If a new operator takes over facility operations, the new operator shall electronically certify and submit PRDs and applicable fees for new NEC coverage via SMARTS prior to the operations transfer. NEC coverage cannot be transferred from one physical location to another regardless of ownership.

8. Operators May Be Required to Obtain NOI Coverage Based on the Protection Of Water Quality?

Operators who certified that their facilities qualify for NEC coverage may, nonetheless, be required by the Regional Water Board to obtain NOI coverage if the Regional Water Board determines that the facility’s discharge has the potential to cause or contribute to an exceedance of applicable water quality objectives/standards or determines that exposure exists at the facility. The Regional Water Board may request information and/or inspect the facility to assess potential water quality impacts and to determine if NOI coverage is required. The Discharger shall take appropriate actions to ensure compliance with the General Permit.

9. Steps to Obtain NEC coverage

This section will walk you through the process of obtaining NEC coverage.

Step 1: Determine if your facility is subject to this General Permit (refer to Attachment A of this General Permit). If yes, proceed to Step 2. If not, stop here.

If your facility is included in Attachment A and conducts industrial activities, you are required to **either** register for NOI coverage or NEC coverage.

Step 2: Determine if your regulated industrial activity meets the definition of “No Exposure” and qualifies for the exclusion from permitting. If yes, proceed to Step 3. If no, stop here and obtain NOI coverage. An

INSTRUCTIONS FOR NO EXPOSURE CERTIFICATION (NEC)

evaluation of the facility must be conducted by facility personnel familiar with the facility and its operations. Inspect all facility areas and potential pollutant sources to determine whether the facility satisfies the “No Exposure” conditions.

Step 3: Electronically certify and submit the PRDs for NEC coverage via SMARTS and mail the annual fee to the State Water Board at the following address:

SWRCB
Surface Water Permitting Section
PO Box 1977
Sacramento, CA 95812-1977

To maintain NEC coverage, the NEC must re-certify and pay a fee annually. This may only be done if the condition of “No Exposure” continues to exist at the facility.

Step 4: If requested, staff from the Water Boards, local Municipal Separate Storm Sewer System (MS4), or United States Environmental Protection Agency must be allowed to inspect your facility. All inspection reports will be made publicly available.

Step 5: Maintain a condition of “No Exposure”.

- NEC coverage is not a blanket exemption. Therefore, if facility physical or operational changes occur which cause exposure of industrial activities or materials to storm water, the Discharger must then immediately comply with all the requirements of this General Permit, including obtaining NOI coverage as applicable.
- To maintain the condition of “No Exposure”, the Discharger shall annually evaluate the facility to assure that the conditions of “No Exposure” still exist. More frequent evaluations may be necessary in circumstances when facility operations are rapidly changing.
- Failure to maintain the condition of “No Exposure” or otherwise obtain NOI coverage may lead to the unauthorized discharge of storm water associated with industrial activity to waters of the United States, resulting in penalties under the CWA and Water Code.

C. Frequently Asked Questions:

Q1. Who is eligible for NEC Coverage?

- A. Any Discharger operating a facility described in Attachment A may register for NEC coverage if their facility has a condition of “No Exposure”.

Q2. How does an eligible Discharger file for NEC coverage and where is the annual fee sent?

- A. The PRDs for NEC coverage shall be electronically certified and submitted in accordance with the instructions provided in SMARTS at the State Water Board website at: <https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.jsp>. The fee is currently \$242, but may be changed by regulation. Once NEC coverage is accepted, an invoice will be electronically sent to the Discharger. The annual fee and invoice shall be sent to:
- State Water Resources Control Board
Division of Water Quality
Attention: Industrial Storm Water Unit
P.O. Box 1977
Sacramento, CA 95812-1977

Q3. If my facility’s storm water discharges are covered by an individual permit, can I file for NEC coverage?

- A. Yes. Storm water discharges covered by an individual permit are eligible for NEC coverage if the conditions at the facility satisfy the definition of “No Exposure” and you obtain approval to terminate individual permit coverage from the local Regional Water Board prior to PRD submittal. Approval from the Regional Water Board is mandatory. Many individual permits, for example, contain numeric storm water effluent limitations (“antibacksliding” provisions may prevent these facilities from qualifying for the “No Exposure” conditional exclusion).

Q4. My facility was originally excluded from the Phase I regulations because it was classified as a “light industrial facility”. The facility has never had any exposure to storm water runoff. Do I now need to certify that the facility meets the No Exposure Exclusion from NPDES Storm Water Permitting?

- A. Yes. See answer provided to question number 9, “What is the exclusion “conditional” upon?”

Q5. Do I have to file a Notice of Termination (NOT) and a register for NEC coverage if my facility has NOI coverage and qualifies for NEC coverage?

- A. No. You are only required to register for NEC coverage. You must provide the WDID# in your NEC coverage PRDs in order for the State Water Board to change permit coverage status.

Q6. When and how often is a NEC coverage re-certification required?

