San Diego County Regional Airport Authority

Fiscal Year 2008-2009 Municipal Stormwater Permit Annual Report

September 2009

Statement of Certification for the 2008-2009 San Diego County Regional Airport Authority Municipal Permit Annual Report

"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 ensure 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: September 25, 2009

Signature: 

Printed Name: Paul Manasjan

Title: Director, Environmental Affairs Department

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

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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.

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

SAN DIEGO INTERNATIONAL AIRPORT

Acknowledgements

The San Diego County Regional Airport Authority fiscal-year 2008-2009 Municipal Stormwater Permit Annual Report has been prepared by the Authority Environmental Affairs Department with the assistance of many other Authority departments. Staff from these departments are integral to implementation of the Authority's stormwater management program and to ensuring compliance with the Municipal Stormwater Permit.

The development and production of this report is a result of the talent and experience of several individuals. Special recognition and acknowledgement are given to the following individuals for their contribution to this document.

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Executive Summary

The San Diego County Regional Airport Authority (Authority) submits the fiscal-year 2008-2009 (FY08-09) Annual Report in compliance with California Regional Water Quality Control Board, San Diego Region (RWQCB), Order No. R9-2007-0001, NPDES Permit #CAS0108758 (Municipal Permit). The FY08-09 Annual Report describes all the stormwater management activities conducted by the Authority between July 1, 2008 and June 30, 2009 to ensure compliance with the Municipal Permit.

The Authority has owned and operated San Diego International Airport (SDIA) since January 1, 2003. SDIA is located on approximately 660 acres adjacent to San Diego Bay, north of downtown San Diego, in San Diego County. The entire jurisdictional area of the Authority, namely, SDIA, discharges into San Diego Bay through 14 storm drain outfalls. Airport operations include two main airline terminals, a commuter terminal, one main runway area, taxiways, fueling facilities, ancillary support facilities, and a closed landfill site.

The Authority controls a number of operations/activities/facilities that are defined by the Municipal Permit as "municipal activities," including: roads and parking lots; the closed Naval Training Center (NTC) landfill; the municipal storm sewer system (MS4) or stormwater conveyance system; the

grounds and buildings; the maintenance and storage facilities operated by the Authority; and the airfield itself. All municipal activities at SDIA are subject to the Authority Storm Water Management Plan (SWMP) and are required to implement the BMPs described therein relative to municipal activities. Of the municipal activities and areas listed above, only the landscaped areas of the facility grounds and the buildings are identified as low priority threats to surface water quality. During FY08-09, the Authority conducted MS4 and municipal facility maintenance activities which included quarterly and annual inspection, cleaning, implementation of measures to prevent waste discharges to receiving waters during maintenance activities, and proper disposal of sediment and debris. The annual site inspections found that the BMPs required for use with municipal operations were, in general, being properly implemented and no formal enforcement actions were initiated.

The Authority's pollution prevention efforts included a waste reduction and recycling program. The Authority has also maintained its quarterly electronic and universal waste collection events open to all airport tenants and Authority staff. The Authority has implemented an integrated pest management (IPM) program designed to minimize the amount of pesticides and herbicides used to maintain the buildings and grounds at SDIA.

Thirty-two (32) airport tenants (including the Authority itself) conduct activities that are subject to the Industrial/Commercial Component of the Municipal Permit. These 32 entities are considered high priority threats to water quality. All are required to implement the BMPs listed in the SWMP. During the reporting period, the Environmental Affairs Department inspection program consisted of both quarterly inspections and an annual inspection (which consisted of an Annual Comprehensive Site Compliance Evaluation and a BMP Audit) for all industrial and commercial activities at SDIA. These inspections resulted in 11 recorded enforcement actions. All issues of concern were resolved.

During the reporting period, there were 14 construction projects at SDIA and the Environmental Affairs Department conducted regular site inspections of each project. No written enforcement actions were issued during FY08-09.

The Authority conducts an illicit discharge detection and elimination (IDDE) program that incorporates site monitoring methods, visual inspections, and a 24-hour telephone hotline (as a public reporting mechanism) in attempting to detect illegal discharges. The IDDE Program will be reported in the Annual IDDE Report to be submitted to the RWQCB on December 15th, 2009. The Authority also conducts a dry weather monitoring program and a wet weather monitoring program. The results of these programs will also be reported in the FY08-09 IDDE Annual Report in December 2009.

The Authority's stormwater education and outreach program is designed to reach the target audiences required by the Municipal Permit. The overall goal of the education component is to increase understanding of stormwater management issues and to help promote behavioral changes that will reduce stormwater pollution and enhance water quality. Elements of the education program include: the Authority webpage, airport storm drain stenciling, posters, signage, brochures, public service announcements, news releases, meetings, and focused training sessions. The FY08-09 Annual Report documents the continued expansion of the Authority's education and outreach efforts, as well as their effectiveness.

The Authority's stormwater management public participation program is primarily directed at airport tenants and Authority staff, but also includes the general public. Public participation opportunities during this reporting period included: regular meetings of the San Diego County Regional Airport Authority Board, regular meetings of the Lindbergh Airport Managers Committee, regular meetings of the Tenant Safety Committee, a 24hour telephone hotline, the Authority webpage, and outreach events in collaboration with local environmental groups.

Using "A Framework for Assessing the Effectiveness of Jurisdictional Urban Runoff Management Programs," the Authority presents an assessment of each component of the stormwater management program implemented during FY08-09. Based on the results of current program implementation and the findings of the effectiveness assessment, the majority of the management measures currently being implemented by the Authority have proven to be effective. Taken as a whole, the Authority's program is in compliance with the Municipal Permit.

This report presents an accounting of the Authority's stormwater management program expenditures for FY08-09, and the budget for FY09-10. Costs are categorized by Personnel, Non-personnel, and the Capital Improvement Program.

The FY08-09 Annual Report documents the Authority's compliance with the Municipal Permit. The majority of the management measures implemented by the Authority have proven to be effective. The program generally fulfills the requirements of the Municipal Permit. The FY08-09 Annual Report clearly demonstrates that the stormwater management program at SDIA is adequately planned, executed, reviewed, and funded.

1 INTRODUCTION

The San Diego County Regional Airport Authority (Authority) continually strives to operate San Diego International Airport (SDIA) in a manner that demonstrates the utmost respect for our unique natural setting - an urban center on the shore of San Diego Bay. The Authority conducts airport activities in a manner that protects the natural resources, the health and well-being of the people that work here, the surrounding neighborhoods and communities, and the traveling public as they pass through our facility. Potential stormwater impacts are just one characteristic of the airport's "environmental footprint" that the Authority aims to minimize.

This report describes the stormwater management activities of the Authority during the period of July 1, 2008 to June 30, 2009 - the fiscal year 2008-2009 (FY08-09). The Authority submits this FY08-09 Annual Report in compliance with California Regional Water Quality Control Board, San Diego Region (RWQCB), Order No. R9-2007-0001, 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 (County), the Incorporated Cities of San Diego County, the San Diego Unified Port District, and the San Diego County Regional Airport Authority (the Municipal Permit).

This report has been prepared by the Authority Environmental Affairs Department with the assistance of the Facilities Management Department, the Landside Operations Department, the Airside Operations Department, the Facilities Development Department, and the Real Estate Management Department. These departments are responsible for the implementation of the Storm Water Management Plan (SWMP) for SDIA. Staff from these departments are integral to eliminating and reducing pollutants in stormwater runoff and to ensuring the Authority's compliance with the NPDES permits applicable at SDIA, including the Municipal Permit.

The FY08-09 Annual Report presents a compilation of the Authority's stormwater management efforts in the following order:

1.1 BACKGROUND

The Authority became the owner and operator of SDIA on January 1, 2003. With approximately 355 employees, the Authority expends an annual budget of approximately $148 million. SDIA is located on approximately 660 acres adjacent to San Diego Bay and just north of downtown San Diego in San Diego County. Approximately 85-90% of the airport property is covered by impervious surfaces. Airport operations include two main airline terminals, a commuter terminal, a fixed base operation facility, one main runway area, taxiways, and ancillary support facilities which include a remote fueling facility, air cargo, ground support, a closed landfill site, an airplane wash-rack, overnight airplane parking areas, and the Airport Rescue and Fire Fighting (ARFF) Facility.

The climate at SDIA is generally mild with an average temperature of 71°F and extremes ranging from the high 40's during the winter to the low 80's during the summer. The majority of the 12 inch-average-annual rain falls during the period from October to April. SDIA lies within the Pueblo San Diego (908.00) hydrologic unit of the San Diego Basin Plan and within the San Diego Bay Watershed of the Municipal Permit. Stormwater runoff from SDIA discharges into San Diego Bay through 14 storm drain outfalls.

Presently, the Authority's operations must comply with two NPDES Stormwater Permits. Since 1992, the operations of the airport have been subject to State Water Resources Control Board (SWRCB) Water Quality Order No. 97-03-DWQ, NPDES General Permit No. CAS000001, Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities (the General Industrial Storm Water Permit). The Authority has also been subject to the Municipal Permit since August of 2003. The Authority has prepared a single document, the Storm Water Management Plan (SWMP, March 2008), to fulfill the requirements of these two permits.

The entire jurisdictional area of the Authority consists of the airport itself. In regards to the Municipal Permit, there are three notable characteristics of the Authority jurisdiction: a) the absence of private property ownership within the Authority's jurisdictional boundaries; b) the absence of a residential population within the Authority's jurisdictional boundaries; and c) the absence of hillsides as defined in the Municipal Permit.

1.2 ANNUAL REPORT HIGHLIGHTS

Several chapters of the FY08-09 Annual Report contain items of note. The discussion of Development and Planning activities in Chapter 2 briefly highlights the latest efforts to implement the $877-milllion near-term Phase I elements of the Airport Master Plan. The fourteen construction projects underway at SDIA during FY08-09 are discussed in Chapter 3, and improvements to the "Tenant Improvement Project Review Process" are mentioned. Chapter 4 - Municipal Component - highlights the continuation of our electronic waste recycling events and universal waste collection program for Authority staff. It also discusses the implementation of a more intensive stormwater pollution prevention training program for the Facilities Management Department. The Effectiveness Assessment Component in Chapter 11 continues to evolve as more data and information are gathered over 5 years of program implementation. Chapter 11 discusses the preliminary results of the 2009 Site Audit and the results of the implementation of a pre- and post-training knowledge and awareness testing methodology for some targeted audiences. The Authority's procedures and methods have begun to allow for a more complete evaluation of the program and more robust conclusions and recommendations for improvement. Finally, two pilot projects conducted by the Authority during FY08-09 are discussed in the Chapter 12 Special Investigations component. The two projects are both aimed at reducing known pollutants of concern from Airport runoff.

2 DEVELOPMENT PLANNING COMPONENT

2.1 INTRODUCTION

The Municipal Permit requires the Authority to implement policies, principles, programs, and practices that ensure land-use development, planning, environmental review, and project approval decisions consistently apply effective water quality and watershed protection measures to avoid, minimize, and mitigate the short- and long-term impacts of land development activities on runoff and receiving water quality. The Municipal Permit requires evaluation of the SDIA Master Plan and modification of the development project approval process and environmental review process, as necessary, to reduce pollutants and runoff flows from development and redevelopment projects to the maximum extent practicable. The Municipal Permit required the Authority to update the Standard Urban Runoff Mitigation Plan (SUSMP) processes for priority development projects and to update the Authority review and approval processes to ensure incorporation of source control and low impact development (LID) BMPs into the design of new development and redevelopment projects. Section 4.0 of the SWMP outlines the elements that satisfy these requirements. This chapter of the Annual Report discusses compliance activities relative to land use planning and development/redevelopment activities at SDIA during FY08-09.

2.2 LAND USE PLANNING

2.2.1 BACKGROUND

The Authority Airport Planning Department is responsible for development and implementation of the Airport Master Plan and the environmental review processes required by the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). As noted in the most recent Annual Report (for fiscal year FY07-08), the Authority Board adopted the Airport Master Plan on May 1, 2008. Adoption of the Airport Master Plan ensures that a responsible program for development and redevelopment will be implemented at SDIA. The Airport Master Plan identifies specific physical improvements for SDIA that will allow the airport to effectively continue its mission of serving San Diego's commercial air transportation needs. The plan includes consideration of a broad range of development possibilities, cumulative impacts, and mitigation opportunities related to water quality and stormwater runoff pollution prevention.

2.2.2 SOURCE CHARACTERIZATION

Every land use at SDIA has the potential to generate stormwater pollutants. As noted in Section 4.2.2 of the SWMP, pollutants found in runoff at SDIA typically include: sediment, nutrients (fertilizers), oxygen demanding substances (for example, decaying vegetation), bacteria, heavy metals, synthetic organics (fuels, oils, solvents, lubricants), pesticides, and other toxic substances. In addition to the information presented in Section 4.0 of the SWMP, descriptions of the pollutant sources to be addressed through land use planning are further described in Section 3.0 (Non-Storm Water Discharges), Section 5.0 (Construction Component), Section 6.0 (Municipal Component), Section 7.0 (Industrial and Commercial Component), and Section 9.0 (Illicit Discharge Detection and Elimination Component) of the SWMP.

2.2.3 BEST MANAGEMENT PRACTICE REQUIREMENTS

In making land use decisions, the Authority evaluates the effect of proposed uses on receiving water quality and requires the application of effective water quality and watershed protection measures to avoid, minimize, and mitigate detrimental impacts. Land uses are evaluated to ensure that: source control BMPs can be implemented to reduce stormwater pollutants of concern in urban runoff; LID BMPs can be incorporated, where feasible; buffer zones can be established between development and natural water bodies (where feasible); and that SUSMP requirements are properly established.

2.2.4 PROGRAM IMPLEMENTATION

Again, the Authority Board adopted the Airport Master Plan on May 1, 2008. The Airport Master Plan envisions near-term (Phase I) and long-term (Phase II) improvements. The Authority prepared Phase I of the Airport Master Plan to guide the development of SDIA to the year 2030. The proposed improvements in Phase I are: the addition of 10 gates that will accommodate the expected increase in travelers; additional airport ramp (tarmac) parking area for remaining-over-night (RON) aircraft; improvements to the aircraft taxiway system to improve aircraft movement; and a second-level roadway system to provide separate departure and arrival areas at Terminal 2. On April 2, 2009, the Authority Board authorized the execution of two design-build contracts for the implementation of these Phase I improvements. The Authority Board's action allowed two contract teams to begin preparation of conceptual designs and the development of cost estimates and schedules for the terminal expansion and airside improvements. Although the preliminary cost estimate for the Phase I improvements is approximately $877 million, the two contract teams had not finalized their estimates and schedules before the FY08-09 reporting period ended.

The Authority has implemented education programs to educate the Authority staff and airport tenants of water quality issues associated with land use planning. The Education Component of the SWMP is described in Section 10.0 of that document. The education and outreach efforts of the Authority during FY08-09 are described in Chapter 8 of this Annual Report.

2.3 ENVIRONMENTAL REVIEW PROCESS

The Authority's environmental review processes for both land use development and specific improvements is described in Section 4.3 of the SWMP and these processes have not changed in the time since the SWMP was last drafted in March of 2008. Authority planning and development review staff, in the Airport Planning Department, use the CEQA (and NEPA, where necessary and feasible) to review proposed land use and development projects. Authority staff use a combination of questions pertaining to hydrology and water quality from the "CEQA Environmental Checklist Form" and from RWQCB Order R9-2001-01 (the 2001 Municipal Permit) to evaluate the potential stormwater impacts of any particular proposed land use or development project.

2.4 DEVELOPMENT PROJECT APPROVAL AND VERIFICATION PROCESS

2.4.1 BACKGROUND

During the planning and review process and prior to project approval and/or permit issuance for all proposed Development Projects, the Authority prescribes the requirements necessary to ensure that discharges of pollutants from the project and to the storm drain system are prevented, reduced, or eliminated. The Authority's development review process incorporates appropriate stormwater management controls into standard conditions of approval, use permits, lease agreements, and/or other suitable project approval mechanisms.

2.4.2 SOURCE CHARACTERIZATION

Development projects may generate any number of pollutants, including sediment, nutrients, oxygen-demanding substances, bacteria, heavy metals, synthetic organics, pesticides, and other toxic substances. In addition to the information presented in Section 4.0 of the SWMP, descriptions of the pollutant sources to be addressed through the development project review and approval process are further described in Section 3.0 (Non-Storm Water Discharges), Section 5.0 (Construction Component), Section 6.0 (Municipal

Component), Section 7.0 (Industrial and Commercial Component), and Section 9.0 (Illicit Discharge Detection and Elimination Component) of the SWMP.

In accordance with the Municipal Permit, the Authority developed a SUSMP based on the Model SUSMP developed by the Copermittees for projects that are determined to be Priority Development Projects. The Authority's SUSMP is included in Appendix C of the SWMP. The SUSMP describes procedures to identify pollutants and conditions of concern for proposed Priority Development Projects and Table 1 of the SUSMP document (see Appendix C of the SWMP) provides a guide to identifying anticipated and potential pollutants generated by land use types and proposed improvements.

2.4.3 BEST MANAGEMENT PRACTICE REQUIREMENTS

The Authority's development project review and approval processes are designed to ensure that applicable LID BMPs are evaluated and incorporated, where feasible, so that the potential for infiltration and/or retention is maximized, runoff rates are slowed as much as possible, the impervious footprint of the project is minimized, runoff from impervious areas is directed into landscaping, and impervious surfaces are constructed to minimum widths necessary. In addition, the Authority's SUSMP process requires the use of site design, source control, and treatment control BMPs. The SUSMP describes the selection and design criteria for the source control, LID, and treatment control BMPs to be implemented at Priority Development Projects.

The Authority's development project review and approval process verifies that any project subject to the General Construction Permit does indeed obtained coverage under that permit. The process also requires that designated construction BMPs are implemented at time of construction.

2.4.4 PROGRAM IMPLEMENTATION

During FY08-09, there were 10 projects that completed the development review process and began construction. One (1) of these 10 projects was a tenant improvement project, and the other 9 were Authority improvement projects. These 10 projects are identified and discussed in Chapter 3 of this

Annual Report. None of these 10 projects were subject to the Authority's SUSMP requirements. During FY08-09, some of the preliminary design and permitting for the Phase I improvements envisioned by the Airport Master Plan resulted in the preparation of a SUSMP document for part of the features proposed for the airside. However, since the Authority Board has not yet authorized the final design and construction of the Phase I improvements, neither the project nor the accompanying SUSMP document are considered final.

The Authority has implemented education programs to educate the Authority staff and airport tenants of water quality issues associated with new development and redevelopment. The Education Component of the SWMP is described in Section 10.0 of that document. The education and outreach efforts of the Authority during FY08-09 are described in Chapter 8 of this Annual Report.

The Authority's watershed-based inventory of approved SUSMP treatment control BMPs has not changed since the last Annual Report and still only includes 2 sites: 1) the NTC Parking Lot Project, as previously noted in the FY03-04 Annual Report; and 2) the EMAS Project, as previously noted in the FY05-06 and FY06-07 Annual Reports. Both of these projects (and the entire jurisdictional boundary of the Authority) lie in the Pueblo San Diego hydrologic unit, San Diego Mesa hydrologic area, Lindbergh hydrologic sub-area (908.21).

Since both the NTC Parking Lot Project and the EMAS Project were Authority projects, the inspection and maintenance of the SUSMP treatment control BMPs associated with each are the responsibility of the Authority. The treatment controls associated with these projects are inspected as part of the Authority's routine, annual inspection of the MS4 (as discussed in Chapter 4 of this Annual Report).

