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

3.1 INTRODUCTION

This update to the Authority SWMP is in response to the requirements of the Municipal Permit and Industrial Permit. The Authority prohibits all types of NSWDs into its MS4 unless the discharge is authorized by a separate NPDES permit, or identified as not being a source of pollutants and all appropriate BMPs are implemented to prevent impacts to storm water quality. The Authority is required by both the Municipal Permit and Industrial Permit to eliminate unauthorized or illicit NSWDs. If the Authority identifies an NSWD as a significant source of pollutants to the waters of the United States (receiving waters), both permits require the Authority to prohibit the discharge. Although certain NSWDs are authorized under the Industrial Permit if the Authority, in its SWPPP, (1) identifies the sources of pollution that potentially affect the quality of authorized NSWDs, and (2) describes and ensures the implementation of BMPs to reduce or prevent pollutants in authorized NSWDs using BAT and BCT, the Authority will implement the discharge prohibitions in the Municipal Permit that are deemed stricter than the Industrial Permit, unless a separate NPDES Permit is obtained for certain NSWDs.

Section 3.0 addresses the requirements in Municipal Permit Provisions D.2.b, D.4.b(1), E.2, and E.7.a and Industrial Permit Sections III, IV, VI, X.G.e, X.H.1 and XI.A for NSWDs and IDDE.

The provisions of the Municipal Permit require the Authority to:

- D.2.b—Develop an MS4 Outfall Discharge Monitoring Program to detect discharges from MS4 outfalls during dry weather. The monitoring program requirements include field screening and non-storm water persistent flow monitoring. Section 3.4.4 and Appendix D-2 have been prepared to address this requirement.
- D.4.b.(1)—Assess and report on the effectiveness of the MS4 Outfall Discharge Monitoring Program in effectively reducing, eliminating, or prohibiting NSWDs and illicit discharges, and identify any modifications needed to increase the effectiveness of the program. Section 3.5 and Appendix D-2 have been prepared to address this requirement.
- E.2.a—Establish an IDDE program, in accordance with the WQIP strategies, to actively seek and eliminate illicit discharges and connections to the storm drain system. This program provides a framework for the detection, investigation, follow-up, and elimination of reported violations. The program is designed to be adaptive and to allow the Authority to periodically assess data, re-evaluate areas of concern, and concentrate control methods and corrective actions as necessary in those areas. Municipal Permit Provision E.2.a requires all NSWDs to be treated as an illicit discharge unless the discharge is (1) authorized under a separate NPDES permit, (2) identified as not being a source of pollutants and all appropriate BMPs are implemented to prevent impacts to storm water quality, such as the use of BMPs designed to prevent these discharges from contacting pollutants, reduce the flow or volume of the discharges, or prevent these discharges from reaching the storm drain system. Section 3.2 and Appendix D-2 have been prepared to address this requirement.
- E.2.b—Update its MS4 inventory and drainage area map to include all areas of the MS4 that are owned, operated, or maintained by the Authority; locations of discharge inlets and all outfalls; known connections with other MS4s; any segments of receiving water within the Authority's jurisdiction that are affected by its MS4 discharges; and locations of any outfalls with non-storm water persistent flow, identified during outfall field screening. Authority employees and contractors are encouraged to be vigilant in identifying and reporting illicit discharges and connections during daily activities. Reporting should include a public hotline and email address to receive reports. The Authority should

designate and implement response procedures for illicit discharges to prevent discharges from reaching the MS4, including control of spills, prevention of seepage from sanitary sewers to the MS4, and coordination with other upstream Copermittees to prevent illicit discharges from entering the MS4 within the Authority's jurisdiction. Sections 3.2, 3.3.4, and 3.4 have been prepared to address this requirement.