INSTRUCTIONS FOR NO EXPOSURE CERTIFICATION (NEC)

- A.** Re-certification of NEC coverage is required annually (assuming the facility maintains its “No Exposure” status). The State Water Board will electronically transmit an NEC re-certification and annual fee notification to each facility operator who has filed for NEC coverage.

public documents and will be available for public review via SMARTS.

Q10. Can secondary containment around an outdoor exposed area qualify for a condition of “No Exposure”?

- A.** If secondary containment is engineered to always prevent a discharge of collected rainfall (based on the historical rainfall record) and a simultaneous spill of any other industrial materials or liquids, the “No Exposure” condition may be claimed. Note that there must be proper disposal of any water or liquids collected from the containment (i.e., discharged in compliance with another NPDES permit, treated and discharged to the sanitary sewer, or trucked offsite to an appropriate disposal/treatment facility).

D. NEC Checklist

An NEC Checklist must be prepared by the Discharger demonstrating that: (1) the facility has been evaluated, (2) none of the following materials or activities are, or will be in the foreseeable future, exposed to precipitation, and (3) all unauthorized NSWs have been eliminated:

1. Using, storing or cleaning industrial machinery or equipment, and areas where residuals from using, storing or cleaning industrial machinery or equipment remain and are exposed;
2. Materials or residuals on the ground or in storm water inlets from spills/leaks;
3. Materials or products from past industrial activity;
4. Material handling equipment (except adequately maintained vehicles);
5. Materials or products during loading/unloading or transporting activities;
6. Materials or products stored outdoors (except final products intended for outside use, i.e., new cars, where exposure to storm water does not result in the discharge of pollutants);
7. Materials contained in open, deteriorated or leaking storage drums, barrels, tanks, and similar containers;
8. Materials or products handled/stored on roads or railways owned or maintained by the Discharger;
9. Waste material (except waste in covered, non-leaking containers, i.e., dumpsters);

New Dischargers must register for NEC coverage before the commencement of facility operations. Dischargers that fail to file for NEC coverage or apply for NOI coverage before the commencement of facility operations will be out of compliance and subject to enforcement.

Existing Dischargers have two options for submitting NECs:

1. Facility operators of “light industrial” facilities who have been operating under their original, no-certification-required permitting exemption must submit the NEC at any time prior to October 1, 2015. Dischargers who have not submitted an NEC or applied for permit coverage by this due date will be considered out of compliance and subject to Water Board enforcement.
2. Dischargers who have NOI coverage may register for NEC coverage at any time following completion of facility changes that result in the condition of “No Exposure”.

Q7. What happens if I know of changes that may cause exposure?

- A.** If exposure has the potential to occur in the near future due to some anticipated change at the facility, the Discharger must obtain NOI coverage to avoid potential enforcement for violations of this General Permit.

Q8. Is the NEC coverage transferable to a new Discharger?

- A.** No. If a new operator takes over your facility, the new operator must register for new NEC coverage prior to the transfer. A new application fee is required.

Q9. What is the exclusion “conditional” upon?

- A.** The exclusion from permit coverage requirements is “conditional” upon the certification of the Discharger that the facility does not have exposure of materials or activities to storm water. PRDs for NEC coverage shall be electronically submitted to the State Water Board and will not be accepted if incomplete. The Regional Water Board may review the information, contact and/or inspect the facility, and invalidate the NEC and require the Discharger to obtain NOI coverage. PRDs are

INSTRUCTIONS FOR NO EXPOSURE CERTIFICATION (NEC)

10. Application or disposal of processed wastewater (unless already covered by an NPDES permit); and
11. Particulate matter or visible deposits of residuals from roof stacks/vents evident in the storm water outflow.

APPENDIX 3

WATERBODIES WITH CLEAN WATER ACT SECTION 303(D) LISTED IMPAIRMENTS

NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITIES (GENERAL PERMIT)

The 303(d) impairments below are sourced from the 2010 Integrated Report. The rows in red are impairments for which industrial storm water Dischargers subject to this General Permit are not required to analyze for additional parameters unless directed by the Regional Water Board, because these parameters are typically not associated with industrial storm water. Test methods with substantially similar or more stringent method detection limits may be used if approved by the staff of the State Water Board prior to sampling and analysis and upon approval, will be added into SMARTS. The rows that are not in red are impairments for which Dischargers in the 303(d) impaired watershed are required to analyze for additional parameters, if applicable, because these parameters are more likely to be associated with industrial storm water. See General Permit Section XI.B.6.e. In the event that any of the impairments in this appendix are subsequently delisted, the Dischargers with discharges to that watershed are no longer required to analyze for the additional parameters for those impairments, and the provisions for new Dischargers with discharges to 303(d) impaired water bodies contained in Section VII.B of this General Permit no longer apply for those impairments.

The Excel spreadsheet containing the water bodies with 303(d) impairments is an attachment to this Appendix 3. To view the attachment from an electronic (pdf) version of this Appendix 3, left-click on the paper clip icon to the left of this pdf file to make the attachment window appear, then double-click on the icon of an Excel spreadsheet. The Excel spreadsheet is also available on the Industrial Storm Water program pages of the State Water Resources Control Board's website (<http://www.waterboards.ca.gov/>).