The development project approval and verification process activities conducted by the Authority during FY08-09 did not identify any violations, and therefore, no enforcement actions were initiated during the reporting period.

2.5 PROGRAM REVIEW AND MODIFICATION

In response to the re-issued Municipal Permit, the Authority submitted a completely revised SWMP to the RWQCB on March 24, 2008. There have been no revisions to the Development Planning Component of the SWMP since that time.

3 CONSTRUCTION COMPONENT

3.1 INTRODUCTION

The Municipal Permit requires the Authority to: a) review and update its grading ordinances and other ordinances, as necessary, to ensure compliance with the Municipal Permit; b) maintain and update, on a monthly basis, a watershed-based inventory of all construction sites; c) designate BMPs and other pollution prevention measures required for implementation at all construction sites year-round; d) develop limitations of grading to a maximum disturbed area before either temporary or permanent erosion controls are implemented to prevent stormwater pollution; e) require implementation of advanced treatment for sediment at construction sites that are determined by the Authority to be an exceptional threat to water quality; f) require implementation of additional controls for construction sites tributary to CWA section 303(d) water body segments impaired for sediment and additional controls for construction sites within or adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas; g) conduct construction site inspections for compliance with its local ordinances (grading, stormwater, etc.), permits (construction, grading, etc.), and the Municipal Permit; h) develop and implement an escalating enforcement process that achieves prompt corrective actions at construction sites for violations of the Authority's water quality protection permit requirements and ordinances; and i) notify the RWQCB

when the Authority issues a stop work order or other high level enforcement to a construction site as a result of stormwater violations. Section 5.0 of the SWMP addresses these Municipal Permit requirements.

This chapter of the Annual Report discusses compliance activities relative to construction activities at SDIA during FY08-09.

3.2 SOURCE CHARACTERIZATION

Chapter 5 of the SWMP notes that construction activities (namely, demolition, grading, excavation, clearing, and structure and road construction) can result in the disturbance of soil and/or the generation of stormwater pollutants such as sediment, trash, debris, chemicals associated with the work, and contaminants associated with the historic uses of the construction site. Based on the criteria described in Section 5.0 of the SWMP, the Authority categorized all construction sites as posing a high, medium, or low threat to water quality.

The Authority maintains a monthly watershed-based inventory of active construction projects at SDIA. The inventory is updated during the first week of each month. Up-to-date information is obtained from the Authority Facilities Development Department. All construction projects at SDIA lie in the same watershed, specifically, the Pueblo San Diego hydrologic unit, San Diego Mesa hydrologic area, Lindbergh hydrologic sub-area (908.21).

There were 14 construction projects underway at SDIA during the FY08-09 reporting period that required the implementation of storm water management controls. All other construction activities were conducted either entirely indoors or without elements that required the implementation of BMPs. Eleven (11) of these projects were initiated by the Authority and 3 were initiated by airport tenants. The Authority determined that 1 of these projects was a high priority site, and that the remaining 13 projects were medium priority threats to water quality in accordance with the Municipal Permit. The 14 projects subject to the Construction Component requirements of the Authority SWMP during FY08-09 are listed in Table 3-1 below. Table 3-1 presents the project name, the project sponsor, a description of the project, the project priority, and the months during which the project was active (which is comparable to a monthly inventory).

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TABLE 3-1 SDIA CONSTRUCTION PROJECTS – FY08-09

#	Project Name	Sponsor	Project Description	Priority	Status during FY07-08
1	Misc. Interior Improvements -- CIP# 104051	Authority	Interior remodeling at various locations throughout the terminals	Medium	Continued from June 2008 and completed September 2008
2	HMS Host -- Interior Improvements	Tenant	Add Chili's 2 Restaurant to T1 Food Court	Medium	Continued from June 2008 and completed April 2009
3	Improve Runway 09 Localizer (FAA)-- # 016-00-414	Tenant	FAA project to improve localizer antenna	Medium	Continued from June 2008 and completed March 2009
4	NTC Landfill Phase II -- CIP# 103044	Authority	Relocate trash to permitted landfill	High	Started July 2008 and continued through June 2009
5	Air Cargo Ramp -- CIP# 104078	Authority	Rehab aircraft parking	Medium	Started July 2008 and completed April 2009
6	N. Harbor Drive and Winship Lane Intersection Improvements -- CIP# 103007A	Authority	Added right turn pocket to Winship Lane intersection	Medium	Started July 2008 and completed September 2008
7	Gate 1A Reconfiguration -- CIP# 104065	Authority	Construct corridor and hold room.	Medium	Started August 2008 and completed October 2008
8	West Wing Standby Generator -- CIP# 104062	Authority	Install backup generator to ensure server has power during outage	Medium	Started December 2008 and completed February 2009
9	Demo Airmail Freight Building -- CIP# 104081	Authority	Demo building	Medium	Started December 2008 and completed March 2009
10	Canopy Project -- CIP# 104054B	Authority	Construct canopy over escalator	Medium	Started February 2009 and completed May 2009
11	12kV Electrical Upgrade-- CIP# 201622	Authority	Airport wide 12kV electrical upgrades	Medium	Started February 2009 and continued through June 2009

TABLE 3-1 SDIA CONSTRUCTION PROJECTS – FY08-09

#	Project Name	Sponsor	Project Description	Priority	Status during FY07-08
12	Resurface Lot 10 -- CIP# 104081B	Authority	Resurface parking lot at location of former Air-mail freight building	Medium	Started April 2009 and completed June 2009
13	Southwest Airlines Relocation of AA Storage Shed -- # 012-007-612	Tenant	Construct concrete pad and relocated AA building	Medium	Started May 2009 and completed June 2009
14	T1- Electrical Equipment Upgrade -- CIP# 103097	Authority	Electrical Equipment upgrades, Terminal 1 East (1st and 2nd floor and roof), Terminal 1 West (1st and 2nd floor and roof)	Medium	Started June 2009 and continued through June 2009

3.2.1 UPDATES TO ORDINANCES AND APPROVAL PROCESS

The Authority's construction project approval process is discussed in Section 5.3 of the SWMP. During FY08-09, the Authority improved the tenant improvement process by streamlining the project intake process. These changes did not effect the stormwater requirements placed on the tenant improvement projects.

3.3 BEST MANAGEMENT PRACTICE REQUIREMENTS

Section 5.4 of the SWMP lists the minimum and activity-specific BMPs required to control construction activities at SDIA. The minimum BMP requirements are applicable year-round and are the same for each construction project regardless of the project's threat to water quality. Depending on the specific activities being conducted at a construction site, the Authority requires the use of BMPs designed to control those particular activities. The Authority may require the implementation of multiple BMPs to provide "multiple lines of defense" for high priority construction sites.

In addition, the Authority requires implementation of advanced treatment for sediment at construction sites that are determined by the Authority to be an exceptional threat to water quality, in accordance with Municipal Permit Section D.2.c.(2).

These BMPs must be employed to the industry standards as listed in the California BMP Handbook for Construction Activity (CASQA 2003) or in the Caltrans Construction Site BMP Manual (Caltrans 2003).

3.4 PROGRAM IMPLEMENTATION

The 3 major steps of program implementation for the Construction Component of the SWMP are education, inspection, and enforcement. The activities conducted by the Authority relative to each of these steps is described below.

3.4.1 EDUCATION

The Authority's stormwater construction education efforts are directed at construction project proponents/sponsor/managers, construction site personnel, and inspection staff. The education program focuses on awareness of 1) pollution causing activities related to construction, and 2) the methods used to minimize these pollutants. The topics addressed by the construction education program are presented in Section 5 (Construction Component) and 10 (Education Component) of the SWMP.

The Environmental Affairs Department continues to provide stormwater pollution prevention training to construction project managers, developers, and contractors, both on site and during project meetings. One of the earliest opportunities for education with those involved in any particular construction project occurs at the pre-construction meeting. Staff from the Environmental Affairs Department participated in the pre-construction meetings for each of the 11 projects initiated by the Authority in FY08-09. Staff from the Environmental Affairs Department also attended the regularly-scheduled (typically weekly) construction progress meetings for each project.

Construction BMP requirements and pollution prevention measures were also discussed, as necessary, with Authority staff and the construction contractors performing the work during inspections. Staff from the Environmental Affairs Department use inspections and meetings to reinforce stormwater pollution prevention principles and to discuss BMPs specific to the project. The Environmental Affairs Department participated in a total of 181 construction project-related meetings during FY08-09.

Chapter 8 of this Annual Report also presents information relative to the construction education activities conducted by the Authority in FY08-09.

3.4.2 INSPECTIONS

The Environmental Affairs Department inspects all construction sites to monitor compliance with the Authority's ordinances, permits, approvals, the Municipal Permit, and the General Construction Permit (if applicable). During the FY08-09 reporting period, the Environmental Affairs Department conducted regular inspections of the 14 construction projects listed in Table 3-1 above. The dates of inspection are shown in Table 3-2 below. The Authority intended to inspect each of these projects on a weekly basis during both the wet and dry seasons, however., staffing issues in the Environmental Affairs Department prevented the Authority from reaching this goal in FY08-09. A total of 162 inspections were conducted during FY08-09.

Table 3-3 identifies the construction activities for which BMPs were not properly implemented at the time of inspection. Poor materials management and poor waste management were the two issues of concern most frequently identified. These same two concerns were also previously identified in the FY04-05, FY05-06, FY06-07, and FY07-08 Annual Reports. Spill prevention and cleanup, and vehicle and equipment maintenance were also identified as issues of concern during FY08-09 construction projects. All of these issues require constant attention from construction site supervisors. While storm drain inlet protection was not identified as frequently as other material and waste management concerns during site inspections, it also requires the constant attention of construction site supervisors and inspectors. Although uncommon to most construction projects during FY08-09, tracking controls and street sweeping were significant issues with the NTC landfill remediation project, which involved as many as 100 trucks per day leaving the site.

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TABLE 3-2 CONSTRUCTION ACTIVITY INSPECTIONS AT SDIA DURING FY08-09

#	Project Name	Inspection Dates		
1	Miscellaneous Interior Improvements -- CIP# 104051	July 2, 2008 July 9, 2008 July 16, 2008 July 23, 2008 July 30, 2008	August 7, 2008 August 13, 2008 August 21, 2008 August 27, 2008 September 4, 2008	September 10, 2008 September 17, 2008 September 25, 2008
2	HMS Host - Interior Improvements	July 2, 2008 July 9, 2008 July 16, 2008 July 23, 2008 July 30, 2008	August 7, 2008 August 13, 2008 August 21, 2008 August 27, 2008 September 4, 2008	September 10, 2008 September 17, 2008 September 25, 2008
3	Improve Runway 09 Localizer (FAA) -- # 016-00-474	July 2, 2008 July 9, 2008 July 16, 2008 July 23, 2008 July 30, 2008 August 7, 2008	August 13, 2008 August 21, 2008 September 4, 2008 September 10, 2008 September 17, 2008 September 25, 2008	March 18, 2009 March 25, 2009 April 1, 2009 April 8, 2009 April 16, 2009 (Project Completed)
4	NTC Landfill Phase II -- CIP# 103044	October 17, 2008 October 24, 2008 October 31, 2008 November 7, 2008 November 14, 2008 November 21, 2008 November 25, 2008 December 5, 2008 December 12, 2008 December 19, 2008 December 26, 2008	January 8, 2009 January 16, 2009 January 23, 2009 January 30, 2009 February 6, 2009 February 13, 2009 February 20, 2009 February 27, 2009 March 27, 2009 April 3 2009 April 10, 2009	April 17, 2009 April 24, 2009 May 1, 2009 May 8, 2009 May 15, 2009 May 22, 2009 May 29, 2009 June 5, 2009 June 12, 2009 June 19, 2009 June 26, 2009
5	Air Cargo Ramp	July 2, 2008 July 9, 2008 July 16, 2008 July 23, 2008 July 30, 2008 August 7, 2008 August 13, 2008 August 21, 2008 August 27, 2008 September 4, 2008	September 11, 2008 September 17, 2008 September 25, 2008 December 31, 2008 January 7, 2009 January 21, 2009 January 28, 2009 February 4, 2009 February 11, 2009 February 18, 2009	February 25, 2009 March 4, 2009 March 11, 2009 March 18, 2009 March 25, 2009 April 1, 2009 April 8, 2009 April 16, 2009 (ProjectCompleted)

TABLE 3-2 CONSTRUCTION ACTIVITY INSPECTIONS AT SDIA DURING FY08-09

#	Project Name	Inspection Dates		
6	N Harbor Drive and Winship Lane Intersection Improvements -- CIP# 103007A	July 22, 2008 August 5, 2008	August 19, 2008	September 2, 2008
7	Gate 1A Reconfiguration -- CIP# 104065	August 20, 2008 September 3, 2008	September 17, 2008 October 1, 2008	October 15, 2008 (Project Complete)
8	West Wing Standby Generator -- CIP #104062	December 31, 2008 January 7, 2009 January 14, 2009	January 21, 2009 January 28, 2009 February 4, 2009	February 11, 2009 February 18, 2009 (Project Complete)
9	Demo Airmail Freight Building CIP# 104081	December 31, 2008 January 7, 2009 January 14, 2009 January 21, 2009	January 28, 2009 February 4, 2009 February 11, 2009 February 18, 2009	February 25, 2009 March 4, 2009 March 11, 2009 (Project Complete)
10	Canopy Project -- CIP# 104054B	April 22, 2009 (Project Complete)	April 29, 2009	May 7, 2009
11	12kV Electrical Upgrades -- CIP #201622 12kV	April 22, 2009 April 29, 2009 May 7, 2009 May 12, 2009	May 20, 2009 May 27, 2009 June 3, 2009 June 10, 2009	June 18, 2009 June 24, 2009
12	Gate 10 -- CIP# 104081B	April 22, 2009 (Project Complete)	April 29, 2009	May 7, 2009
13	Southwest Airlines Relocation of AA Storage Shed #012-007-612	May 4, 2009	May 18, 2009	(Project Complete)
14	T1 -- Electrical Equipment Upgrade -- CIP# 103097	June 22, 2009		

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TABLE 3-3 TYPES OF CONSTRUCTION ACTIVITY FOR WHICH BMPS WERE MOST FREQUENTLY NOT PROPERLY IMPLEMENTED AS DETERMINED DURING SITE INSPECTIONS – FY08-09

Construction Activity	BMPs Required in SAN SWMP*
Materials not properly managed or stored	WM-1 Material Delivery and Storage WM-3 Stockpile Management
Spills not properly contained/cleaned	WM-4 Spill Prevention and Control
Improper equipment/vehicle maintenance	NS-10 Vehicle and Equipment Maintenance
Solid waste not properly managed or stored	WM-5 Solid Waste Management

*.As noted in the SWMP, required Construction BMPs are generally those listed in the CASQA California Stormwater Best Management Practice Handbook for Construction Activity.

3.4.3 FOLLOW-UP AND ENFORCEMENT

Staff from the Environmental Affairs Department discussed the results of each inspections with the construction contract site supervisor, typically at the end of each inspection and again during regular progress meetings. When necessary, inspectors required corrective actions and/or modification to the BMPs being employed on the project.

In addition to inspections and meeting attendance by the Environmental Affairs Department, the Facilities Development Department (FDD - responsible for project management) has dedicated inspection staff on site during every day of construction activity for each project. The FDD construction inspectors are familiar with proper stormwater BMP implementation and are trained to raise immediate stormwater concerns with the construction contract site supervisor. Stormwater concerns that require additional follow-up are brought to the attention of the Environmental Affairs Department.

The construction oversight conducted by the Environmental Affairs Department generally found these 14 projects to be in substantial compliance with the requirements of the SWMP and the Municipal Permit Construction Component. In general, all the issues and concerns identified during inspections were corrected as soon as they were brought to the attention of

the construction contract supervisor. No unauthorized discharges to receiving waters were identified during construction site inspections in FY08-09.

The issues of concern identified during site inspections, and noted in Table 3-3 above, were generally resolved through verbal communication with the construction contract site supervisor in the field and at weekly progress meetings. No further enforcement actions were initiated during the reporting period.

3.5 PROGRAM REVIEW AND MODIFICATION

In response to the re-issued Municipal Permit, the Authority submitted a completely revised SWMP to the RWQCB on March 24, 2008. Since that time, the only revisions to the Construction Component of the SWMP has been an update of the inventory of construction projects. The Authority keeps a monthly inventory of active construction projects, and this Annual Report includes an updated inventory as of June 30, 2009 (the end of the reporting period). Any and all revisions to the SWMP are discussed and summarized in Chapter 14 of this Annual Report.

4 MUNICIPAL COMPONENT

4.1 INTRODUCTION

The Municipal Permit requires the Authority to: a) prepare and annually update a watershed based inventory of municipal areas and activities that could generate pollutants and the significant materials in or generated by those areas; b) designate, describe and implement pollution prevention methods and BMPs for all municipal areas and activities; c) properly operate, inspect and maintain its MS4s and structural controls; d) implement BMPs to reduce the contribution of pollutants associated with the application, storage, and disposal of pesticides, herbicides, and fertilizers from municipal areas and activities to MS4s; e) implement sweeping programs for roads and parking facilities designed to reduce pollutant discharges to its MS4s to the maximum extent practicable (MEP); f) implement controls and measures to prevent and eliminate infiltration of seepage from municipal sanitary sewers to MS4s through thorough, routine preventative maintenance of the MS4 that will include overall sanitary sewer and MS4 surveys and thorough, routine preventative maintenance of both; g) inspect high priority municipal areas and activities annually, with other municipal areas and activities inspected as needed, and implement all follow-up actions necessary to comply with the Municipal Permit; h) enforce its stormwater ordinance for all municipal areas and activities as necessary to comply with the Municipal Permit; i) describe the steps that will be taken to require and verify the implementation of

designated BMPs at municipal facilities and activities. Section 6 (Municipal Component) of the SWMP has been prepared to satisfy these requirements, in part.

Since the operation of the airport is also subject to the General Industrial Permit, many of the activities classified as municipal activities by the Municipal Permit are also considered to be industrial activities by the General Industrial Permit. As such, many of the municipal activities listed above are also detailed in Section 7 (Industrial and Commercial Component) of the SWMP. For instance, inspection and maintenance of the storm drain system is discussed in both sections, as well as the management of pesticides, herbicides, and fertilizers and the sweeping of municipal areas.

Section 6 of the SWMP presents information regarding the municipal source areas and activities, and associated significant materials at SDIA that could generate stormwater pollutants. The SWMP describes the following specific municipal activities, namely: 1) the storm drain system and associated structural controls; 2) the management of pesticides, herbicides, and fertilizers; 3) the sweeping of impervious municipal areas; 4) the infiltration from the sanitary sewer system into the storm drain system and preventive maintenance for both systems; 5) activities deemed high priority by the Municipal Permit or determined to be high priority by the Authority. Additional high priority municipal areas/activities discussed in Section 6 of the SWMP are the closed municipal landfill (the NTC landfill) and special event venues. Again, given the overlap between the Municipal Permit and the General Industrial Permit, Section 7 of the SWMP also discusses some of these high priority municipal areas/activities, as well as the Authority's corporate yards and power washing activities.

This chapter of the Annual Report discusses compliance activities relative to municipal activities at SDIA during FY08-09. Since many aspects of the Authority's Municipal Component are similar for the each of the various municipal activities discussed below, the content of this chapter has been drafted to remove redundancies and facilitate reporting. As such, the outline of this chapter varies slightly from the Standardized Format for Jurisdictional Urban Runoff Management Plan Annual Reports, adopted by the Copermittees. Presented below as combined topics for the whole of the Authority's municipal activities are: a brief background; a characterization of municipal sources; and the BMP requirements applicable to municipal areas,

activities, or operations. Inspection, maintenance, and enforcement actions relative to the various municipal activities are presented under the heading of "Program Implementation."