- E.2.c—Implement a strategy for field screening the MS4 within its jurisdiction to detect NSWDs and connections to the MS4. Section 3.3 and Appendix D-2 has been prepared to address this requirement.
- E.2.d—Develop a timeline and prioritization for responding to reports or observations of NSWDs or illicit discharges, using the criteria detailed in Municipal Permit Provision E.2.d.(1). These criteria include whether or not pollutants are (1) classified as highest or focused priority pollutants in the WQIP; (2) listed on the 303(d) list for the receiving water; (3) used within the Authority's jurisdiction; (4) causing an exceedance to a numeric action level (NAL), or (5) posing a threat to human health or the environment. The Authority must implement investigation procedures to determine the validity of each report, prioritize responses, respond and investigate, attempt to identify the source of the discharge, assess and reclassify discharges if necessary, and maintain records of the report and actions taken. The Authority is also required to implement procedures to eliminate illicit discharges and connections to its MS4 by enforcing its legal authority and implementing the Enforcement Response Plan (ERP) required under Municipal Permit Provision E.6. A summary of the NSWDs and illicit discharges, investigations, and actions to eliminate the discharges must be included in the WQIP. Sections 3.2 and 3.4 have been prepared to address this requirement.

The Industrial Permit requires the Authority to:

- III.—Effectively prohibit all NSWDs, with the exception of those authorized by the Industrial Permit or by other NPDES permits. Section 3.1 has been prepared to address this requirement.
- IV.A—Ensure that all authorized NSWDs, as listed in Industrial Permit Section IV.A, meet the conditions described in Industrial Permit Section IV.B. Section 3.1 has been prepared to address these requirements.
- IV.B—Ensure that any authorized NSWDs do not violate the San Diego Basin Plan, applicable water quality standards, or any applicable Authority ordinance or code, and implement BMPs to reduce or prevent pollutants in authorized NSWDs as well as the flow or volume of those discharges to the MEP, by using BAT/BCT. The Authority should conduct monthly visual observations of authorized NSWDs to ensure effective BMP implementation and report all authorized NSWDs in the Industrial Annual Report. Sections 3.3.4 and 7.5.3 have been prepared to address this requirement.
- VI—Ensure that authorized NSWDs, once they reach receiving waters, do not contribute to water quality impairments, cause exceedances in water quality standards, threaten human health or the environment, or contain pollutants that contribute to overall pollution or public nuisance. Sections 3.3.1 and 7.5.4 have been prepared to address this requirement.
- X.G.e—Evaluate the facility to identify all NSWDs, including their sources and drainage areas. The Authority is required to evaluate all drains connected to the MS4 and describe the process by which all unauthorized NSWDs have been eliminated. The Authority is also required to include in this SWMP the source, quantity, frequency, characteristics, and drainage areas of all NSWDs, and whether they are authorized or unauthorized. Sections 7.7 and 7.8.4.2 have been prepared to address this requirement.
- X.H.1—Implement and maintain a minimum set of BMPs to prevent spills and illicit discharges from entering the storm drain system and to minimize authorized NSWDs. Sections 3.1, 3.2, and 7.7.4 have been prepared to address this requirement.

- XI.A—At least once per month during daylight hours of a dry weather period, visually observe each drainage area, including all industrial operational areas and equipment and material storage areas, for authorized or unauthorized NSWDs and the associated BMPs and their effectiveness. These monthly visual observations and facility inspections actively seek to detect and eliminate illicit discharges, and help determine the effectiveness of BMPs in minimizing and controlling authorized NSWDs. Sections 3.3.4 and 7.8.4.2 and Appendix D-1 have been prepared to address this requirement.

3.1.1 NON-STORM WATER DISCHARGES

NSWDs are addressed as illicit discharges unless they are identified as a discharge authorized by a separate NPDES permit, or identified as a category of NSWDs or flows that are addressed pursuant to the following requirements from the Municipal Permit Provision E.2:

- NSWDs to the MS4 from the following categories are addressed as illicit discharges unless the discharge has covered or meets the exception criteria under NPDES Permit No. CAG919003 (Order No. R9-2015-0013, as it may be amended or reissued) for discharges to surface waters within the San Diego Region:
  - Uncontaminated pumped ground water;
  - Discharges from foundation drains;
  - Water from crawl space pumps, and
  - Water from footing drains.
- NSWDs from water line flushing and water main breaks to the MS4 are addressed as illicit discharges unless the discharge has coverage under NPDES Permit No. CAG679001 (Order No. R9-2010-0003, as it may be amended or reissued) or NPDES General Permit No. CAG140001 (Order 2014-0194-DWQ, as it may be amended or reissued). This category includes water line flushing and water main break discharges from water purveyors issued a water supply permit by the California Department of Public Health or federal military installations. Discharges from recycled or reclaimed water lines to the MS4 are addressed as illicit discharges, unless the discharges have covered under a separate NPDES Permit.
- NSWDs to the MS4 from the following categories that are addressed as illicit discharges only if the Authority or the RWQCB identifies the discharge as a source of pollutants to receiving water:
  - Diverted stream flows;
  - Rising ground water;
  - Uncontaminated ground water infiltration to MS4s;
  - Springs;
  - Flows from riparian habitats and wetlands;
  - Discharges from potable water sources;
  - Discharges from foundation drains; and
  - Discharges from footing drains.
- NSWDs to the MS4 from the following categories are controlled by the requirements given below through Authority ordinances, codes, or requirements, or similar means. NSWDs to the MS4 from the following categories not controlled by the requirements given below through Authority ordinances, codes, or requirements are addressed as illicit discharges:
  - Air conditioning condensation:

        - The discharge of air conditioning condensation should be directed to landscaped areas or pervious surfaces, or to the sanitary sewer, where feasible.

    - Firefighting discharges to the MS4 are addressed as illicit discharges only if the Authority or the RWQCB identifies the discharge as a significant source of pollutants to receiving waters. Firefighting discharges to the MS4 not identified as a significant source of pollutants to receiving waters, are addressed, at a minimum, as follows:

        - Non-emergency firefighting discharges:

            - Building fire suppression system maintenance discharges (e.g., sprinkler line flushing) to the MS4 are addressed as illicit discharges unless BMPs are implemented to prevent pollutants associated with such discharges to the MS4; and

            - Non-emergency firefighting discharges (i.e., discharges from controlled or practice blazes, firefighting training, and maintenance activities not associated with building fire suppression systems) are addressed by a program, to be developed and implemented by the Authority, to reduce or eliminate pollutants in such discharges from entering the MS4.

        - Emergency firefighting discharges:

            - The Authority will develop and encourage implementation of BMPs to reduce or eliminate pollutants in emergency firefighting discharges to the MS4s and receiving waters within its jurisdiction. During emergency situations, priority of efforts should be directed toward life, property, and the environment (in descending order). BMPs should not interfere with immediate emergency response operations or impact public health and safety.

- If the Authority or RWQCB identifies any category of NSWDs listed under Provisions E.2.a.(1)-(4) as a source of pollutants to receiving waters, the category is prohibited through the Authority ordinances, codes, and requirements and addressed as an illicit discharge. Alternatively, the Authority may propose controls to be implemented for the category of NSWDs as part of the WQIP instead of prohibiting the category of NSWDs, and implement the controls if accepted by the RWQCB as part of the WQIP:

    - Over-irrigation is identified by the RWQCB as a pollutant source to receiving water.

- Where feasible and priorities and resources allow, the Authority reduces or eliminates NSWDs listed under Provisions E.2.a.(1)-(4) into its MS4, unless an NSWD is identified as a discharge authorized by a separate NPDES permit.

3.1.2. SOURCE CHARACTERIZATION AND CONTROL MEASURES

The Authority addresses all NSWDs into the MS4 as illicit discharges, unless the discharge is authorized by a separate NPDES permit, or identified as not being a source of pollutants and all appropriate BMPs are implemented to prevent impacts to storm water quality, such as the use of BMPs designed to prevent these discharges from contacting pollutants, reduce the flow or volume of the discharges, or prevent these discharges from reaching the storm drain system. The Authority conducts regular inspections to ensure that these BMPs are properly and fully implemented. The BMPs required by the Authority for the NSWDs identified above are discussed in this section. Monitoring and reporting of all NSWDs as required by the applicable permits are described in Appendix D-1 and D-2 and Section 12.0.

Potential NSWDs at SAN include these sources: groundwater, water from crawl space pumps and footing drains, air conditioning and cooling plant condensation and mist, landscape irrigation, potable water flushing, eye wash station testing, water fountains, hose bibs, fire hydrant and sprinkler system flushing, non-emergency and emergency firefighting flows, and tidal intrusion into the MS4. The list of source

characterization for each potential NSWD is described below and their compliance with the Municipal Permit or another NPDES Permit.