4.2 BACKGROUND

There have been no changes in the inventory of municipal areas and activities/operations since the SWMP was prepared in March of 2008. The Authority's MS4 consists of roads with drainage systems, curbs, catch basins, gutters, 210 inlets, culverts, trench drains, and 86,000 feet of stormwater conveyance pipe of varying materials and widths. The structural treatment controls incorporated into the MS4 include 6 oil water separators, 1 Vortech hydrodynamic separator unit, and numerous drain inlet inserts.

As discussed in Section 6.3 of the SWMP, important municipal areas and activities associated with the application, storage, and disposal of pesticides, herbicides, and fertilizers at SDIA include municipal facility structures/ buildings and landscaped areas. The Authority Facilities Management Department maintains the 12.5 acres of landscaping at the airport. The Facilities Management Department implements an Integrated Pest Management (IPM) program that encourages the use of native plant species in the landscaped areas to help minimize the need for excessive irrigation and application of fertilizers and/or herbicides. The IPM also encourages the use of natural pest control mechanisms, limits the need for and inventory of man-made biocides, and ensures the proper use of any biocides.

Section 6.4 of the SWMP discusses the Authority's sweeping programs for roads and parking facilities. The Authority's program for airfield ramp sweeping is described in Section 7.2.3 of the SWMP. The entities responsible for implementing BMPs for roads and parking facilities are the Authority and the parking lot management service provider. The parking lot management service provider manages the short-term and long-term public parking facilities and the airport employee parking lots.

As noted in Section 6.5 of the SWMP, the Authority does not own or manage a municipal sanitary sewer system. The City of San Diego Metropolitan Wastewater Department (MWWD) provides municipal sanitary sewer service to the airport. However, the Authority is responsible for those portions of

the on-site sanitary sewer system that connect to the MWWD system. As such, the Authority has implemented controls and measures to prevent and eliminate infiltration of seepage from airport sanitary sewers to the storm drain systems through thorough routine inspection and preventative maintenance of the sanitary sewer system and inspection of the stormwater conveyance system.

Section 6.6 of the SWMP identifies the closed NTC landfill area as a high priority municipal area. The Authority has sole responsibility for stormwater management at the closed NTC landfill. The size of the several parking lots at the airport, along with the general public's familiarity with the location, makes the airport 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. Section 6.7 of the SWMP discusses the potential pollutant sources and BMPs implemented to mitigate pollutants to the storm drain system from special event venues.

4.3 SOURCE CHARACTERIZATION

As a consequence of its function, the stormwater conveyance system collects and transports stormwater runoff at SDIA that may contain certain pollutants if adequate BMPs are not being implemented or adequate inspections and maintenance of the storm drain system are not being performed. At SDIA, these potential pollutants include: sediment, trash and debris, oil and grease, hydrocarbons/fuels, hydraulic fluids, solvents, soap/cleaning fluids, lavatory chemicals and waste, paints, pet wastes, used batteries and battery acid, anti-freeze, hazardous wastes (mostly oils), metals, deicing chemicals, herbicides and pesticides, adhesives, rust preventers, aircraft fire fighting foam, and sealants. Structural treatment controls that are not properly maintained can also be sources of sediment, oil and grease, trash and debris, and associated pollutants such as metals.

The Authority generally uses pesticides and/or herbicides to control pest and weeds. The limited use of these chemicals at SDIA suggests that this activity presents a low potential for impacting stormwater discharge.

Littering by the general public can create trash and debris pollutants on roadways and in public parking facilities at SDIA. Fluid leaks from vehicles on roads or in parking facilities are a potential source of pollutants such as oils, fuel, and antifreeze. Atmospheric deposition, vehicle use and emissions, asphalt and concrete surface deterioration, peeling or crumbling roadway and parking lot painted surfaces, and eroding landscaped surfaces can generate particulate pollutants.

Infiltration from sanitary sewers to the storm drain system may potentially introduce the following pollutants: sediments, nutrients, bacteria, organics, and oxygen demanding substances.

During FY08-09, all previous temporary uses of the closed NTC landfill were terminated. For the entirety of FY08-09, the only activity conducted at the landfill was the excavation of 145,000 cubic yards of municipal solid waste and burn ash. The NTC landfill remediation project is discussed further in the construction component chapter of the report.

Potential pollutants of concern generated by large special events are trash, litter, and debris.

4.4 BEST MANAGEMENT PRACTICE REQUIREMENTS

Descriptions of the BMPs required by the Authority to address maintenance and operation of the MS4 and structural controls can be found in Appendix B of the SWMP. The applicable BMPs include SC17 "Storm Drain Maintenance" and TC01 "Treatment Controls." These BMPs are aimed at mitigating pollutant sources from the operation and maintenance of the storm drain system and from structural treatment controls.

BMPs applicable to the management of pesticides, herbicides, and fertilizers by the Authority are summarized in Appendix B of the SWMP and include BMP categories SC06 "Outdoor Loading/Unloading of Materials," SC09 "Building and Grounds Maintenance," SC10 "Employee Training," SC18 "Housekeeping," SC19 "Safer/Alternative Products," and SR01 "Spill Prevention, Control, and Clean-up."

The Authority requires the use of BMP SC16 "Parking Lots" aimed at mitigating pollutant sources in parking areas, and category SC12 "Outdoor Wash down/Sweeping (Apron Washing, Ramp Scrubbing)" covers BMPs aimed at mitigating pollutant sources in not only the airfield ramp areas, but also from roads. Descriptions of these BMPs can be found in Appendix B of the SWMP. The Authority's Storm Water Code (see Appendix F of the SWMP) requires parking lot operators to clean the areas frequently. Additional controls that have been added to parking lot facilities include a series of drain inlet inserts at the transportation islands, cell phone parking area, cargo area, rental car hold lot, Terminal 1 waste disposal area, near the triturator, and in the California least tern nesting area.

The Authority requires the use of BMPs SC01 "Non-Storm Water Management," SC11 "Lavatory Service Operation," SC17 "Storm Drain Maintenance," and SR01 "Spill Prevention, Control and Cleanup" to mitigate pollutant sources from sewage spills or seepage. Descriptions of these BMPs can be found in Appendix B of the SWMP.

Special events sponsored/coordinated by Authority staff and/or airport tenants are required to implement the following BMPs (summarized in Appendix B of the SWMP): BMP SC06 "Outdoor Loading/Unloading of Materials," SC08 "Waste Handling and Disposal," SC09 "Building and Grounds Maintenance," SC10 "Employee Training," SC12 "Outdoor Washdown/Sweeping (Apron Washing, Ramp Scrubbing)," SC16 "Parking Lots," SC18 "Housekeeping," and SR01 "Spill Prevention, Control, and Clean-up." If the special event sponsors/coordinators are not Authority staff or airport tenants, they must generally obtain Authority approval in the form of a "use permit." The conditions of the "use permit" typically include the following additional controls: fencing and barricades as necessary to delineate the event area; appropriate signage regarding recycling, trash disposal, and stormwater pollution prevention; adequate number of recycling containers and trash cans; portable restrooms, as necessary; adequate number of on-site event management staff to monitor and control trash and litter; adequate number of on-site event staff to promptly cleanup after event; and street sweepers, as necessary.

4.5 PROGRAM IMPLEMENTATION

4.5.1 EDUCATION AND STAFF TRAINING

All Authority staff attend an annual mandatory SWMP training session to cover topics such as pollution prevention, good housekeeping, prohibited discharges, inspections, spill response, implementation of BMPs, and record-keeping. In 2009, a more intensive storm water pollution prevention training program was created and implemented for Facilities Management Department Staff due to the nature of their duties. In addition, the Facilities Management Department staff attend an annual mandatory training session on proper pesticide and herbicide storage, application, and disposal. Details on the staff training are presented in Section 10.0 (Education Component) of the SWMP and Chapter 8 of this Annual Report.

4.5.2 POLLUTION PREVENTION

As in prior years, the Authority continued its pollution prevention efforts during FY08-09. These efforts include a waste reduction and recycling program. The Authority's recycling campaign is designed to educate staff about the single-stream recycling program used at the airport. The Authority has a bilingual (English-Spanish) Recycling Guide used to describe and promote the program to Authority staff and airport tenants. Approximately 6.4% of the waste generated at SDIA (including e-waste) was recycled during the reporting period (290.5 tons recycled of 4,506 tons of waste generated).

The Authority also continued to provide education about Universal Waste to staff and tenants. Since 2006, the Authority has maintained a universal waste collection program for Authority staff. Containers are provided in designated areas where Authority employees may dispose of alkali or rechargeable batteries, cell phone batteries, and electronic devices. The universal waste is collected and properly disposed/recycled. During FY05-06 and FY06-07, the Authority hosted One-day Electronic and Universal Waste Collection Events, which were open to all staff and tenants. Due to the success of those events the Authority began hosting quarterly two-day events during FY07-08 and continued to host these events in FY08-09. These events have allowed staff and tenants to drop off unwanted electronic and universal waste (such as batteries, fluorescent light bulbs, television, and computers) for proper

recycling or disposal. During this reporting period, collection events were held August 21-22, 2008, January 8-9, 2009, and April 23-24, 2009. A combined total of approximately 9.35 tons of electronic and universal waste was collected at these events during FY08-09.

The Authority also continues to provide two Service Animal and Pet Relief Areas for those animals that are traveling with passengers. The areas provide a place for animals to have a water or restroom break while waiting for departure or upon arrival. Approximately 690 pet waste bags were dispensed at the two Service Animal and Pet Relief Areas in FY08-09.

The results of these 3 pollution prevention efforts in FY08-09 are presented in Table 4-1 below.

TABLE 4-1 MUNICIPAL ACTIVITIES - POLLUTION PREVENTION DURING FY08-09

Type of Activity	Quantity
Recyclable Waste recovery	290.5 tons (6.4% of all waste generated)
Electronic and Universal Waste Collection	8.0 tons
Universal Waste Collection	1.25 tons
Pet Waste Bags Dispensed	689

4.5.3 INSPECTIONS

In general, the Authority Environmental Affairs Department inspects all municipal operations, as described in Sections 6.0 and 7.0 of the SWMP. The inspections include: 1) quarterly inspections; 2) frequent municipal land use area-specific inspections; 3) monthly inspections of the entire facility and the above-ground portions of the storm drain system during the wet weather season (October 1-May 31); and 4) a comprehensive annual inspection. All areas of municipal land use and activity are inspected during the monthly, quarterly, and annual inspections. Inspections are designed to ensure that site specific BMPs are properly implemented. The program includes timely follow-up inspections whenever BMP deficiencies are found.

The Environmental Affairs Department conducts a comprehensive MS4 inspection annually during the period from May 1 through September 30, to identify areas that need cleaning or maintenance. The Authority has established a routine quarterly inspection and cleaning program for the MS4 slit trench inlets on the ramp areas near the terminal gates. A routine annual inspection and cleaning is performed on the MS4 components in the vicinity of the terminal transportation islands. The Authority contracts with a professional service which maintains a series of drain inlet inserts in the rental car lot, cell phone parking area, cargo area, across from the triturator, and the California least tern nesting area. To prevent flooding, these inserts are cleaned every three months during the dry weather season and every month or after any rain event during the wet weather season.

The Facilities Management Department performs or contracts for inspection and maintenance of the MS4 and structural controls. Service companies are contracted to clean structural controls on an as-needed basis. During FY08-09, the oil water separator located downstream of the vehicle/equipment wash rack was pumped out and cleaned on March 20, 2009.

The Authority hires a contractor to sweep the roads into and out of the airport 5 days a week. The sweepings/debris are vacuumed up into the sweeping unit and properly disposed. The parking lot management service provider sweeps the terminal parking lots daily using a motorized sweeper unit, and the employee parking lots are swept weekly. Roads, parking lots, and curbs at SDIA are generally inspected continuously to identify the need for maintenance and/or cleaning. Authority and tenant employees are encouraged to identify areas that should be cleaned and to contact the Facilities Management Department regarding such issues.

The Facilities Management Department inspects both the storm drain system and the sanitary sewer system as part of their routine duties. The annual inspections of the stormwater conveyance system conducted by the Environmental Affairs Department is also used to identify any impacts from the sanitary sewer systems and to recommend any needed improvements. The Facilities Management Department also regularly inspects the pesticide, herbicide, and fertilizer storage areas as part of their normal routine.

The Environmental Affairs Department conducts inspections of all special event venues prior to and after each event. All the inspections conducted by the Environmental Affairs Department are presented in Table 4-2 below.

TABLE 4-2 MUNICIPAL ACTIVITY SITE INSPECTIONS CONDUCTED DURING FY08-09

Date	Inspection Element	# of Activities Inspected / # Requiring Inspection	Activity Types and Number
08/12/08	Quarterly Site Inspection	31/31	Roads (1), 12 Parking Lots (12), MS4 (various inlets) (1), 4 Maintenance and Storage Areas (3), 4 Solid Waste Operations (4), Airside Operations Area (1), Grounds (1), 8 Buildings (8)
08/11/08 through 08/14/08	MS4 Inspection	1 / 1	MS4 (slit trenches/drains and inlet filters at transportation islands)
11/18/08 and 11/21/08	Quarterly Site Inspection	31/31	Roads (1), 12 Parking Lots (12), MS4 (various inlets) (1), 4 Maintenance and Storage Areas (3), 4 Solid Waste Operations (4), Airside Operations Area (1), Grounds (1), 8 Buildings (8)
12/1/08 through 12/4/08	MS4 Inspection	1 / 1	MS4 (slit trenches/drains and inlet filters at transportation islands)
02/23/09 and 02/26/09	Quarterly Site Inspection	31/31	Roads (1), 12 Parking Lots (12), MS4 (various inlets) (1), 4 Maintenance and Storage Areas (3), 4 Solid Waste Operations (4), Airside Operations Area (1), Grounds (1), 8 Buildings (8)
02/2/09-02/5/09	MS4 Inspection	1 / 1	MS4 (slit trenches/drains and inlet filters at transportation islands)
04/2/09 through 05/28/09	Annual Comprehensive Site Inspection	31/31	Roads (1), 12 Parking Lots (12), MS4 (various inlets) (1), 4 Maintenance and Storage Areas (3), 4 Solid Waste Operations (4), Airside Operations Area (1), Grounds (1), 8 Buildings (8)
05/29/09 and 05/31/09	Site-specific Inspection	1 / 1	Special Event - Rock 'n' Roll Marathon (GD Parking Lot)
06/19/09 through 06/25/09	MS4 Inspection	1 / 1	MS4 (210 inlets: stormdrain pipes, slit trenches/drains and inlet filters at transportation islands)

4.5.4 CLEANING AND MAINTENANCE

For FY08-09, the municipal operation area and activity inspections above resulted in the cleaning and maintenance activities summarized in Table 4-3 below. As noted above, the Authority has established an integrated pest management (IPM) program designed to minimize the use of herbicides, pesticides, and fertilizers in maintaining the buildings and grounds at SDIA. Table 4-3 shows that a total of 24 gallons of pesticides and/or herbicides were applied at SDIA during FY08-09 which is less than the 27 applied in FY07-08 and almost half of the 51.5 gallons applied during FY06-07.

TABLE 4-3 MS4 AND MUNICIPAL OPERATION MAINTENANCE ACTIVITIES DURING FY08-09

Type of Activity	Manpower Metric*	Materials Metric*
Street Sweeping - Landside	1,050 hours	125 cubic yards
Parking Lot Sweeping	12,250 hours	4,070 cubic yards
Ramp/Apron Sweeping and Scrubbing -- Airside, as needed	1,300 hours	46 tons
Runway Rubber Removal – Airside, as needed	125 hours	14 tons
MS4 Cleaning, as needed	130 hours	19 cubic yards
Landscape Maintenance	2,000 hours	1,000 cubic yards
Pesticide/Herbicide Application, as needed	65 hours	24 gallons
Solid Waste Disposal (total includes waste, recycle, and e-waste)	Not Applicable	4,506 tons

. All metrics are approximated.

4.5.5 FOLLOW-UP AND ENFORCEMENT

No unauthorized discharges or other concerns associated with municipal operations, areas, or activities were identified during routine inspections. The annual comprehensive stormwater site inspection found that, overall, the BMPs required for municipal operations, as listed in the SWMP, were adequate and properly implemented. Inspections conducted during FY08-09 found municipal operations, areas, and activities to be in compliance with the SWMP and the Municipal Permit. As such, no enforcement actions were initiated during the reporting period.

4.6 PROGRAM MODIFICATION AND REVIEW

In response to the re-issued Municipal Permit, the Authority submitted a completely revised SWMP to the RWQCB on March 24, 2008. In June of 2009, the Environmental Affairs Department reviewed the inventory of municipal operations at SDIA and found that no changes were necessary. Any and all revisions to the SWMP are discussed and summarized in Chapter 14 of this Annual report.

5 INDUSTRIAL AND COMMERCIAL COMPONENT

5.1 INTRODUCTION

The Municipal Permit requires the Authority to: a) prepare and annually update a watershed-based inventory of all industrial and commercial sites/sources within its jurisdiction that could contribute a significant pollutant load to the MS4; b) designate, describe and implement pollution prevention methods and a minimum set of BMPs for all industrial and commercial sites/sources; c) describe, conduct and track industrial and commercial site inspections for compliance with its ordinances, permits, and the Municipal Permit; d) develop and implement a program to reduce the discharge of pollutants from mobile businesses to the MEP, including a listing of mobile businesses known to operate within its jurisdiction; e) enforce its stormwater ordinance for all industrial and commercial sites/sources as necessary to maintain compliance with the Municipal Permit; and f) annually report a list of industrial sites (including the name, address, and SIC code) that may require coverage under the General Industrial Permit for which a NOI has not been filed. Section 7.0, Tables 4 through 8, Figure 3 and Figures 5 through 8, and Appendices B and E of the SWMP outline the elements that satisfy these requirements.

As noted in Section 7.3 of the SWMP, while there are several industrial/commercial entities at SDIA that operate at multiple locations throughout the airport, the Authority does not consider any of these entities to be mobile

sources in terms of the Municipal Permit. Any and all industrial/commercial entities at SAN are included in the discussion of stationary industrial/commercial sites/sources in both the SWMP and below.

This chapter of the Annual Report discusses compliance activities relative to industrial and commercial activities at SDIA during FY08-09.

5.2 STATIONARY INDUSTRIAL AND COMMERCIAL SITES/SOURCES ELEMENT

5.2.1 BACKGROUND

The Municipal Permit requires the Authority to maintain an inventory of industrial and commercial sites/sources and to annually update the inventory and prioritization of these sites/sources. The inventory was last presented in Table 5 of the March 2008 SWMP. Table 5 of the SWMP includes the inventory and prioritization for industrial and commercial activities/operations at SDIA. As of June 30, 2009, there are 30 tenants conducting industrial or commercial activities, plus the ARFF Facility and the Authority itself as operator of the airport, for a total of 32 entities conducting industrial or commercial activities that could contribute a significant pollutant load to the storm drain system. These 32 entities are considered stationary sources. Information regarding these 32 entities and the type of industrial/commercial activity into which they have been categorized, as well as their locations on the airport, is presented in the SWMP. The format in which the inventory is presented was revised by the copermittees in 2009.

5.2.2 SOURCE CHARACTERIZATION

The SWMP identifies commercial passenger air carriers, cargo air carriers, the Fixed Base Operator, fuel vendors, aircraft refuelers, aircraft and airport service and maintenance providers, and all airfield/airport related activities (including aircraft rescue and fire fighting) as industrial operations in terms of the General Industrial Permit. There are 29 stationary industrial sites/operations at SDIA and the Authority has determined that all 29 are high priority threats to water quality. There are 3 commercial operations (namely, the airport public/employee parking lot operator, the master-lease

concessionaire/food service provider, and the airport janitorial services provider) that the Authority has determined to be high priority threats to water quality. In short, all 32 entities conducting industrial or commercial activities that could contribute a significant pollutant load to the storm drain system have been determined to be high priority threats to water quality.

Section 7.2.2 of the SWMP outlines the significant materials and potential pollutant sources associated with industrial and commercial operations at SDIA. The variety of materials associated with the industrial activities at the airport consist primarily of petroleum products, solvents, soap/cleaning fluids, and trash. Other potential pollutants also present at the airport in smaller amounts include lavatory chemicals and waste, paints, used batteries and battery acid, anti-freeze, hazardous wastes, metals, deicing chemicals, herbicides and pesticides, adhesives, sealants, rust preventers, and various fire suppression chemicals. The materials associated with the commercial activities at the airport consist primarily of vehicle maintenance fluids, food preparation oils, and various maintenance and cleaning chemicals. The potential pollutant generating industrial 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, non-stormwater discharges, as well as the commercial activities of parking lot management and vehicle storage, food service, and janitorial service.

5.2.3 BEST MANAGEMENT PRACTICE REQUIREMENTS

Industrial and commercial operations at SDIA are required to implement those BMPs in Chapter 7 and Appendices B and E of the SWMP relevant to their operations, including the generally applicable site-wide BMPs and pollution prevention measures. The BMPs and pollution prevention measures were broadcast through e-mail, the Authority's webpage, meetings, and also discussed with tenants and staff, as necessary, during the site inspections described below under Program Implementation.

5.2.4 PROGRAM IMPLEMENTATION

In FY08-09, the Environmental Affairs Department inspected all industrial and high priority comercial operations at SDIA on a quarter-annual basis. All areas of industrial and commercial activity and associated sources of stormwater pollution were visually inspected and any unauthorized discharges were duly noted and addressed. The fourth quarter inspection was expanded to become part of the bi-annual BMP Site Audit. The BMP Site Audit included all of the elements of a comprehensive site inspection including: 1) a review of records; 2) a review and evaluation of all BMPs; 3) a visual inspection of all the equipment needed to implement the BMPs and; 4) a visual inspection of BMP implementation. The audit also included interviews with tenants to assess knowledge and awareness of BMPs. The Site Audit is discussed further in Chapter 11 Effectiveness Assessment.

In addition to the inspections conducted by the Environmental Affairs Department, the Airside Operations Department also conducted quarterly inspections of the aircraft fueler and fuel vendor operations in accordance with Federal Aviation Administration (FAA) regulations. These inspections are designed to identify safety concerns, but also identify poorly maintained or leaking equipment. The Environmental Affairs Department is advised of any environmental issues discovered during these inspections. Table 5-1 presents the dates and types of industrial and commercial activity inspections conducted by the Authority during FY08-09.

TABLE 5-1 INDUSTRIAL/COMMERCIAL ACTIVITY SITE INSPECTIONS CONDUCTED DURING FY08-09

Date*	Inspection Element
07/28/08	Quarterly FAA 139.321 (b) Fuel/Fueler Inspection
08/12/08	Quarterly Site Inspection
10/14/08	Quarterly FAA 139.321 (b) Fuel/Fueler Inspection
11/18/08 and 11/28/08	Quarterly Site Inspection
01/20/09	Quarterly FAA 139.321 (b) Fuel/Fueler Inspection
02/23/09 and 02/26/09	Quarterly Site Inspection
04/1/09	Quarterly FAA 139.321 (b) Fuel/Fueler Inspection
04/2/09 through 05/28/09	Bi-annual BMP Site Audit

*.Quarterly Site Inspections and the Annual Comprehensive Site Inspection were performed for commercial and industrial tenants.

Inspections conducted in FY08-09 generally found industrial activities to be in compliance with the requirements of the SWMP and the Municipal Permit Industrial and Commercial Component. The majority of the required BMPs are being implemented properly. Table 5-2, however, identifies the types of industrial/commercial activity and the associated BMPs which were most frequently found to be improperly implemented at the time of inspection.

TABLE 5-2 TYPES OF INDUSTRIAL/COMMERCIAL ACTIVITIES AND ASSOCIATED BMPS FOUND TO BE IMPROPERLY IMPLEMENTED AS DETERMINED DURING FY08-09 SITE INSPECTIONS

Industrial/Commercial Activity	BMPs Required by SAN SWMP
Improper storage of materials.	SC-07 – Outdoor Storage of Significant Material
Leaking vehicles or equipment Oily stains or other chemical stains on the ground surface. Used absorbent left on ground surface.	SC-02 – Aircraft, Ground Vehicle and Equipment Maintenance SC-03 – Aircraft, Ground Vehicle and Equipment Fueling SC-04 – Aircraft, Ground Vehicle and Equipment Cleaning SC-08 – Waste Handling and Disposal SC-11 – Lavatory Service Operations
Improper storage of waste.	SC-08 – Waste Handling and Disposal
Non-emergency fire hydrant discharge without storm drain protection	SC-01 -- Non-Stormwater Management

In those instances where BMPs were found to be implemented improperly, the Environmental Affairs Department directed the tenant/operation to correct the situation and to implement the BMP in the manner described in the SAN SWMP. In general, issues and concerns identified during inspections were corrected as soon as they were brought to the attention of the tenant. There were 11 industrial and commercial operations with compliance concerns during FY08-09 and these operations were issued a written notice in response to issues identified during the site inspections. Each notice detailed the concerns regarding BMP implementation identified by the Environmental Affairs Department during the inspection, requested corrective action and a written response within a specific time-frame, and provided information on the proper implementation the particular BMPs required for their activities. The concerns identified during the inspections are listed in Table 5-3 below. Each item was addressed satisfactorily within the time-frame allowed and no further enforcement actions were initiated.

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TABLE 5-3 INDUSTRIAL/COMMERCIAL OPERATION COMPLIANCE CONCERNS IDENTIFIED DURING SITE INSPECTIONS AND DATES OF RESOLUTION - FY08-09

Operation	Compliance Issue(s)	Type & Date of Notice	Date of Resolution
Allied Aviation	Fire hydrant testing performed without protecting storm drains to prevent discharge of pollutants from entering storm drains.	04/03/09 -- Written	05/12/09
American Airlines	Used oil absorbent was left out at Gate 32.	08/12/08 -- Written	08/18/08
	Lavatory deodorant leaking from the plane while hooked up to lavatory waste truck. Lavatory deodorant staining was also observed on the ramp near Gate 27.	11/21/08 -- Written	12/06/08
ASIG	Used oil absorbent was left out in several locations.	08/12/08 -- Written	08/18/08
DAL Global Services	Trash cart was observed dripping liquid between Gates 25 and 23.	11/21/08 -- Written	12/06/08
DHL/Airborne Express	Fresh oil stains in the operations area and absorbent left out on an oil stain.	11/18/08 -- Written	12/22/08
Delta Airlines	Fresh oil staining and evidence of leftover absorbent from previous spill at Gate 39.	11/21/08 -- Written	12/05/08
	Coolant spilled in yard area during maintenance activities.	02/26/09 -- In Person	03/21/09
HMS Host	Evidence of trash spills by grease trap and trash containers between gates 10 and 11.	11/21/08 -- Written	12/03/08
	Trash was observed overflowing from trash containers by Gate 1.	02/23/09 -- Written	03/17/09
Landmark Aviation	Oily stains in the operations area.	11/18/08 -- In Person	12/10/08
Southwest Airlines	Staining and evidence of lavatory deodorant spill at Gates 1-10.	11/21/08 -- Written	12/30/08

TABLE 5-3 INDUSTRIAL/COMMERCIAL OPERATION COMPLIANCE CONCERNS IDENTIFIED DURING SITE INSPECTIONS AND DATES OF RESOLUTION - FY08-09

Operation	Compliance Issue(s)	Type & Date of Notice	Date of Resolution
United Airlines, Inc.	Observed trash and debris scattered in the maintenance shop yard.	11/18/08 -- Written	01/09/09
	Outdoor handwashing station overflowing at Gate 12.	11/21/08 -- In Person	01/12/09
	The container used to add lavatory deodorant to lavatory service trucks outside the maintenance shop was leaking/ dripping.	04/13/09 -- Written	05/08/09
US Airways	Significant oil staining and fresh oil on ramp between Gates 34 and 35.	11/21/08 -- Written	12/02/08
	Empty trash carts were tipped over and liquid was leaking from them.	02/26/09 -- Written	03/17/09

No unauthorized discharges to receiving waters were identified during inspections in FY08-09. Based on these inspections, the Authority determined that the BMPs listed in the SAN SWMP were adequate, and no additions or modifications were required. Poor materials/waste management was again frequently identified as an issue of concern, along with oily stains and leaking equipment. These concerns were also identified in the FY04-05, FY05-06, FY06-07, FY07-08, and FY08-09 Annual Reports. All of these issues require constant attention from industrial and commercial activity site managers/supervisors. It should be noted that poor housekeeping activities had been identified as an issues of concern in four previous Annual Reports prepared by the Authority. Since poor housekeeping was not identified as an issue of concern by the FY08-09 industrial and commercial activity inspection program, it would appear that the tenants are improving their implementation of this BMP.

5.3 MOBILE SOURCES ELEMENT

As noted above, while there are several industrial/commercial entities at SDIA that operate at locations throughout the airport, the Authority does not consider any of these entities to be mobile sources in terms of the Municipal Permit. Any and all industrial/commercial entities at SDIA are included in the discussion of stationary industrial/commercial sites/sources in both the SWMP and above.

5.4 PROGRAM REVIEW AND MODIFICATION

In response to the re-issued Municipal Permit, the Authority submitted a completely revised SWMP to the RWQCB on March 24, 2008. Since that time, the only revisions to the Industrial and Commercial Component of the SWMP has been an update of the inventory of industrial and commercial operations. In FY08-09, the Authority gained Virgin America as a tenant and lost Aloha Airlines. Since June 30, 2008, five new commercial passenger airline tenants (West Jet, Sun County, Air Canada Jazz, AirTran Airways, and Allegiant) began operations at SDIA, and have therefore been added to the inventory. Two commerical passenger airlines (MidWest and Express Jet) ceased operations at SDIA. During this same period, BAX, DHL, and JetWash were all reclassified as subtenants to other existing operations at SDIA. Additionally, Delta and Northwest merged and kept the name Delta Airlines. Jimsair ceased operations and was replaced by Landmark Aviation and SPC changed their name to Flagship. Any and all proposed revisions to the SWMP are discussed and summarized in Chapter 14 of this Annual Report.

6 RESIDENTIAL COMPONENT

As stated in the Executive Summary, and specifically in Section 8.0 of the SWMP, as well as in the Introduction to this Annual Report, there are no residential land uses or activity areas within the Authority's jurisdiction. For this reason and consistent with previous Annual Reports, the FY08-09 Annual Report contains no discussion of activities conducted by the Authority relative to the Residential Component of the Municipal Permit.

Please note, however, that both the SWMP and our Annual Reports discuss issues relative to the general public under the Education and Public Participation components (Chapters 8 and 9 of this report).

7 Illicit Discharge Detection and Elimination Component

Section D.4 of the Municipal Permit requires that the Authority establish an Illicit Discharge Detection and Elimination (IDDE) program to actively seek and eliminate illegal discharges and connections to the storm drain system. This program provides the framework for the detection, investigation and follow-up, and elimination of reported violations. Section J.3.a of the Permit outlines the annual reporting requirements and schedule for the entire jurisdictional urban runoff management program, including the IDDE component.

In 2008, addendum No. 2 to the Permit extended the due date for the annual reporting requirements of Section D.4, the IDDE component, to December 15th. Extending the due date to December 15th allows the Copermittees to compile the information for an entire Dry Weather Monitoring season (May 1 to September 30) in one single report, rather than reporting information on portions of the Dry Weather Monitoring Program in two separate JURMP fiscal year Annual Reports. Therefore, information on the IDDE component of the Authority's Storm Water Management Program,

and supporting documents that might be expected here in Chapter 7 of the Annual Report, will be submitted to the RWQCB in a separate report on December 15th, 2009.

8 EDUCATION COMPONENT

8.1 INTRODUCTION

The Authority's stormwater education and outreach program is designed to measurably increase the awareness of target populations with respect to the storm drain system, the impacts of urban runoff on receiving waters, and the variety of BMPs required for use at the airport that are intended to help prevent and/or eliminate stormwater quality problems. The education efforts outlined in the SWMP are intended to increase understanding of stormwater management issues and to help promote behavioral changes that will reduce stormwater pollution, and thereby lead to a reduction in pollution draining to the storm drain system and San Diego Bay.

The education and outreach program is targeted towards Authority staff and airport tenants, as well as the general public. The programs focus on elements of the SWMP, including development planning, construction activities, municipal activities, and industrial/commercial activities. Section 10 of the SWMP provides a general description of the content, form, and frequency of training developed for Authority staff, airport tenants, school children and the general public, as applicable. While the Authority has no residential land use within our jurisdiction, we support and participate, where reasonable, in the Copermittee's regional outreach efforts to the residential communities. The following sections describe the education and outreach activities conducted by the Authority during FY08-09.

8.2 STAFF TRAINING ELEMENT

The stormwater training programs developed by the Authority are designed to provide information appropriate to the duties and activities of the particular audience. In brief, the training typically addresses: 1) laws, regulations, and permit requirements; 2) urban runoff concepts; 3) BMPs and requirements for use; 4) illicit discharges, inspections, and reporting; and 5) other water conservation and pollution prevention concepts. Table 8-1 presents the education and outreach activities directed at Authority staff during FY08-09.

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TABLE 8-1 EDUCATION ACTIVITIES FOR AUTHORITY EMPLOYEES DURING FY08-09

Program Element	Description of Activities	Estimated Audience Size*
Authority Webpage	Environmental Affairs' webpage includes information on the Authority's stormwater program and the SWMP (www.san.org/environmental).	Up to 350
	Airport Recycling Guide, Pollution Prevention information, and Energy Savings Checklist remain posted on the intranet and internet.	
	Sustainability (featuring a "Green Tip" to be more sustainable, and things SDIA is doing to be a more sustainable airport) posted on the internet.	
Storm Drain Stenciling	"No Dumping" warning on storm drain inlets throughout the airport.	Up to 350
Posters/ Banners/ Signage in Terminals and Parking Lots	March 11, 2008 through July 14, 2008. Etched Glass and Larval Fish exhibit displayed in Terminal 2 East.	Up to 350
	May 8, 2008 through January 1, 2009. BIOcom, Cell Culture, an artistic exhibit featuring microscopic research from the San Diego Life Science community displayed at Portrait Wall Transition Corridor.	
	January 19, 2009 throughJuly 1, 2009. Birch Aquarium Feeling the Heat (climate change) exhibit displayed in the Commuter Terminal.	
Brochures	Recycling Guide provided in terminals and at various outreach events.	Up to 350
	Plastic Debris from Rivers to Sea and Plastics are Forever were provided at the Annual Safety Fair.	
Public Service Announcements (PSA's) in Terminals	Think Blue PSAs aired in the Terminal 2-West Baggage Claim areas.	Up to 350
	"Don't Trash California" Anti-Litter Campaign PSA aired in Terminal 2-West baggage claim area.	

TABLE 8-1 EDUCATION ACTIVITIES FOR AUTHORITY EMPLOYEES DURING FY08-09

Program Element	Description of Activities	Estimated Audience Size*
Media News Releases	July 29, 2008. News release announces "San Diego International Airport Celebrates its 80th Anniversary with 30 Days of Blue -- SAN Skyfaire."	Up to 350
	August 8, 2008. News release announces "San Diego International Airport teams up with Surfrider Foundation to fight cigarette litter."	
	February 27, 2009. News release announces"2009 Regional Youth Aviation Art Competition Awards to San Diego artists ages5-17 presented February 28 at the Aerospace Museum; theme Sustainability."	
	April 16, 2009. News release announces "In honor of Earth Day, San Diego International Airport to show its electric vehicle fleet April 17."	
	April 22, 2009. News release announces "SDIA receives fifth Recycler of the Year Award from the City of San Diego."	
E-mail Announcements/ Tenant Advisories	August 20, 2008. Tenant Advisory reminding employees of the One Week Long Clean up and Two Day Electronic Waste Collection Event August 21 and 22, 2008.	Up to 350
	September 4, 2008. Tenant Advisory thanking employees for their participation in the Third Quarter Airport-wide Electronic Waste Collection Event and announced amounts collected.	
	September 5, 2008. E-Newsletter announcing the 24th Annual California Coastal Clean Up Day.	
	September 16, 2008. Tenant Advisory announcing the start of the rainy season.	
	September 23, 2008. Tenant Advisory announcing a new waste management contract waste and recycling services provider.	
	October 9, 2008. Tenant Advisory announcing Energy Awareness Month including tips on energy conservation and efficiency measures.	
	November 11, 2008. Tenant Adevisory announcing America Recycles Day.	
	December 4, 2008. E-Newsletter giving holiday pollution prevention tips.	
	January 5, 2009. E-Newsletter announcing the upcoming Quarterly Electronic Waste Collection Event.	
	January 16, 2009. E-Newsletter announcing the amount of electronic waste collected at the Quarterly Electronic Waste Collection event and resources for other upcoming local events.	