GROUNDWATER, WATER FROM CRAWL SPACES, AND FOOTING DRAINS

The elevation and proximity of SAN in relation to San Diego Bay creates a relatively shallow groundwater table, generally approximately 10 to 15 feet below the ground surface, with depth to groundwater increasing to the northeast, away from San Diego Bay. Groundwater elevations vary around SAN and fluctuations occur during and following periods of heavy rain. The shallow groundwater tends to infiltrate into below-grade structures at SAN, including utility vaults, below-grade crawl spaces, footing drains, and the storm drain system itself.

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

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

AIR CONDITIONING AND COOLING PLANT CONDENSATION

Air conditioners are located throughout the Authority and are used for environment and equipment cooling. Condensate is regularly discharged from air conditioners, although most discharge rates are extremely low, and air conditioning condensate in passenger boarding bridges in Drainage Basins 8, 12, and 15 is captured and reused in power washing activities (approximately 48,710 gallons of condensate were captured this way from 20 different passenger boarding bridges during fiscal year [FY] 2022). Air conditioner condensate may contact contaminants if allowed to flow through areas where significant materials, oil from parking lots, sediment, trash, and construction debris may potentially be carried into the storm drain system by the discharge.

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

The Terminal 2 Parking Plaza SWRTS opened in June 2018 and captures 100 percent of the storm water drainage from an 85th-percentile 24-hour storm event that falls on the 7.6-acre parking structure and routes the water to the Central Utility Plant for use in the cooling towers.

In early 2019, the Authority began construction on a storm water capture and reuse system that will capture approximately 80 percent of average annual storm water runoff from approximately 200 acres of the 661-acre Authority property. Built in 3 phases, the completed capture and reuse system will include an underground and aboveground storm water conveyance system, underground storage facilities, treatment

facilities, pump station(s), a distribution system, and underground infiltration facilities. At final build-out, the system will provide a total storage capacity of nine million gallons and allow for capture and reuse or infiltration of approximately 39 million gallons of storm water per year. The overall goals of the project are to 1) mitigate storm water discharges of zinc and copper into San Diego Bay; 2) develop onsite sources of water to meet onsite non-potable water demand; and (3) integrate flexibility to address long-term storm water liabilities and meet water stewardship goals of the Authority.

Incidental air conditioning and cooling tower condensate has been identified as an illicit discharge only when they are not controlled using the standard airport-wide BMPs requirements described in Appendix B and the following BMPs applicable to air conditioning and cooling plant discharges:

- Monitor and control the amount of blow-down water or water lost to evaporation. To ensure the most efficient use of water, cooling towers can be equipped with automatic blowdown control systems or water flow meters to monitor water loss;
- Keep a log to track the make-up and blowdown quantities, conductivity, and cycles of concentration to detect leaks, excessive blowdown, or deterioration;
- Properly maintain the air conditioners and cooling towers to help reduce the amount of condensate discharged. Monitor water usage in cooling towers to track water loss and efficiency;
- Capture and reuse air conditioning condensate as appropriate; and
- Prevent the discharge from contacting surface pollutants in the path of the discharge.

Prevent discharges from entering the storm water conveyance system, if possible, by diverting the flow to a landscaped area or other pervious surface, an impervious area where the discharge can evaporate, an OWS or other treatment control or LID BMP, or the sanitary sewer.

LANDSCAPE IRRIGATION

Landscape irrigation constitutes a small portion of the potable water usage at SAN, (6 million gallons in 2012, before completion of xeriscaping), due in part to the limited landscape acreage (approximately 18 acres) in Drainage Basins 1, 3, 5, 5a, 6, 8, 9, 10, and 11 and the use of xeriscaping to help reduce the need for irrigation, including planting indigenous and drought-tolerant plants. For example, water-intensive shrubs were replaced with turf and drought-tolerant trees in front of the Terminal 1 check-in building. SAN has also used a satellite water-tracking system to determine SAN's watering needs; this system is expected to save approximately 9 million gallons of water each year. Approximately 2 acres of bioswales and 1.25 acres of bioretention swales were installed as part of SAN's Green Build LID projects. Additional LID features were installed at the Signature Aviation FBO and RCC. Five bioswales were installed at Signature, and six bioretention basins were installed at the RCC. These areas will require additional landscaping and irrigation.

- **Landscape Irrigation**: Over-irrigation was identified by the RWQCB as a pollutant source to receiving water. The Authority prohibits over-irrigation discharges because they have been found to be a source of pollutants such as nutrients, bacteria, pesticides and sediment. The hotline number to report incidents or complete an over-irrigation report is provided on the Environmental Affairs storm water page. Concerns regarding over-irrigation can also be provided on the Authority's contact us page (https://www.san.org/Travel-Info/Contact-Us). BMPs are implemented to prevent these discharges, as follows:
  - Use native plants to reduce the need for irrigation and fertilization. Perform soil analysis seasonally to determine appropriate fertilization requirements and minimize the use of chemical fertilizers.

- Apply pesticides, herbicides, and fertilizers as needed and in accordance with manufacturer instructions to maximize the utility of the product and minimize the potential for product residue to contact irrigation runoff. Do not use pesticides or herbicides if a rain event is expected. Do not apply pesticides or herbicides during periods of high wind.
- Combat weeds by hand pulling when feasible. Use herbicides only as a last resort.
- Properly dispose of landscaped materials in the garbage or compost. If immediate disposal is not feasible, store landscaped materials and vegetation debris in areas that are covered or otherwise protected from wind and rain dispersal.
- Avoid exposed soils by revegetating or temporarily covering these areas.
- Do not water during a rain event or at least 48 hours following a rain event.
- Employ water conservation practices, such as:
  - Water a maximum of 2 days per week.
  - Limit watering days to Mondays and Fridays. Exceptions include:
    - Irrigation with a landscape permit;
    - Erosion control; and
    - Landscape establishment following a disaster.
  - When using a standard sprinkler system, limit watering duration to 5 minutes between the hours of 4:00 pm to 10:00 am from November 1 to May 31 and 6:00 pm to 10:00 am from June 1 to October 31.
  - When available, use recycled or reclaimed water for landscaping purposes.
  - Use automatic sprinkler timers. Automatic sprinklers, when properly set, minimize runoff by turning off the system at the appropriate intervals.
  - Where automatic sprinkler timers are not used, periodically observe the area being watered.
  - Conduct weekly observations to identify and correct damaged sprinkler systems and to adjust sprinkler heads. The landscaped or vegetated LID areas should also be observed for prevention of over-watering and runoff.
  - Assess the soil moisture and depth and utilize the Authority's satellite water-tracking system to determine accuracy of irrigation schedules.
  - Use water delivery rates that do not exceed the infiltration rate of the soil, but instead minimize ponding and runoff and allow water to infiltrate into the soil.
  - If a rain event is predicted, temporarily turn off sprinkler systems or use smart controllers to avoid over-watering and runoff.
  - Avoid overspray outside of the landscaped areas and adjust irrigation systems to prevent overspray, minimize or eliminate runoff, and prevent contact with surface pollutants.
  - Use micro-irrigation systems (e.g., drip irrigation).
  - Use a control nozzle if watering by hand to avoid runoff.
  - Avoid placing, storing, or parking equipment and vehicles in areas being irrigated to minimize the potential for runoff caused by blocking the spray or water delivery patterns. In this way, the potential for inadvertent runoff to contact pollutants is precluded.

POTABLE WATER, HOSE BIBS, AND EYE WASH STATIONS

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

- A drinking water fountain was installed outside of the Terminal 2 West baggage claim area. The water is contained and is pumped back through the back-flow system, where it is treated for algae. The water fountain is flushed directly into the sanitary sewer annually.
- Hose bibs are installed around the perimeter of the terminals for connection to hoses. Hose bibs can be locked, and use is limited. These hose bibs provide the opportunity for NSWDs.
- Eye wash stations are located outside most gates along Terminals 1 and 2 for emergency purposes. This equipment requires monthly testing, during which water is released onto the ramp.