TABLE 8-1 EDUCATION ACTIVITIES FOR AUTHORITY EMPLOYEES DURING FY08-09

Program Element	Description of Activities	Estimated Audience Size*
E-mail Announcements/ Tenant Advisories	February 18, 2009. E-Newsletter announcing trivia challenge winners were awarded reusable shopping bags for all contestants.	Up to 350
	March 30, 2009. Tenant Advisory regarding proper Waste Disposal.	
	April 1, 2009. E-Newsletter announcing Earth Month Celebrations and upcoming events.	
	April 2, 2009. E-Newsletter including an Environmental Awareness Survey.	
	April 6, 2009. E-Newsletter including environmental tips and resources including cell phone recycling, canceling phone book delivery, and announcing Earth Fair at Balboa Park.	
	April 8, 2009. E-Newsletter announcing environmental tips and resources including impact calculator, EPA daily tips email sign up, and advertising new education Ocean IMAX movie.	
	April 10, 2009. E-Newsletter providing environmental education games and quizzes web links.	
	April 14, 2009. Tenant Advisory announcing Quarterly Electronic Waste Collection Event.	
	April 15, 2009. E-Newsletter announcing the First Electric Car Parade.	
	April 16, 2009. E-Newsletter announcing the 20 Gallon Water Conservation Challenge display in the Commuter Terminal with tips for conservation.	
	May 12, 2009. E-Newsletter promoting "Bike to Work Day" and green commuting options.	
Annual Open House	June 11, 2009. Provided outreach and training regarding the San Diego Regional Sustainability Partnership.	Up to 350
Department Meetings	Environmental Affairs staff attendance at Facilities Maintenance Department – Monthly Status Meetings: July 29, 2008 November 25, 2008 May 26, 2009 August 26, 2008 January 27, 2009 June 30, 2009 October 28, 2008 February 24, 2009	Up to 120
	Facilities Maintenance Department attendance at Environmental Affairs Department – Monthly Status Meetings January 26, 2009 February 25, 2009 March 24, 2009	Up to 36

TABLE 8-1 EDUCATION ACTIVITIES FOR AUTHORITY EMPLOYEES DURING FY08-09

Program Element	Description of Activities	Estimated Audience Size*
Targeted Training for Specific Employees	Environmental Affairs staff gave a presentation at the World Class Tune-Up training on the Authority's Storm Water Program: July 11, 2008 — April 15, 2009 (FMD 1st Shift) September 24, 2008 — April 15, 2009 (FMD 2nd Shift) February 3, 2009 — April 29, 2009 (FMD 3rd Shift) June 10, 2009	Up to 350
Special Presentations	July 24, 2008. Annual Airport-Wide Safety Fair provided information on plastic debris and handed out reusable grocery bags.	Up to 350
	August 21 & 22, 2009. Two-day Electronic & Universal Waste Collection Event.	Up to 50
	October 18, 2008. Green Skills for Life exhibit at the San Diego Air & Space Museum. Environmental Affairs Department provided information on storm water pollution prevention.	Up to 350
	July 24, 2008. Annual Airport-Wide Safety Fair provided information on plastic debris and handed out reusable grocery bags.	Up to 350
	August 21 & 22, 2008. Two-day Electronic & Universal Waste Collection Event.	Up to 50
	October 18, 2008. Green Skills for Life exhibit at the San Diego Air & Space Museum. Environmental Affairs Department provided information on storm water pollution prevention.	Up to 350
	December 18, 2008. Celebrated a "Day Without a Disposable Bag," and handed out informational cards and reusable grocery bags.	Up to 350
	January 7, 2009. Presentation at SANformation Meeting announcing the Electronic Waste Collection event.	Up to 150
	January 8 & 9, 2009. Two-Day Electronic & Universal Waste Collection event.	Up to 150
	February 28, 2009. Regional Youth Aviation Art competition themed: Designing a Futuristic flying machine that uses alternative energy sources.	Up to 50
	April 3, 2009. Presentation at SANformation Meeting announcing energy conservation and efficiency tips. Also handed out 108 water saving shower head/faucet kits.	Up to 150
	April 7, 2009. Coastkeeper presentation on volunteer opportunities.	Up to 50
	April 17, 2009. First Annual Electric Car Parade.	Up to 150

TABLE 8-1 EDUCATION ACTIVITIES FOR AUTHORITY EMPLOYEES DURING FY08-09

Program Element	Description of Activities	Estimated Audience Size*
Special Presentations	April 23 & 24, 2009. Two-Day Electronic & Universal Waste Collection Event.	Up to 50
	June 22, 2009. Tour of the California Least Tern habitat and Stormwater Education tour.	15
	June 29, 2009. Tour of the California Least Tern habitat and Stormwater Education tour.	15
Attendance at External Professional Training/Workshops	August 5- 7, 2008. STORMCON – The North American Surface Water Quality & Exposition.	1
	August 14, 2008. Foley and Lardner LLP presentation on the new proposed storm water construction permit.	1
	August 25, 2008. HAZWOPER 8 hour refresher training.	3
	September 22-24, 2008. CASQA conference.	1
	October 11, 2008. 1st Annual "No Plastic Left Behind" Campaign Against the Plastic Plague Conference.	1
	October 21-22, 2008. Annual Environmental Summit "Navigating an Ever-Greening World."	2
	November 13, 2008. Tour of the New Leaf Biofuel Facility.	1
	December 2, 2008. Tour the Waste Management Facility.	10
	March 6, 2009. Roger Revelle Climate Change Symposium.	2
	May 13, 2009. Earth Resource Organization: The Pieces of Zero Waste, Compostable Bioplastics workshop.	1
	June 30, 2009. Tour and Grand Opening of Waste Management new recycling sorting line.	6

*.There are approximately 350 Aufithority Employees at any time during the reporting period.

8.3 EDUCATIONAL OUTREACH ELEMENT

In addition to Authority staff, the stormwater education program is also designed to reach the other target audiences required by the Municipal Permit, with the one exception noted above: there are no specific efforts directed at the "residential community." As such, the remaining audiences addressed by the education component of the SWMP include: the general public and school children; the airport industrial and commercial tenants; quasi-governmental agencies, such as the FAA; and construction site project managers/developers/contractors.

The education program emphasizes the consistent presentation of readily understandable information about the causes and effects of stormwater pollution, as well as the proper use of BMPs. Each element of the education program is designed to present the appropriate Municipal Permit "agenda" message to a particular audience. The education program seeks to partner with other Copermittees, airport tenants, non-profit organizations, and other interested stakeholders to ensure cost-effective use of resources.

Again, Section 10 of the SWMP provides details on the education mechanisms and proposed training frequencies. The following tables summarize the education efforts conducted by the Authority during the reporting period. There are several instances where one education mechanism has been applied to several target audiences. For example, the Authority webpage, airport storm drain stenciling, and the airport recycling brochure were each developed to address all the target audiences. Tables 8-2 through 8-4 present information relative to the education efforts directed at the following composite audiences during FY08-09: a) the general public and school children; b) airport industrial, commercial, and quasi-governmental agency tenants; and c) construction project managers, developers, and contractors.

8.4 PROGRAM REVIEW AND MODIFICATION

In response to the re-issued Municipal Permit, the Authority submitted a completely revised SWMP to the RWQCB on March 24, 2008. There have been no revisions to the Education Component of the SWMP since that time.

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TABLE 8-2 EDUCATION ACTIVITIES FOR THE PUBLIC AND SCHOOL CHILDREN DURING FY08-09

Program Element	Description of Activities	Estimated Audience Size
Authority Webpage	Environmental Affairs' webpage includes information on the Authority's stormwater program and the SWMP (www.san.org/environmental).	10s of thousands
	Airport Recycling Guide, Pollution Prevention information, and Energy Savings Checklist remain posted on the intranet and internet.	
	Sustainability (featuring a "Green Tip" to be more sustainable, and things SDIA is doing to be a more sustainable airport) posted on the internet.	
Storm Drain Stenciling	"No Dumping" warning on storm drain inlets throughout the airport.	100s of thousands
Posters/ Banners/ Signage in Terminals and Parking Lots	March 11, 2008 through July 14, 2008. Etched Glass and Larval Fish exhibit displayed in Terminal 2 East.	100s of thousands
	May 8, 2008 through January 1, 2009. BIOcom, Cell Culture, an artistic exhibit featuring microscopic research from the San Diego Life Science community displayed at Portrait Wall Transition Corridor.	
	January 19, 2009 throughJuly 1, 2009. Birch Aquarium Feeling the Heat (climate change) exhibit displayed in the Commuter Terminal.	
Brochures	Recycling Guide provided in terminals and at various outreach events.	Up to 2,500
	Plastic Debris from Rivers to Sea and Plastics are Forever were provided at the Annual Safety Fair.	
Public Service Announcements (PSA's) in Terminals	Think Blue PSAs aired in the Terminal 2-West Baggage Claim areas.	100s of thousands
	"Don't Trash California" Anti-Litter Campaign PSA aired in Terminal 2-West baggage claim area.	
Media News Releases	July 29, 2008. News release announces "San Diego International Airport Celebrates its 80th Anniversary with 30 Days of Blue -- SAN Skyfaire."	100s of thousands
	August 8, 2008. News release announces "San Diego International Airport teams up with Surfrider Foundation to fight cigarette litter."	
	February 27, 2009. News release announces"2009 Regional Youth Aviation Art Competition Awards to San Diego artists ages5-17 presented February 28 at the Aerospace Museum; theme Sustainability."	
	April 16, 2009. News release announces "In honor of Earth Day, San Diego International Airport to show its electric vehicle fleet April 17."	
	April 22, 2009. News release announces "SDIA receives fifth Recycler of the Year Award from the City of San Diego."	

TABLE 8-2 EDUCATION ACTIVITIES FOR THE PUBLIC AND SCHOOL CHILDREN DURING FY08-09

Program Element	Description of Activities	Estimated Audience Size
Collaborative Efforts	Partnership with Elementary Institute of Science. Students received an airport tour, presentation on duties of the Environmental Affairs Department, Students worked ona stormwater research project throughout the fiscal year.	24
	Continued collaboration with WiLDCOAST on the "Wildlife Outreach Program" to encourage conservation of local wildlife and habitats.	Not Applicable
	Continued collaboration with San Diego CoastKeeper on "Project Swell" (providing children with a water-quality-based educational curricula) and to support the "Common Grounds" water quality monitoring database.	
	Continued collaboration with Surfrider Foundation on "Hold On To Your Butt" public education campaign about cigarette butts as a storm-water pollutant.	
	Continued collaboration with local government agencies, universities, and businesses on the "San Diego Regional Sustainability Partnership" with one focus being natural resources conservation and protection.	
	Continued collaboration with San Diego CoastKeeper and others on the Annual California Coastal Cleanup Day event, held September 20, 2008.	
	Continued collaboration with I Love A Clean San Diego to sponsor the Annual Creek to Bay Cleanup event held April 25, 2009.	
	Collaboration with the San Diego County Copermittees to staff a booth at the "Eco-Village" Independence Jam Music Festival in Oceanside, on June 7, 2009.	
	Collaboration with the San Diego County Copermittees to staff a booth at the EnviroFair at the San Diego County Fair on June 20, 2009.	
Special Presentations	August 16, 2008. Environmental Affairs Department staffed a booth at the 80th Anniversary with 30 Days of Blue – SAN Skyfaire and provided information on stormwater pollution prevention.	100s of thousands
	October 18, 2008. Green Skills for Life exhibit at the San Diego Air & Space Museum. Environmental Affairs Department provided information on storm water pollution prevention.	
	December 18, 2008. Celebrated a "Day Without a Disposable Bag," and handed out informational cards and reusable grocery bags.	
	February 28, 2009. Regional Youth Aviation Art competition themed: Designing a Futuristic flying machine that uses alternative fuels.	

TABLE 8-3 EDUCATION ACTIVITIES FOR AIRPORT INDUSTRIAL, COMMERCIAL, AND QUASI-GOVERNMENTAL AGENCY TENANTS DURING FY08-09

Program Element	Description of Activities	Estimated Audience Size
Authority Webpage	Environmental Affairs' webpage includes information on the Authority's stormwater program and the SWMP (www.san.org/environmental).	1,000s
	Airport Recycling Guide, Pollution Prevention information, and Energy Savings Checklist remain posted on the intranet and internet.	
	Sustainability (featuring a "Green Tip" to be more sustainable, and things SDIA is doing to be a more sustainable airport) posted on the internet.	
Storm Drain Stenciling	"No Dumping" warning on storm drain inlets throughout the airport.	1,000s
Posters/ Banners/ Signage in Terminals and Parking Lots	March 11, 2008 through July 14, 2008. Etched Glass and Larval Fish exhibit displayed in Terminal 2 East.	1,000s
	May 8, 2008 through January 1, 2009. BIOcom, Cell Culture, an artistic exhibit featuring microscopic research from the San Diego Life Science community displayed at Portrait Wall Transition Corridor.	
	January 19, 2009 throughJuly 1, 2009. Birch Aquarium Feeling the Heat (climate change) exhibit displayed in the Commuter Terminal.	
Brochures	Recycling Guide provided in terminals and at various outreach events.	Up to 2,500
	Plastic Debris from Rivers to Sea and Plastics are Forever were provided at the Annual Safety Fair.	
Public Service Announcements (PSA's) in Terminals	Think Blue PSAs aired in the Terminal 2-West Baggage Claim areas.	1,000s
	"Don't Trash California" Anti-Litter Campaign PSA aired in Terminal 2-West baggage claim area.	
Media News Releases	July 29, 2008. News release announces "San Diego International Airport Celebrates its 80th Anniversary with 30 Days of Blue -- SAN Skyfaire."	1,000s
	August 8, 2008. News release announces "San Diego International Airport teams up with Surfrider Foundation to fight cigarette litter."	
	February 27, 2009. News release announces"2009 Regional Youth Aviation Art Competition Awards to San Diego artists ages5-17 presented February 28 at the Aerospace Museum; theme Sustainability."	
	April 16, 2009. News release announces "In honor of Earth Day, San Diego International Airport to show its electric vehicle fleet April 17."	

TABLE 8-3 EDUCATION ACTIVITIES FOR AIRPORT INDUSTRIAL, COMMERCIAL, AND QUASI-GOVERNMENTAL AGENCY TENANTS DURING FY08-09

Program Element	Description of Activities	Estimated Audience Size
Media News Releases	April 22, 2009. News release announces "SDIA receives fifth Recycler of the Year Award from the City of San Diego."	
Announcements/ Tenant Advisories	August 20, 2008. Tenant Advisory reminding employees of the One Week Long Clean up and Two Day Electronic Waste Collection Event August 21 and 22, 2008.	1,000s
	September 4, 2008. Tenant Advisory thanking employees for their participation in the Third Quarter Airport-wide Electronic Waste Collection event and announced amounts collected.	
	September 5, 2008. E-Newsletter announcing the 24th Annual California Coastal Clean Up Day.	
	September 16, 2008. Tenant Advisory announcing the start of the rainy season.	
	September 23, 2008. Tenant Advisory announcing a new waste management contract waste and recycling services provider.	
	October 9, 2008. Tenant Advisory announcing Energy Awareness Month including tips on energy conservation and efficiency measures.	
	November 11, 2008. Tenant Advisory announcing America Recycles Day.	
	December 4, 2008. E- Newsletter giving holiday pollution prevention tips.	
	January 5, 2009. E- Newsletter announcing the upcoming Quarterly Electronic Waste Collection Event.	
	January 16, 2009. E-Newsletter announcing the amount of electronic waste collected at the Quarterly Electronic Waste Collection Event and resources for other upcoming local events.	
	February 18, 2009. E-Newsletter announcing trivia challenge winners were awarded reusable shopping bags for all contestants.	
	March 30, 2009. Tenant Advisory regarding proper Waste Disposal.	
	April 1, 2009. E-Newsletter announcing Earth Month celebrations and upcoming events.	
	April 10, 2009. E-Newsletter providing environmental education games and quizzes web links.	
	April 14, 2009. Tenant Advisory announcing Quarterly Electronic Waste Collection Event.	

TABLE 8-3 EDUCATION ACTIVITIES FOR AIRPORT INDUSTRIAL, COMMERCIAL, AND QUASI-GOVERNMENTAL AGENCY TENANTS DURING FY08-09

Program Element	Description of Activities	Estimated Audience Size
Announcements/ Tenant Advisories	April 15, 2009. E-Newsletter announcing the First Electric Car Parade.	1,000s
	April 16, 2009. E-Newsletter announcing the 20 Gallon Water Conservation Challenge display in the Commuter Terminal with tips for conservation.	
	May 12, 2009. E-Newsletter promoting "Bike to Work Day" and green commuting options.	
Tenant Safety Committee Meetings	Environmental Affairs Department presented stormwater management program updates at Tenant Safety Committee meetings: July 2, 2008 December 17, 2008 April 15, 2009 August 6, 2008 January 21, 2009 May 21, 2009 September 3, 2008 March 18, 2009 June 17, 2009	320
Lindbergh Airport Managers Committee (LAMC) Meetings	Environmental Affairs Department presented stormwater management program updates to airline station managers at monthly LAMC meetings: November 19, 2008	up to 50
Targeted Training/ Presentations for Specific Tenant Groups	January 16, 2009. Environmental Affairs Department met with United Airlines to discuss stormwater pollution prevention options for a specific issue in their operations area.	3
	January 30, 2009. RAC Local Management Meeting – Environmental Affairs Department staff discussed spill response.	20
	May 29, 2009. Environmental Affairs Staff met and had a pre-event inspection and discussion with Rock and Roll Marathon coordinators.	4
	Stormwater Management Plan audit interviews presented information regarding stormwater pollution and BMPs to airport tenants on an individual basis.	32

TABLE 8-4 EDUCATION ACTIVITIES FOR AIRPORT CONSTRUCTION PROJECT MANAGERS, DEVELOPERS, AND CONTRACTORS DURING FY07-08

Program Element	Description of Activities	Estimated Audience Size
Authority Webpage	Environmental Affairs' webpage includes information on the Authority's stormwater program and the SWMP (www.san.org/environmental).	100s
	Airport Recycling Guide, Pollution Prevention information, and Energy Savings Checklist remain posted on the intranet and internet.	
	Sustainability (featuring a "Green Tip" to be more sustainable, and things SDIA is doing to be a more sustainable airport) posted on the internet.	
Storm Drain Stenciling	"No Dumping" warning on storm drain inlets throughout the airport.	100s
Posters/ Banners/ Signage in Terminals and Parking Lots	March 11, 2008 through July 14, 2008. Etched Glass and Larval Fish exhibit displayed in Terminal 2 East.	100s
	May 8, 2008 through January 1, 2009. BIOcom, Cell Culture, an artistic exhibit featuring microscopic research from the San Diego Life Science community displayed at Portrait Wall Transition Corridor.	
	January 19, 2009 throughJuly 1, 2009. Birch Aquarium Feeling the Heat (climate change) exhibit displayed in the Commuter Terminal.	
Brochures	Airport Recycling Guide in airport terminals and at various outreach events.	Up to 100
Public Service Announcements (PSAs) in Terminals	Think Blue PSAs aired in the Terminal 2-West baggage claim area.	100s
	"Don't Trash California" Anti-Litter Campaign PSA aired in Terminal 2-West baggage claim area.	
Direct Contact through Project Meetings and Inspections	Environmental Affairs Department staff attendance at Pre-Construction meetings: 11 meetings	220
	Environmental Affairs Department staff attendance at regularly scheduled Project Progress meetings: 181 meetings	1990
	Environmental Affairs Department follow-up meetings to site inspections and tailgate meetings. Typically, one-on-one with construction contract site supervisor: 162 meetings	162

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9 PUBLIC PARTICIPATION COMPONENT

9.1 INTRODUCTION

The Authority has established two main goals for the public participation element of the SWMP. The first goal is to develop mechanisms to facilitate public participation in the implementation of the SWMP. The second is to then gain through those mechanisms the participation of the community in helping to sustain and improve the Authority's stormwater management efforts. An educated public generally makes for a more effective partner in preventing stormwater pollution. As such, there is some overlap between the Authority's public education efforts described in Chapter 8 of this Annual Report and the public participation efforts described here. Public participation is garnered in two primary ways: participation in implementation of SWMP programs and public feedback on SMWP programs. Feedback is used to improve the SWMP itself and to improve the implementation of the SWMP.

The Authority's public participation program is directed primarily at airport tenants and Authority staff, while also addressing the general public to the extent possible. The mechanisms used to facilitate public participation on the part of these groups during FY08-09 are described here.

9.2 PUBLIC PARTICIPATION ELEMENT FOR AUTHORITY STAFF AND AIRPORT TENANTS

In addition to daily interactions between the Authority staff and the airport tenants, several mechanisms were used during the reporting period to provide staff and airport tenants the opportunity to participate in the implementation and ongoing development of the Authority's SWMP. These mechanisms included: a) regular meetings of the San Diego County Regional Airport Authority Board; b) monthly meetings of the Lindbergh Airport Managers Committee; c) monthly meetings of the Tenant Safety Committee; d) the 24-hour telephone line; e) the Authority's webpage; and f) outreach events. The use of these six public participation mechanisms for tenants and Authority staff during the reporting period are summarized here.

9.2.1 AIRPORT AUTHORITY BOARD MEETINGS

The Airport Authority Board is committed to ensuring that SDIA operates in a manner that complies with all federal, state and local environmental laws. Tenants and Authority staff are encouraged to become involved and help to continually improve both the SWMP and its implementation. Tenants and staff are encouraged to speak directly to the Board during public meetings. During FY08-09, the Board held a combined total of 38 general and subcommittee meetings.

9.2.2 LINDBERGH AIRPORT MANAGERS COMMITTEE

Tenants and Authority staff meet monthly to discuss and improve the operational aspects of SDIA. During these meetings, 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 stormwater management concerns at SDIA. There were 12 meetings of the Lindbergh Airport Managers during the reporting period.

9.2.3 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 these monthly committee meetings stormwater management concerns are presented by the Environmental Affairs Department and discussed with tenants and staff. At the same time, tenants and staff are welcome to submit comments on the SWMP and its implementation during the meetings. The Committee held 11 meetings during FY08-09.

9.2.4 24-HOUR TELEPHONE LINE/PUBLIC HOTLINE

The daily activities of airport tenants and Authority staff have a substantial impact on the successful implementation of the SWMP. The SWMP provides guidance about reducing pollutants discharging to the MS4 and the proper implementation of appropriate BMPs. Taking ownership of the MS4 and making appropriate use of BMPs are some of the best ways for tenants and staff to participate in the implementation of the SWMP. The Airside Operations Department 24-hour telephone line/public hotline facilitates timely communication between the Environmental Affairs Department and concerned tenants and staff. Tenants and staff are also reminded to report unauthorized non-stormwater discharges to the 24-hour telephone line.

9.2.5 AUTHORITY WEBPAGE

The Authority webpage features several pages dedicated to the environmental issues at SDIA (www.san.org/environmental), including stormwater management. The webpage, accessible by airport tenants and Authority staff, presents the SWMP in its entirety, along with contact information for the Environmental Affairs Department. The webpage provides another opportunity for tenants and staff to review and comment on the SWMP and the manner in which the SWMP and the BMPs described therein are implemented at SDIA. The environmental page of the Authority webpage had approximately 16,500 hits during FY08-09.

9.2.6 OUTREACH EVENTS FOR AIRPORT TENANTS AND AUTHORITY STAFF

Outreach events allow the Environmental Affairs Department and airport tenants and Authority staff to exchange information, ideas, and opinions about general stormwater management issues and issues specific to the airport. Outreach events have both an education component and a public participation component. Such events promote public participation and further environmental stewardship by tenants and staff. Outreach events are an important element of public participation and help keep communication open between the Authority, its tenants and its staff. During FY08-09, the Authority participated in one outreach event that allowed the Environmental Affairs Department to share concerns about proper stormwater management at SDIA with staff. On June 11, 2009, the Environmental Affairs Department provided educational materials about stormwater management to Authority staff at the Annual Divisional Open House.

During FY08-09, the Authority also conducted outreach to 32 individual airport tenants. From April through May of 2009, the Environmental Affairs Department provided training regarding the revision being made to the SWMP in response to the re-issued Municipal Permit. The training covered stormwater runoff, potential pollutant sources and BMPs applicable to their individual areas and operations.

The Authority also promoted two local watershed cleanup events during the reporting period. These two events drew participation by Authority staff and their families, namely: a) the 24th Annual California Coastal Cleanup Day on September 20, 2008; and b) the 7th Annual Creek to Bay Cleanup Event held April 25, 2009.

9.3 PUBLIC PARTICIPATION ELEMENT FOR THE GENERAL PUBLIC

The Authority uses a variety of mechanisms to provide the general public with opportunities to participate in the ongoing development and implementation of the Authority's SWMP. Some of the mechanisms used to encourage participation by the general public are similar to those used with tenants and staff. These mechanisms include a) regular meetings of the San Diego County Regional Airport Authority Board; b) regular meetings of the San Diego Municipal Permit Copermittees; c) the Authority's webpage;

d) the Project Clean Water webpage; e) the Authority's 24-hour telephone line; f) the Copermittee's regional hotline telephone numbers; and g) outreach events for the General Public.

9.3.1 AIRPORT AUTHORITY BOARD MEETINGS

As stated above, the Airport Authority Board is committed to ensuring that SDIA operates in a manner that complies with all environmental laws. The public is encouraged to review and comment on the SWMP and to thereby help to continually improve both the plan and its implementation. The general public is encouraged to speak directly to the Board during public meetings. During FY08-09, the Board held a combined total of 38 general and subcommittee meetings.

9.3.2 SAN DIEGO MUNICIPAL PERMIT COPERMITTEE MEETINGS

The San Diego Municipal Permit Copermittees meet regularly to discuss various aspects of the stormwater management programs being implemented throughout the county in accordance with the Municipal Permit. 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 Committee, the subcommittees, and the workgroups are open to the general public. These meetings provide numerous opportunities for public participation in stormwater management activities both throughout the region and at SDIA. 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. Combined, the Copermittees held more than 18 general, subcommittee, and workgroup meetings during FY08-09.

9.3.3 AUTHORITY WEBPAGE

As stated above, the Authority webpage features several sections regarding the environmental issues at SDIA (www.san.org/environmental), including stormwater management. The webpage is accessible by the general public and presents the SWMP in its entirety. The webpage provides contact information

for the Environmental Affairs Department, allowing the general public another opportunity to review and comment on the SWMP and the BMPs described therein. Again, the environmental page of the Authority webpage had approximately 16,500 hits during FY08-09.

9.3.4 PROJECT CLEAN WATER WEBPAGE

Partly in response to its duties as the Principal Copermittee to the 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 stormwater 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 stormwater management regionally and at the individual jurisdictional level.

9.3.5 AUTHORITY 24-HOUR TELEPHONE LINE/PUBLIC HOTLINE

The general public can always address immediate stormwater concerns directly to the Authority using the Airside Operations Department 24-hour telephone line/public hotline. In addition to providing the general public with another link to the Environmental Affairs Department, the telephone line enables the general public to report unauthorized non-stormwater discharges and other stormwater concerns.

9.3.6 COPERMITTEE'S PUBLIC HOTLINE

The Municipal Permit Copermittees have established two regional hotlines, the Project Clean Water Hotline and the THINKBLUE Hotline. Both are 1-800 numbers that allow the general public to obtain contact information for any of the individual jurisdiction stormwater management programs, including the Authority's. The hotlines also provide another mechanism for the general public to report unauthorized non-stormwater discharges and/or other stormwater concerns, which are then referred to the appropriate jurisdiction. The hotlines provide services in English and Spanish and are available 24-hours a day.

9.3.7 OUTREACH EVENTS FOR THE GENERAL PUBLIC

Similar to the previous discussion of outreach events, outreach events for the general public allow the Authority and the general public to exchange information, ideas, and opinions about stormwater management issues in general and those specific to the airport. Such events promote public participation and further environmental stewardship by the general public.

During FY08-09, the Authority continued to collaborate with seven local environmental groups that shared concern for proper stormwater management at SDIA and protection of San Diego Bay - the receiving water for runoff from the airport. Three of these efforts began during FY04-05 and continued through FY05-06, FY06-07, FY07-08 and FY08-09. The Authority collaborated with the San Diego Coastkeeper to help support the "Project Swell" campaign aimed at engendering environmental stewardship in local schoolchildren through education using water-quality-specific curricula. The Authority also collaborated with Coastkeeper on the "Common Grounds" water quality monitoring database, as well as the volunteer citizens water quality monitoring program. In addition, the Authority has collaborated with WiLDCOAST to support its "Wildlife Outreach Program" - a bilingual campaign aimed at educating the public and schoolchildren about watershed and natural resource management. The Authority continues to support the Surfrider Foundation's "Hold On To Your Butt" campaign aimed at educating the public and children about cigarette butts as a stormwater pollutant through educational brochures, t-shirts, bumper stickers, and public service announcements. The Authority teamed up with the Surfrider Foundation to participate in "Hold On To Your Butt Day" Saturday August 9, 2008. The event helped to raise awareness of, and reduce litter from, discarded cigarette butts. Authority staff spent four hours in and in front of the airport terminals handing out "personal cigarette ashtrays," bumper stickers and information cards to airport visitors in order to educate smokers at the airport that their improperly disposed of cigarette butts can end up as pollution in San Diego Bay.

Throughout FY08-09, the Authority partnered with The Elementary Institute of Science to provide 24 high-school students with the opportunity to learn about environmental issues through a mentorship program. Their project focused on stormwater management and the students worked throughout FY08-09 to develop educational materials for Airport employees, while learning about stormwater pollution in the process..

Throughout FY08-09, the Authority continued to partner with local government agencies, universities, and businesses in the "San Diego Regional Sustainability Partnership," with one focus of the partnership being natural resource conservation and environmental protection. The Authority particpated in two outreach events in collaboration with the Parternship. On August 16, 2008, the Authority participated at the "SAN Skyfaire 30 Days of Blue" community event. On October 18, 2008, the Authority participated at the "Green Skills for Life Exhibit" at the San Diego Air & Space Museum. At both outreach events the Authority provided information and give-aways on storm water pollution prevention and plastic debris in our oceans.

The Authority partnered with the San Diego County Water Authority and supported their "20-Gallon Challenge" campaign. A water conservation exhibit was showcased in the Commuter Terminal during the months of April through June 2009.

And finally, the Authority collaborated with the San Diego Regional Residential Education Program and participated in two community outreach events during FY08-09. On June 7, 2009, Authority staff participated at the "EnviroFair" held at the San Diego County Fair. Give-aways and educational materials included Think Blue rally towels, pencils listing the regional hotline, and pet waste bag dispensers. There were 218 Think Blue survey cards completed. On June 20, 2009, Authority staff participated at the "Eco-Village Independence Jam" concert held at the City of Oceanside. Give-aways and educational materials included Think Blue rally towels and watershed information. Four thousand people attended the event.

9.4 PROGRAM REVIEW AND MODIFICATION

In response to the re-issued Municipal Permit, the Authority submitted a completely revised SWMP to the RWQCB on March 24, 2008. There have been no revisions to the Public Participation Component of the SWMP since that time.

10 Fiscal Analysis Component

10.1 INTRODUCTION

The Municipal Permit requires the Authority to demonstrate sufficient financial resources to implement the SWMP. 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 Airport Authority does not rely on taxpayer dollars or any city or county funds to operate. The Authority's FY09-10 budget totals $148,059,000. The fiscal analysis presented here relates only to implementation of the stormwater management program and includes the expenditures for FY08-09, the budget for FY09-10, the source of the funds, a description of the use of these funds, and any legal restrictions on the use of the funds.

The bulk of expenditures related to the implementation of the SWMP pass through the Environmental Affairs and Facilities Management Departments. The Environmental Affairs Department is responsible for administrative functions within the stormwater management program, including budget management and planning. The Environmental Affairs Department staff carries out the administrative and educational activities for the program, including: a) budgetary management and planning; b) enforcement and inspection; c) monitoring and reporting; d) interagency coordination and

copermittee involvement; e) assistance to groups outside the department; f) internal and external training, workshops and public events and; g) helping to secure the materials and equipment necessary to perform required tasks.

The Facilities Management Department is responsible for the operation and maintenance (O&M) aspects of the program, including: a) inspection and maintenance of the MS4; b) maintenance of facilities and grounds; c) securing the materials, equipment and vehicles necessary to perform required tasks; and d) supporting the management of the Authority's wastes.

The remaining expenditures flow through the Authority's Capital Improvement Program (CIP). The Capital Improvement Program is a rolling 3 to 5 year program that provides for critical improvements and asset preservation, including environmental pollution prevention needs. Funding sources for the projects include federal Airport Improvement Program (AIP) grants, passenger facility charges (PFCs), airport operating revenues, airport revenue bonds, and short-term borrowing using commercial paper.

10.2 FISCAL YEAR 2008-2009 EXPENDITURES

Financial resources expended to implement the SWMP are allocated into 4 components, namely: administration; education; O&M; and capital improvements. The annual costs for the activities under each of these components falls into one of the following expense categories: personnel, non-personnel, or CIP.

The total expenditures for implementation of the SWMP in FY08-09 was $3,222,700. The expenses for FY08-09 are shown in Table 10-1 according to expense category. A total of $1,092,000 was expended on staff time for the Environmental Affairs and Facilities Management Departments to carry out the program. Staff time for the Environmental Affairs Department equated to $304,000 and the staff time for the Facilities Management Department equated to an allocation of $778,000.

Non-personnel expenses represent permit fees and contracted services necessary to implement and maintain all the program activities listed in Table 10-1, including professional services, site and infrastructure cleaning and maintenance, training, and education and public outreach efforts. Total expenditures for Non-Personnel items during FY08-09 were $1,809,950.

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TABLE 10-1 STORM WATER MANAGEMENT PROGRAM EXPENDITURES FOR FY08-09

Description	Costs
A. Personnel Expenses	
1. Environmental Affairs Department	$304,000
2. Facilities Management Department	$788,000
Subtotal	$1,092,000
B. Non-Personnel Expenses	
1. NPDES Permit Fees	$26,725
2. Professional Services	$0
a. Legal	$0
b. Consulting	$324,000
3. Routine Maintenance	$20,625
4. Ramp Cleaning/Runway Rubber Removal	$581,700
5. Landscape Maintenance	$333,850
6. MS4/BMP Cleaning/Maintenance	$251,975
7. Street Sweeping	$60,000
8. Parking Lot Sweeping	$117,475
9. Hazardous Waste Disposal	$47,550
10. Equipment Purchases	$3,900
11. Education, Training, and Public Outreach	$42,150
Subtotal	$1,809,950
C. Capital Improvement Program Expenses	
1. CIP #104022 -General Dynamics Lot and Dust Mitigation Project	$33,000
2. CIP #104055 - Solid Waste Disposal and Recycling Facility Upgrades	$167,375
3. CIP #104057 - Stormwater Management Pilot Projects	$120,375
Subtotal	$320,750
GRAND TOTAL	$3,222,700

In FY08-09, the Authority budgeted funds to 3 CIP projects related to the stormwater management program, namely: 1) CIP Project #104022 - General Dynamics Lot and Dust Mitigation Project; 2) CIP Project #104055 - Solid Waste Disposal and Recycling Facility Upgrades; and 3) CIP Project #104057 - Stormwater Management Pilot Projects. Total expenditures for the CIP Projects during FY08-09 were $320,750. CIP Project# 104055 - Solid Waste Disposal and Recycling Facility Upgrades was modified and completed, during the reporting period.

10.3 FISCAL YEAR 2009-2010 BUDGET

Table 10-2 presents the projected budget to implement the SWMP for FY09-10, which totals $2,709,925. A total of $1,092,000 is allocated for the combined staff time of the Environmental Affairs Department and the Facilities Management Department. There is no increase over FY08-09 in staff cost budgeted for FY09-10, given the current nationwide economic downturn.

A total of $1,335,200 is allocated for Non-Personnel expenses in FY09-10, including professional services, site and infrastructure cleaning and maintenance, training, and education and public outreach efforts.

The remainder of the FY09-10 budget, $282,725, represents the 2 CIP Projects that are still underway as noted in Table 10-2 below, namely: 1) CIP Project #104022 - General Dynamics Lot and Dust Mitigation Project; and 2) CIP Project #104057 - Stormwater Management Pilot Projects.

In response to the re-issued Municipal Permit, the Authority submitted a completely revised SWMP to the RWQCB on March 24, 2008. There have been no revisions to the Fiscal Analysis Component of the SWMP since that time.

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TABLE 10-2 STORM WATER MANAGEMENT PROGRAM BUDGET FOR FY09-10

Description	Costs
A. Personnel Expenses	
1. Environmental Affairs Department	$304,000
2. Facilities Management Department	$788,000
Subtotal	$1,092,000
B. Non-Personnel Expenses	
1. NPDES Permit Fees	$33,000
2. Professional Services	$0
a. Legal	$0
b. Consulting	$310,000
3. Routine Maintenance	$25,000
4. Ramp Cleaning/Runway Rubber Removal	$340,000
5. Landscape Maintenance	$215,000
6. MS4/BMP Cleaning/Maintenance	$110,000
7. Street Sweeping	$50,000
8. Parking Lot Sweeping	$125,000
9. Hazardous Waste Disposal	$75,000
10. Equipment Purchases	$4,200
11. Education, Training, and Public Outreach	$48,000
Subtotal	$1,335,200
C. Capital Improvement Program Expenses	
1. CIP #104022 - General Dynamics Lot and Dust Mitigation Project	$30,000
2. CIP #104057 - Stormwater Management Pilot Projects	$252,725
Subtotal	$282,725
GRAND TOTAL	$2,709,925

11 EFFECTIVENESS ASSESSMENT COMPONENT

11.1 INTRODUCTION

The Authority continues to evaluate the effectiveness of the stormwater management program in both the short-and long-term. The San Diego Municipal Copermittees developed, and continue to develop, criteria that allows for an assessment of the effectiveness of stormwater management efforts implemented in accordance with the Municipal Permit. In 2003, the Copermittees produced "A Framework for Assessing the Effectiveness of Jurisdictional Urban Runoff Management Programs" (Framework) as a guidance document. The concepts developed in the Framework have since been incorporated into the Municipal Permit. The Framework allows the Authority to conduct an assessment of: a) SWMP implementation; b) program effectiveness at improving stormwater discharge and receiving water quality; c) identification of management measures proven to be ineffective in reducing urban runoff pollutants and flow; and d) identification of any changes necessary to ensure the effectiveness of the program.
The following presents both a narrative assessment of each component of the Authority's stormwater management program during FY08-09 and an assessment of the program in terms of the Framework. As a logical extension of the assessment, this chapter also identifies any improvement or degradation observed in water quality.

11.2 EFFECTIVENESS ASSESSMENT RESULTS

11.2.1 NARATIVE ASSESSMENT OF PROGRAM COMPONENTS

Chapters 2 through 10, and 13 of this report outline the Authority's implementation of program components during FY08-09. A narrative assessment of each program component and identification of the strengths and weaknesses of the components are presented here. Taken as a whole, the SWMP is generally effective and in compliance with the Municipal Permit.

The Municipal, Industrial, and Commercial Components of the SWMP are the backbone of the stormwater management program at the airport. The Municipal, Industrial, and Commercial Components of the SWMP are designed to comply with both the Municipal Permit and the General Industrial Storm Water Permit. These components are considered to be well-defined and properly implemented. Although the programs have been expanded to include implementation of stormwater management practices related to roads, parking lots, and recycling, most of the program elements of the Municipal Component have been in place since the 1990's when airport operations were first required to comply with the General Industrial Storm Water Permit.

The Land Use Planning Component of the SWMP focuses on the Airport Master Plan and the implementation of the Authority's SUSMP process. As noted in Chapter 2 of this Annual Report, the Airport Master Plan was adopted in May of 2008. None of the development projects initiated at the airport in FY08-09 were subject to the SUSMP process. The Land Use Planning Component of the SWMP remains effective.

The Environmental Affairs Department continues to take an active role in pre-construction project meetings and regular project progress meetings with construction contractors and relevant Authority staff. The Environmental Affairs Department also continues to inspect construction activities at a frequency in excess of the Municipal Permit requirements. The Construction Component of the SWMP is considered to be effective.

Information related to the IDDE component of the SWMP is not required for submission to the RWQCB until December of each year. Nonetheless, based on preliminary review of the data currently being compiled, the IDDE Component of the SWMP is considered effective.

The Education Component of the SWMP has been designed to increase public knowledge about stormwater issues and concerns both at the airport and throughout the San Diego Bay watershed. The tables included in Chapter 8 of this Annual Report outline the training and outreach conducted during FY08-09. The education and outreach efforts continue to expand in an attempt to strengthen the effectiveness of this component of the program.

Chapter 9 of this Annual Report notes that numerous meetings either held by or attended by the Authority Board or staff which represent significant opportunities for public participation. In short, the Public Participation Component remains an effective element of the SWMP. Finally, Chapter 10 of this Annual Report demonstrates that the Authority has sufficient financial resources to implement the SWMP. The analysis presents the expenditures for FY08-09, the budget for FY09-10, the source of the funds, and a description of the use of these funds.

11.2.2 PROGRAM ASSESSMENT USING THE ASSESSMENT FRAMEWORK

The Authority recognizes the importance of evaluating the effectiveness of program components and the program as a whole. The following assessment of the Authority's stormwater management program is based on the Framework noted above. The Framework builds upon a foundation of basic program activity assessments (Program Assessment element) and moves towards a water-quality based assessment (Water Quality Assessment element) to evaluate the overall effectiveness of the program (Integrated Assessment element). The Framework uses direct and indirect measurements of program effectiveness, employs methods to estimate pollutant loads, and incorporates discharge and receiving water quality monitoring. The Framework presents a six-tier hierarchy of program outcomes that can be used independently or in combination to evaluate effectiveness. The six levels of assessment outcomes are listed below:

Level 1 - Compliance with Activity-based Permit Requirements

Level 2 - Changes in Knowledge/Awareness

Level 3 - Behavioral Changes and BMP Implementation

Level 4 - Load Reductions

Level 5 - Changes in Discharge Quality

Level 6 - Changes in Receiving Water Quality

The Authority is adopting the Framework planning and implementation processes to conduct pollutant source characterization, select appropriate BMPs, target the outcomes of BMP implementation, and identify adequate measures of program effectiveness. The application of the Framework to the Authority's stormwater management program follows.

Level 1 - Compliance with Activity-based Permit Requirements

The Municipal Permit requires the establishment of specific urban runoff management program components, activities, and frequencies, with the assumption that these particulars will reduce urban runoff pollution and improve receiving water quality. The degree to which the activities required by the Permit are implemented constitutes the first level and foundation of the Framework program assessment hierarchy. Tracking this information over time allows the Authority to assess consistent and incremental program improvements. Table 11-1 presents the activity-based requirements of the Permit and the Authority's implementation of these requirements during FY08-09. As shown in Table 11-1, the Authority has met all the activity-based requirements of the Municipal Permit..

TABLE 11-1 ASSESSMENT OF ACTIVITY-BASED PERMIT REQUIREMENTS

Permit Section	Activity	Identified	Completed
F.1 Land Use	Number of projects subject to SUSMP requirements	0	0
F.2 Construction	Number of high priority construction sites subject to inspection	1	1
	Number of medium/low priority construction sites subject to inspection	13	13
	Number of enforcement actions taken	0	0
	Number of construction projects referred to RWQCB for enforcement of State General Construction Storm Water Permit	0	0
F.3.a Municipal	Number of high priority municipal operations subject to inspection	22	22
	Quantity of debris and material removed from the MS4 (in cubic yards)	19	19
	Quantity of debris and material captured by street sweeping (in cubic yards)	125	125

TABLE 11-1 ASSESSMENT OF ACTIVITY-BASED PERMIT REQUIREMENTS

Permit Section	Activity	Identified	Completed
F.3.b. Industrial and Commercial	Number of high, medium, or low priority industrial/commercial operations subject to inspection	32	32
	Number of enforcement actions taken	11	11
	Number of operations referred to RWQCB for enforcement of State General Industrial Storm Water Permit	0	0
F.4 Education	Number of stormwater educational materials/ brochures	Not Applicable	2400
	Number of stormwater education mechanisms for the general public	Not Applicable	8
	Number of stormwater training mechanisms for staff	Not Applicable	13
	Number of stormwater training mechanisms for tenants	Not Applicable	10
	Number of stormwater training mechanisms for construction project managers, developers, and contractors	Not Applicable	6
F.5 IDDE	Number of dry weather monitoring locations for all of FY07-08	10	10
	Number of IDDE events recorded by all reporting methods	Not Applicable	204
	Number of enforcement actions taken	0	0
F.6 Public Participation	Number of types of participation mechanisms for staff and tenants	Not Applicable	6
	Number of types of participation mechanisms for the general public	Not Applicable	7

Level 2 - Changes in Knowledge/Awareness

One of the desired outcomes of the Authority's stormwater management program is a change for the better in the knowledge, awareness, or attitudes of staff, tenants, and the general public. A major goal of the Authority's SWMP education and public participation efforts is to instill knowledge and awareness about stormwater management issues in these target audiences.

The Authority used two mechanisms during FY08-09 to assess changes in knowledge and awareness: (1) the number of hits to the Authority's environmental webpage; and (2) educational presentations combined with pre- and post-training knowledge and awareness tests.

The Authority's website, particularly the environmental webpage, provides staff, tenants, and the general public access to information regarding stormwater management efforts at SDIA, including the SWMP itself. Making basic stormwater management information available should increase public awareness of stormwater management concerns. The environmental webpage had a total of 16,500 hits during the reporting period. This represents an average of approximately 317 hits per week. There were 50,000 hits reported in FY08-09, 278 hits reported in FY06-07, 88 hits reported in FY05-06, 370 hits reported in FY04-05, and 120 hits reported in the FY03-04 Annual Report. These six years of data are not yet indicative of a trend. As such, the Authority will continue to track the number of hits to the environmental webpage in future annual reports in an effort to assess the utility of this information in drawing conclusions about the effectiveness of the Authority's stormwater management program.

While previous Annual Reports noted that surveys and community-based social marketing tools were being used to assess changes in awareness and knowledge of stormwater management issues, during FY08-09, the Environmental Affairs Department began to use a pre-training and post-training knowledge assessment test to gauge changes in awareness and knowledge. There were three instances during FY08-09 that the Authority was able to implement this new assessment tool.

During the FY08-09 reporting period, the Authority had the opportunity to use a pre-test to assess the effectiveness of one the education and outreach activities conducted with a class of high-school students. At the beginning of FY08-09, the Environmental Affairs Department partnered with The Elementary Institute of Science to provide 24 high-school students with the opportunity to learn about environmental issues through a mentorship program. Their project focused on stormwater management and the students worked throughout FY08-09 to develop educational materials for Airport employees, while learning about stormwater pollution in the process. The Environmental Affairs Department also took the opportunity to assess their baseline knowledge of stormwater management issues and to track their learning over time. To that end, a pre-test was given to the students prior to

the initiation of the project. The test consisted of 8 questions related to watersheds, NPDES permits, pollutant sources, TMDLs, and BMPs. Results from the pre-test showed a good general knowledge of stormwater, with all but 3 questions answered correct by 79% or more of the students. The three questions with low scores concerned NPDES permits and sources of stormwater pollution. From this preliminary information Environmental Affairs staff focused on reviewing these subjects during Airport tours, and regular meetings held with the students throughout FY08-09. At the culmination of the mentorship program, the EIS students gave a final presentation discussing the educational materials that they had created and what they had learned. The presentation thoroughly demonstrated the changes in knowledge and awareness that the students gained about stormwater pollution prevention through the course of the program. Improvement in their awareness of stormwater issues could also be seen in the educational booklet the students created that focused primarily on stormwater pollution prevention.

All Authority staff are required to attend annual mandatory stormwater pollution prevention awareness training. In FY08-09, the Environmental Affairs Department incorporated pre- and post- testing into this annual training to assess the effectiveness of this training at improving the general knowledge of Authority staff about stormwater management issues. The pre-test consisted of 5 questions that were repeated exactly in the post-test in order to accurately observe any changes. Two mandatory annual stormwater pollution prevention awareness training sessions were held during FY08-09, one in February and one in June 2009. The February training session was the initial test run of the new training method, and was administered to 17 people. The test results showed a high initial level of stormwater knowledge, with 3 of the questions being answered correctly by 100% of the people in the class. The two questions that were not answered correctly were related to the definition of a watershed and the legal requirements for stormwater management to which the Authority is subject. When the questions that had been missed on the pre-test were asked again on the post-test, all participants answered correctly. The June training session had similar results, with only 2 of the 5 questions being missed on the pre-test, although this time the questions were related to the Authority's obligations under the NPDES Permit and where descriptions of BMPs required for use can be found in the Authority's SWMP. Again, at the end of the training session all participants correctly answered the questions that had previously been missed.

During April of 2009, the Environmental Affairs Department implemented a new more focused training and education program for the employees of the Facilities Management Department. Like all Authority departments, the Facilities Management Department already receives annual mandatory stormwater pollution prevention awareness training. However, a more robust training program was designed for this department since many of their required work activities and the materials they use have a significant potential to impact storm water runoff. The training included a 30 minute presentation and pre- and post- testing to assess changes in knowledge and awareness based on the presentation. The presentation was given to 3 separate shifts of employees, totaling 43 people. The pre- and post-tests were a set of 10 questions that were exactly the same for both tests. The results of the testing showed that 70% of the time the percentage of people who answered the question correctly went up after the educational presentation for all three work shifts.

Table 112 presents an overveiw of the changes in knowledge and awareness of stormwater management issuefor Authority staff as measured by pre- and post-training testing during FY0809.

TABLE 11-2 CHANGES IN KNOWLEDGE AND AWARENESS FOR AUTHORITY STAFF DURING FY08-09

Name of Training	Date	Number of Attendees	% of questions where scores improved (after presentation)
Annual Mandatory Stormwater Pollution Prevention Awareness Training	2/03/09	17	40%*
FMD Annual Environmental Training – 1st Shift	4/15/09	19	90%
FMD Annual Environmental Training – 2nd Shift	4/15/09	9	60%
FMD Annual Environmental Training – 3rd Shift	4/29/09	15	60%
Annual Mandatory Stormwater Pollution Prevention Awareness Training	6/10/09	25	40%*

* These numbers appear lower due to the initial high scores on the pre test, which left less opportunity for change.

In conclusion, given the success of these three educational programs, the Environmental Affairs Department plans to continue to develop these and similar programs in the future. The use of pre- and post-training testing

mechanisms has also proven to be an effective way to evaluate our educational programs and to track changes in knowledge and awareness over time. The effectiveness of these three educational programs was clearly demonstrated by the elevated post-training test scores.

The education and outreach efforts of the Authority continue to expand. As seen in Chapter 8 of this report, these efforts included more terminal displays and signage, Tenant Advisories, school presentations and partnerships, training and outreach events. The impact of these expanded efforts continues to increase Authority staff, airport tenant, and the general public's knowledge and awareness of stormwater pollution prevention.

Level 3 - Behavioral Changes and BMP Implementation

One primary objective of the Authority's stormwater management program is to affect significant and lasting changes in the behavior of target audiences. Ideally, behavioral changes are expressed in terms of consistent BMP implementation. The Framework indicates that estimating or quantifying BMP implementation is one component of a successful effectiveness assessment strategy.

Previous Annual Reports noted that the Authority had conducted site-wide audits of BMP implementation by the Authority staff and airport tenants in 2005 and 2007. A detailed discussion of the site audit program was presented in the effectiveness assessment section of the FY05-06 Annual Report. The same methodology was again used to conduct the audit in 2009. The results of the 2009 audit are documented in the August 2009 Draft Site Audit Report prepared by Mactec.

In short, the 2005, 2007 and 2009 site audits contained elements of both the Program Assessment and Water Quality Assessment aspects of the Framework. In terms of Program Assessment, the site audit provided an accounting of BMP implementation activities, as well as an assessment of the spatial distribution of implementation activities, which may provide useful information as to whether priority areas and problems are being adequately addressed. The site audit helped to identify potential pollutant sources and to assess the level of implementation of SWMP-required BMPs by Authority staff and airport tenants. Additionally, it reviewed and continued to develop standardized methods for documenting potential pollutant sources and

BMP implementation. Taken together, the 2005, 2007 and 2009 site audits provide a mechanism for assessing future changes in behavior and BMP implementation. Our bi-annual audits represent a major step by the Authority to develop a mature program assessment strategy.

The 2009 site audit was organized around the BMP categories contained in the SWMP. During the audit, staff and tenants were questioned about the level of implementation of required BMPs, including treatment or structural BMPs, for each potential pollutant source. BMP implementation rates were then calculated for the Authority as a whole, individual tenants, and four general land use categories. Implementation rates alone did not fully describe how well BMPs were implemented by any particular operation. Other factors needed to be considered, such as the complexity of the operations and the operational complexity of BMPs required for implementation. The BMP implementation rates and total complexity scores for operations conducted by either Authority staff or tenants are presented in the August 2009 Draft Site Audit Report. The results of the 2009 audit found that: a) no tenants scored a BMP implementation rate less than 80 percent (compared to four in 2007 and 18 in 2005); b) nineteen scored between 80 to 90 percent (compared to 20 in 2007 and 12 in 2005); and c) 13 scored 90 percent or higher (compared to eight in 2007 and two in 2005). These results indicate an overall improvement in BMP implementation at SDIA. The land use category BMP implementation rates were: a) Commercial at 89% (compared to 64% in 2005 and 87% in 2007); b) Industrial-Tenant at 89% (compared to 78% in 2005 and 86% in 2007); c) Industrial- Airport Operations at 86% (compared to 68% in 2005 and 84% in 2007); and d) Ground Transportation at 84% (compared to 61% in 2005 and 78% in 2007). These results also indicate improvement in BMP implementation at SDIA. The median implementation frequency for tenants and the authority combined increased from 77% in the 2005 audit, to 87% in the 2007 audit, to 89% in the 2009 audit.

The site audits conducted in 2005, 2007 and 2009 identified deficiencies in BMP implementation and provided a list of recommended changes for the Authority's stormwater management program. The findings of these and future site audits will be used to direct program improvements, to increase awareness, and help to produce changes in behavior and BMP implementation rates.

Level 4 - Load Reductions

The primary goal of BMP implementation is to reduce the pollutant loadings to stormwater discharges and, in turn, effect improvements to receiving water quality. Evaluating load reductions related to BMP implementation is one part of the Authority's program assessment process. By working to establish Framework Level 4 outcomes, the Authority hopes to understand the relationship of BMP implementation to water quality improvement. The site audit, discussed in the Level 3 program assessment above, began the identification and characterization of the pollutants of concern that impact stormwater quality at the airport. The results of the 2005 site audit also influence the current dry weather and wet weather monitoring programs. The continued development of both the site audit process and the implementation of the SWMP sampling plans (appendix D of the SWMP) are designed to provide the Authority with mechanisms for estimating load reductions related to the improved implementation of existing BMPs and/or the implementation of new BMPs as part of the Authority's stormwater management program.

The Authority is continually evaluating the contribution of specific sources to stormwater runoff at the airport. Based on the site audits, the activities and sources most closely associated with the airport operations, industrial, and ground transportation land use categories are assumed to be the primary contributors of potential pollutants. The three probable contributors of the copper and zinc associated with both the airport operations and ground transportation land use categories are: 1) vehicle and aircraft use and emissions; 2) galvanized metal structures; and 3) atmospheric deposition.

The probable contributors of copper, zinc and other metals associated with industrial land uses are: 1) vehicle, equipment, and aircraft maintenance and emissions; 2) outdoor storage and use of paints, motor oils, inoperable vehicles, etc.; 3) industrial spills and releases; and 4) other industrial activities.

The site audits identified copper and zinc and the primary pollutants of concern and so the source identification element of the wet weather monitoring program focuses on these pollutants. The “source identification sampling element” of the Authority wet weather monitoring program is designed to evaluate sources of the airport’s pollutants of concern in terms of annual mass loading in stormwater runoff. Once the sources are well established, the Authority will evaluate the potential for reduction through

BMP implementation and the best combination of BMPs to achieve pollutant load reductions. Fourteen sampling locations are being used to characterize the quality of non-industrial stormwater runoff associated with vehicle and aircraft use and emissions, atmospheric deposition, and galvanized metal structures, particularly metal roofs.

The FY08-09 wet weather season marked the completion of the 3 year calibration element of the source identification sampling program. The results of 3 sampling seasons (FY06-07, FY07-08, FY08-09) were analyzed to determine which source(s) appear to contribute the largest amount of pollutants. First, the samples were categorized by the spatial location and by the source of the pollutants to help determine if certain drainage basins had higher pollutant concentrations. The source of the pollutants can be used to target BMP implementation. Second, mass loadings for copper and zinc were calculated for the different pollutant sources.

In terms of spatial trend analysis, the results from a roof runoff location were the highest for both total copper and total zinc. The next highest results were from a source representative of the runway. In terms of pollutant sources and mass loading analysis, the annual mass load was calculated for each of the sources being characterized. Results of the analysis showed that roofs appeared to be the larger source of zinc, estimated to be as much as 239 lbs annually. The runway/ramp was the larger source of copper, estimated to be as much as 318 lbs annually. As for the parking lots and airport operations, the parking lots were a larger source of zinc, estimated at approximately 11 lbs annually. The total copper load for both parking lots and airport operations were estimated to be 2.4 lbs and 3.7 lbs respectively. The total copper loads for both parking lots and airport operations are not statistically different. Ranking the pollutant sources from highest to lowest pollutant load, the sources are as follows: 1) for total copper - runway/ramp, roofs, parking lots, airport operations; 2) for total zinc - roofs, runway/ramp, parking lots, airport operations.

The outcomes from completed and future site audits, as well as the results from the Authority's dry and wet season monitoring programs will be used to prioritize stormwater management activities and identify potential program improvements. By working to establish Framework Level 4 outcomes, the Authority hopes to gain an understanding of the relationship of required BMPs to water quality improvement. To avoid specious conclusions, these load reduction estimation exercises often require large datasets collected over

time. The Level 4 assessment provided here outlines a process for estimating future load reductions and provides baseline information from which to draw future comparisons.

Level 5 - Discharge Quality

Changes in discharge quality should be the direct result of successful stormwater management program implementation. However, establishing relationships between discharge quality and specific program components can be difficult. The two NPDES permits applicable to SDIA require that the quality of stormwater runoff from SDIA not cause or contribute to the violation of applicable water quality standards. Although neither of these two NPDES permits contains effluent limitations, they both require monitoring programs. The Municipal Permit requires a jurisdictional dry weather monitoring program. The results of the Authority's dry weather monitoring program will be presented in the FY08-09 Annual IDDE Report in December. The General Industrial Stormwater Permit requires a facility to conduct wet weather stormwater sampling. The results of the Authority's wet weather monitoring program will also be presented in the Annual IDDE Report.

A preliminary analysis of the Authority's FY08-09 dry weather monitoring program indicates that there were only 2 sites, out of 10 monitored at which a sufficient volume of water was present to allow sampling (once field analyses ruled out the likelihood of salt water intrusion). Laboratory analysis of the ponded water at these 2 sites reported total copper exceeded action levels in 5 of 5 sampling events, zinc exceeded action levels in 3 of 5 sampling events and total coliform exceeded action levels in 1 of 5 sampling events. The laboratory results suggesting copper and zinc as potential pollutants of concern are consistent with the long history of results from the Authority's wet weather sampling program.

A preliminary analysis of the wet weather monitoring program performed at SDIA during the FY08-09 suggest that the results are consistent with the historical trends. Further discussion of the wet weather monitoring program will be presented in the FY08-09 Annual IDDE Report.

As previously stated, the Authority wet weather monitoring program (Appendix D-2 of the SWMP) addresses the runoff sampling requirements of the General Industrial Storm Water Permit and provides an indication of

discharge quality. In developing the wet weather monitoring program, the Authority evaluated the quality of the existing historic stormwater sampling data set and identified representative sample locations and the amount of data sufficient to provide adequate statistical power in evaluating long-term program effectiveness. Development of the wet weather monitoring program also considered the variability in annual precipitation patterns at the airport and the impact of such variability on program implementation and on the assessment of long-term program effectiveness. The FY08-09 wet weather season is only the third season in which the wet weather monitoring program was conducted in accordance with the SWMP. Over time, a larger dataset will allow the Authority to evaluate changes in discharge water quality, and perhaps, relate improved discharge water quality to improvements in the Authority's stormwater management program.

Level 6 - Changes in Receiving Water Quality

The ultimate objective of the Authority's stormwater management program is to protect the water quality of San Diego Bay, the water body receiving discharges from the Authority's MS4. Level 6 measures can be addressed through outcomes such as compliance with regulatory benchmarks, protection of biological integrity, and beneficial use attainment. The Authority has not conducted any receiving water quality monitoring independent of the Copermittee Receiving Water Monitoring Program, since neither of the two NPDES permits currently applicable to activities at SDIA requires that the Authority monitor receiving waters and/or benthic communities to detect the potential impacts of stormwater runoff. The Authority must rely on studies conducted by others to evaluate Framework Level 6 outcomes and attempt to establish relationships, if possible, between receiving water quality and specific program components of the Authority's stormwater management efforts.

The receiving water quality issues in the vicinity of the airport that have been studied or noted by others have generally resulted from the activity related to federal Clean Water Act (CWA) Section 303(d) requirements. The waters of San Diego Bay in the vicinity of the airport were listed on the 2002 CWA Section 303(d) list of water quality segments for 1) benthic community effects, 2) sediment toxicity, and 3) bacteria indicators. A 2006 CWA Section 303(d) list of water quality limited segments which was adopted by the State Water Resources Control Board in October of 2006, and approved by

the Environmental Protection Agency in June of 2007, includes copper as a pollutant in the marinas along Harbor Island in the vicinity of the airport. No additional listings occurred during FY08-09.

The RWQCB has been in the process of investigating the establishment of TMDLs for 19 of the 38 bacteria-impaired waterbodies in the San Diego region in a two part study (Project I and Project II). Project I looked at indicator bacteria in beaches and creeks in the San Diego region. Project II looked at bacteria-impaired shorelines in San Diego Bay and Dana Point Harbor. At the end of FY07-08 the RWQCB adopted a Basin Plan amendment to incorporate the TMDLs developed for Baby Beach in Dana Point Harbor and Shelter Island Shorlie Park in San Diego Bay. On June 16, 2009 the state board approved the Basin Plan amendment. The Authority will address the TMDLs in future monitoring programs.

In regards to the TMDL process for benthic community effects and sediment toxicity in the vicinity of the airport, the RWQCB did not release any new information during the FY08-09 reporting period. The most recent activity remains the release of the Final Report, in June of 2005, entitled "TMDL Sediment Quality Assessment Study at the B Street/ Broadway Piers, Downtown Anchorage, and Switzer Creek, San Diego, Phase II, Temporal Variability, Causes of Impacts, and Likely Sources of Contaminants of Concern." Without additional information or data, the Authority cannot draw any new inferences from this TMDL process to help measure the effectiveness of the Authority's stormwater management program in accordance with Level 6 of the Framework.

11.2.3 INTEGRATED EFFECTIVENESS ASSESSMENT

An integrated assessment of the Authority's stormwater management program uses the results of the Framework's Program Implementation Assessment and Water Quality Assessment to draw general conclusions about overall effectiveness. Based on the information discussed for Framework Level 1 through 6 outcomes above, the management measures currently being implemented by the Authority are generally effective. The Authority has demonstrated compliance with the Level 1 activity-based permit requirements. The Authority continues to expand and evaluate education and outreach efforts. The number of hits on the environmental page of the Authority website and the newly added training pre- and post-training

knowledge assessment test results, discussed in the Level 2 assessment above, suggests that the awareness of tenants and staff appears to be on the rise. The Level 3, Level 4, and Level 5 outcome assessments above made extensive use of site audit data, including the 2009 Audit, and the results of the FY08-09 wet and dry season stormwater monitoring information. The site audit information has used the baseline BMP implementation rates established by the first audit to draw some initial comparisons with the second and third audits performed in FY08-09. All three audits and the stormwater sampling program have provided some insight into the pollutants of concern and their apparent loads in stormwater runoff at the airport. The audit and sampling programs will allow the Authority to more accurately assess Level 3 and Level 4 outcomes in future years. The discharge water quality information collected in FY08-09 and discussed in the Level 5 assessment above noted that discharge water quality continues to match the historical trend of exceeding benchmarks for copper and zinc. The assessment at Framework Level 6 (changes to receiving water quality) remains a difficult and complex task, involving numerous assumptions about the relationship of runoff water quality from the airport on receiving water quality in San Diego Bay. Efforts by the Authority to refine the Level 6 assessment continue to rely on collaboration with regional monitoring due in part to the extensive resources and longer time frames generally needed to collect sufficient monitoring data from which to draw conclusions. On the whole, the Authority's stormwater management program continues to be effective at preventing, minimizing, and/or eliminating impacts to the water quality of San Diego Bay.

The Authority continues to assemble information on those factors which appear to be key for assessing the stormwater management program and for recommending improvement to the program. The Authority has developed methods to assess program effectiveness in terms of Levels 1 through 5 of the Framework. As information is collected, the Authority will continue attempts to link implementation of the program directly to discharge water quality. The Authority has also developed procedures to identify pollutants, required BMPs, and the implementation rates for the required BMPs. Over time, the Authority intends to estimate the load reductions from BMP implementation and attempt to connect those estimates to the results of runoff monitoring. As BMP implementation rates increase, it is expected that the pollutant loadings will decrease.

11.2.4 MANAGEMENT MEASURES PROVEN TO BE INEFFECTIVE

Taken on the whole, the information presented throughout this report indicates that the majority of the management measures currently being implemented by the Authority have proven to be effective. The Municipal Permit emphasizes an iterative process to improve both BMPs and stormwater management measures as a whole. As such, the Authority will continue to refine and employ the Framework and site audit methodologies discussed in this chapter to identify and enhance effective stormwater management measures and to discontinue those that prove ineffective.

11.2.5 WATER QUARLITY IMPROVEMENT OR DEGRADATION

The limited water quality information discussed above notes that discharge water quality continues to match historical trends and to exceed benchmarks for copper and zinc. The results of the dry weather monitoring conducted in FY08-09 also appear to confirm copper and zinc as pollutants of concern and suggest that total coliforms be closely evaluated at discreet airport locations. Continued implementation of the dry weather and wet weather stormwater monitoring programs will lead to future evaluation and validation of discharge water quality at SDIA using trend analysis and other statistical methods.They FY08-09 Annual IDDE Report will also discuss changes in discharge water quality.

11.3 PROGRAM REVIEW AND MODIFICATION

In response to the re-issued Municipal Permit, the Authority submitted a completely revised SWMP to the RWQCB on March 24, 2008. There have been no revisions to the Effectiveness Assessment Component of the SWMP since that time.

12 SPECIAL INVESTIGATIONS

12.1 INTRODUCTION

Two special investigation projects addressing urban runoff were underway at SDIA during FY08-09. The Downspout BMP Pilot Project was initiated in 2007 and is still ongoing. The Oval 8 Feasibility Study was initiated during FY08-09 and is still ongoing. Both projects aim to find new ways to address the know pollutants of concern at SDIA. Each of these projects is discussed below.

12.2 THE DOWNSPOUT BMP PILOT PROJECT

BMP effectiveness evaluations and source sampling conducted by the Authority determined that the rooftops and runways were the largest sources of the primary pollutants of concern at SDIA (namely, copper and zinc). Begun in 2007, the Downspout Pilot Study was designed to test BMP products for treating storm water from the Terminal 1 rooftops prior to the runoff entering the storm drain system. The Authority began with an evaluation of the BMPs currently available that are designed to remove metals from downspout drainage. The study looked at both the pollutant removal efficiencies and the maintenance requirements of both filters. At the time of the survey, in spring 2007, only three products were available to remove

metals from downspout runoff. Two technologies, the Downspout Filter and FloGard, were selected based on their footprint and cost for installation. The third technology was deemed not feasible for terminal-wide implementation.

The first of the two BMPs selected for the study was the Downspout Filter, manufactured by Bio Clean Environmental Services, Inc., which is designed for commercial and industrial buildings and includes a fabric filter designed to capture debris, sediments, hydrocarbons, and metals. The second BMP was the FloGard, manufactured by KriStar Enterprises, Inc., which includes a fossil rock filter medium specialized to filter out metals, particulates, debris, and petroleum hydrocarbons. A total of four installation locations were chosen at Terminal 1; two locations for each of the two selected BMPs.

The study Sampling and Analysis Plan (SAP), prescribes a total of six storm events be sampled over two years, starting in fall 2008. Both first-flush and grab samples are collected from the influent and effluent locations of the BMPs. The first-flush sample quantifies the constituent concentrations of the initial runoff from the Terminal 1 roof and shows the BMP filter removal efficiency for the first flush. The grab sample is collected to quantify the constituent concentrations and BMP filter removal efficiency after the initial flush. The collected samples are then analyzed for both total and dissolved copper and zinc concentrations.

In addition to collecting water quality samples, the filter units are inspected on a monthly basis and have been inspected since their installation in August 2008 to document the condition of each BMP filter and the overall condition of the entire unit. The filter media for both filters appear unchanged over the course of the first six months of monitoring, although the ease of maintenance is quite different between the two technologies.

The sample results to date suggest that the filters are not functioning as expected. At the beginning of the 2008-2009 wet-weather monitoring season, a system blank was collected by running blank water through the sample downspouts and installed BMPs. The results from the analysis of those blank samples found that for both filters the total copper and total zinc concentrations were higher for the effluent than for the influent. Stormwater samples collected during four sampling events followed similar trends as the blanking data. For a majority of the samples, the effluent concentrations were higher than the influent concentrations. Additionally, the metals concentrations measured were quite large. The total copper results ranged

from 19 micrograms-per-liter (μg/L) to 1,000 μg/L. Total zinc results varied from 100 μg/L to 9,500 μg/L. Given the unexpected results of both the blank samples and the runoff samples, at the end of FY08-09, the Authority was considering whether to discontinue the pilot project, although no final decision was made.

12.3 THE OVAL EIGHT FEASIBILITY STUDY

The Airport Authority is currently conducting a feasibility study to investigate BMP technologies to treat runway runoff. This study will hopefully lead to a pilot program to manage and treat stormwater runoff that flows from the runway and discharges into Ovals 4 and/or 8 (located between the runway approaches).

During FY08-09, the study began with a literature search to screen potential BMPs available to remove metals from storm water runoff. Technologies reviewed included underground detention, sand filtration, porous pavement, biofiltration, synthetic turf, and a proprietary underground wetland treatment system. The technologies were evaluated based on their applicability considering constraints posed by both the airport operational and the natural environments. Site constraints include: 1) the space available to accommodate the BMPs; 2) height limits on any proposed BMPs; and 3) the amount of hydraulic head available.

The three candidate structural BMPs that were selected based on the initial phase of evaluation were porous pavement, synthetic turf in combination with sand filtration and a porous pavement bed, and a proprietary underground treatment system. A preliminary, feasibility level design is being drawn up for each of the three selected BMPs. Using these preliminary designs, constructions costs are being calculated, along with maintenance and operation costs, and monitoring costs. The study will evaluate the potential pollutant removal capabilities of each BMP. Once each of these factors has been evaluated, one or two of the selected BMPs will be recommended for construction and further study.

12.4 CLOSING

There were no other special investigations underway at SDIA during the reporting period that resulted in any additional data or information relevant to urban runoff that has not already been presented elsewhere in this Annual Report.

13 NON-EMERGENCY FIRE FIGHTING

13.1 INTRODUCTION

Non-emergency fire fighting is discussed in Section 3 of the SWMP. Non-emergency fire fighting flows at SAN generally fall into two categories: a) discharges from building fire suppression systems during installation, maintenance, or testing; and b) discharges of potable water and/or potable water mixed with fire fighting foaming agents from the ARFF rigs during fire fighting practice drills and other exercises. This chapter of the Annual Report provides a brief description of significant non-emergency fire fighting activities that occurred during FY08-09.

13.2 SOURCE CHARACTERIZATION

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. Potable water and/or potable water mixed with fire fighting foaming agents discharged to the ground during fire fighting training can become a contaminated source of water and/or a transport mechanism for pollutants. Discharges of potable water from the ARFF rigs during fire fighting practice drills and other exercises 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.

13.3 BEST MANAGEMENT PRACTICES REQUIREMENTS

Control measures to address the potential for non-emergency fire fighting flows to transport pollutants to receiving waters are described in Section 3.4 of the SWMP. For fire suppression system flushing, the Authority requires the use of one of the following procedures: 1) capture and/or direct discharge to the sanitary sewer system on or off site; or 2) submission of a workplan signed by a registered civil engineer, detailing how the water will be capture, stored, and tested for water quality, and recommending the treatment necessary prior to discharging to the airport storm drain system.

Fire fighting training by the fire fighters stationed at the ARFF typically involves the discharge of potable water from the ARFF fire fighting vehicles. The Authority requires the use of the applicable non-stormwater management BMPs found in Appendix B of the SWMP to control these discharges. The Authority also lists several additional control measures in Section 3.4.3 of the SWMP to control these discharges, the focus of which generally require the discharge of water in a manner and direction that maximizes 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 maximized, and also prevents the discharge from contacting surface pollutants in the path of the discharge.

ARFF fire fighting vehicles are flushed for one to two minutes every day using only water, fire fighting foam testing is performed twice a year, and Purple K testing is generally performed once a year. . The foam tests use approximately 1,000 gallons of water and 50 gallons of foaming agent in each vehicle. The chemical suppressant tests only use a few pounds of the material. The chemical suppressant is discharged as a dry material.

All three types of testing are performed on a large concrete pad called the north ramp area, just to the east of ARFF facility. The entire north ramp area drains through two oil water separators, although these systems are only used as a back-up fail-safe. The slit trench storm drain inlet to which the north

ramp drains is blocked off from the stormwater conveyance system using sandbags prior to and during the tests. This allows the foam or chemical suppressant to be captured on the north ramp and/or in the slit trench, but prevents the foam or chemical suppressant from entering the stormwater conveyance system. All of the foam or chemical suppressant is flushed into the slit trench and then vacuumed into a tanker truck for proper disposal in the sanitary sewer under proper permits.

13.4 PROGRAM IMPLEMENTATION

Fire fighting foam and/or chemical suppressant testing was only performed twice during FY08-09. Foam testing was performed on December 18, 2008, and April 27, 2009.

13.5 PROGRAM REVIEW AND MODIFICATION

In response to the re-issued Municipal Permit, the Authority submitted a completely revised SWMP to the RWQCB on March 24, 2008. There have been no revisions to the non-emergency fire fighting elements of the SWMP since that time.

14 JURMP REVISIONS

As noted in Chapter 1 of this report, the Authority uses the term Storm Water Management Plan (SWMP) when referring to the document prepared in response to the Municipal Permit requirements for a Jurisdictional Urban Runoff Management Plan (JURMP). The latest SWMP was submitted to the RWQCB on March 24, 2008. Based on the program review conducted in order to prepare this annual report, the following revisions are proposed for the SWMP. The revisions are presented in two categories: 1) those revisions discussed in this report; and 2) additional revisions identified during compilation of this report, but not discussed herein.

14.1 REVISIONS DISCUSSED IN THE ANNUAL REPORT

1. Chapter 3 Construction Component – Updates to the Monthly Inventory of Active Construction Sites and related tables.
2. Chapter 4 Municipal Component – Updates to the Inventory of Municipal Sites/Sources and related tables.
3. Chapter 5 Industrial and Commercial Component - Updates to Inventory of Industrial/Commercial Sites/Sources and related tables.

14.2 ADDITIONAL REVISIONS PROPOSED FOR THE SWMP

1. Chapter 3 Non-Stormwater Discharges, Section 3.4.1 – Revisions to text regarding specific measures to control non-emergency fire fighting discharges.
2. Chapter 5 Construction Component – Revisions to text regarding update to the monthly inventory of active construction sites.
3. Chapter 6 Municipal Component - Revisions to text regarding updates to the inventory of municipal sites/sources.
4. Chapter 7 Industrial and Commercial Component – Revisions to text regarding updates to the inventory of industrial/commercial sites/sources.
5. Appendix D, Section 2.2 – Revisions to text regarding alternate dry weather monitoring sites.
6. Updates to the table of key Authority personnel responsible for SWMP Implementation table.

15 CONCLUSIONS AND RECOMMENDATIONS

15.1 INTRODUCTION

The FY08-09 Annul Report summarizes the Authority's efforts to manage stormwater at SDIA in compliance with the San Diego Municipal Permit. Based upon this Annual Report and the Annual Reports for FY03-04, FY04-05, FY05-06, FY06-07, and FY07-08, the Authority believes the stormwater management program at SDIA is adequately planned, executed, reviewed, and funded. This chapter summarizes information to support a determination that the Authority stormwater management program fulfills the requirements of the Municipal Permit. Also highlighted herein are any recommendations for program improvements that may further enhance stormwater pollution prevention and control measures at SDIA.

15.2 CONCLUSIONS

Conclusions about the Authority's stormwater management program are presented in four basic categories: 1) overall program compliance status; 2) effective stormwater management program components; 3) program elements identified for improvement; and 4) revisions to the SWMP.

15.2.1 OVERALL PROGRAM COMPLIANCE STATUS

Information presented throughout this report, particularly Chapter 11 (Effectiveness Assessment Component), supports a determination that the Authority's stormwater management efforts are in general compliance with the Municipal Permit.

15.2.2 EFFECTIVE STORMWATER MANAGEMENT PROGRAM COMPONENTS

Based on the results of current program implementation and the findings of the FY08-09 effectiveness assessment in Chapter 11, the management measures currently being implemented have proven to be effective.

15.2.3 PROGRAM ELEMENTS IDENTIFIED FOR IMPROVEMENT

Again, the majority of the management measures currently being implemented by the Authority have proven to be effective. The assessment of program effectiveness in Chapter 11 did not identify any particular stormwater management program elements in need of improvement.

15.2.4 REVISIONS TO THE SAN SWMP

Proposed revisions to the SWMP, identified during this reporting period, include updates to the municipal inventory, updates to the industrial/commercial inventory, and updates to the inventory of active construction sites. Although, not highlighted in this Annual Report, the Authority also proposed to edit language in the SWMP regarding alternate dry weather monitoring sites. A summary of these proposed revisions is presented in Chapter 14.

15.3 RECOMMENDATIONS

Following the recommendations of previous Annual Reports, the Authority continues to review and expand upon effective education and outreach efforts for staff and tenants as a means for raising general awareness of

stormwater concerns and for achieving improved BMP implementation rates. Information provided in this report indicates that current education and outreach efforts are effective. Successful education efforts should lead to improved BMP implementation.

The Authority will also continue to research technologies and pursue pilot projects to help address known pollutants of concern. And aside from the general recommendation to continue effective and cost-efficient implementation of existing stormwater mangement efforts, there are no further specific recommendations at this time.

15.4 CLOSING

The FY08-09 Annual Report clearly demonstrates that the stormwater management program at SDIA is adequately planned, executed, reviewed, and funded. The program generally fulfills the requirements of the Municipal Permit. The Authority strives to enhance existing stormwater pollution prevention and control measures at SDIA, to eliminate ineffective measures, and to identify, develop, and incorporate more effective measures whenever possible. Potential stormwater impacts are just one characteristic of the airport's "environmental footprint" that the Authority aims to minimize.