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

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

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

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

FIRE HYDRANT FLUSHING

The City of San Diego Water Department generally maintains the water mains and fire hydrants at SAN. However, Menzies Fuel Farm performs annual flush testing of fire hydrants in its operating area, (Drainage Basin 6) and the Authority FMD responds to minor leaks and breaks throughout SAN. Fire hydrant or fire response system flushing must be addressed as illicit discharges only if the Authority or RWQCB identifies it as a significant source of pollutants, as detailed by the Municipal Permit Provision 2.E.a. It is considered an authorized discharge under the Industrial Permit only if the discharge meets the conditions provided in Section IV.B. Since fire hydrant flushing has the potential to transport pollutants to receiving waters if the discharge is allowed to flow through areas where significant materials, oil, sediment, trash, and construction debris may potentially be carried into the storm drain system, BMPs will be implemented to reduce or

eliminate pollutants in such discharges from entering the MS4. BMPs are implemented to minimize contact between pollutants and flows, minimize the potential for erosion from any nearby landscaped areas, and use treatment control BMPs, where applicable, to treat the discharge to remove pollutants before entering the MS4. The City of San Diego Water Department flushes fire hydrants at SAN once per year. Menzies Fuel Farm's annual flushing activities are performed in a bermed area and nearby storm drains are covered. All wastewater is contained and collected for offsite disposal.

- **Fire Suppression System Installation, Maintenance, and Testing**: Potable water that has been left to stand in a building fire suppression system has a significant potential to carry pollutants, especially over time, as the water tends to stagnate and undergo various physical and chemical changes. As such, the Authority requires the following BMPs be implemented to address the discharge of this type of water:

  - Obtain the proper permit(s) from the City of San Diego Metropolitan Wastewater Department (MWWD) to discharge the water directly to the sanitary sewer.
  - Discharge the water directly into a tanker truck for proper disposal offsite.
  - Capture the discharge in a holding tank or lined, bermed area or sump of sufficient capacity to store the water prior to discharge to an onsite sewer under proper permit(s) from MWWD or prior to transferring the water to a tanker truck for proper disposal offsite. In addition, berm or block storm drains located close to or within the test area to prevent any risk of seepage into the MS4.
  - Direct flows to nearby landscaped or pervious area to infiltrate or evaporate during dry weather.
  - Direct flows to a contained area and collect using a wet vacuum or equivalent, and properly dispose of collected water. Remove any residue in contained area and do not perform during rain events.

NON-EMERGENCY FIREFIGHTING FLOWS

The ARFF and Menzies Fuel Farm (in Drainage Basin 6) and RCC (in Drainage Basins 3 and 5) are the only facilities at SAN that operate and maintain fire suppression systems and/or perform firefighting activities. Non-emergency firefighting flows at SAN generally fall into two categories: (1) discharges from building fire suppression systems during installation, maintenance, or testing; and (2) discharges of potable water during firefighting practice drills and other exercises. Quantities and frequencies involved are outlined below. Menzies Fuel Farm maintains fire suppression systems surrounding oil storage areas, including the foam-to-water ratio of their equipment (though no foam is released during testing), as described below. Once potable water has been left to stand in building fire suppression systems, the water can become contaminated and serve as a transport mechanism for pollutants. Discharges of potable water from the ARFF equipment during firefighting practice drills and equipment testing have the potential to transport pollutants to receiving waters if the discharge is allowed to flow through areas where significant materials, oil, sediment, trash, and construction debris may potentially be carried into the storm drain system.

Not all the activities conducted at the ARFF station that generate NSWDs are considered non-emergency firefighting flows. Non-emergency firefighting flows that have the potential to transport pollutants to receiving waters include potable water discharged from the ARFF rigs during firefighting practice drills and other exercises. Fire hydrants will be used only to fight fires and to maintain human health and safety. Routine vehicle and equipment cleaning is conducted either at the SAN wash rack or in a nearby permeable area. The RCC has a certified contractor test the sprinkler and FM200 fire suppression system quarterly and annually. The FM200 fire suppression system is installed in the computer room, and a sprinkler system is installed throughout the facility. The Authority requires the implementation of various BMPs to address these types of activities.

The Authority allows non-emergency firefighting equipment testing to be performed, but prohibits the discharge of non-emergency firefighting flows to the MS4. The proper disposal of non-emergency firefighting flows is discussed below:

1) Firefighting Equipment Testing

While firefighting equipment is tested annually at Menzies FSF, the test is conducted using water only and the water is discharged into storm drains connected to the onsite OWS. At the FSF foam house, the test ports inside the house are used to test the water-to-foam ratio; however, no foam discharge is created in this process. During all equipment and facility testing, the test area is bermed and all wastewater is collected and disposed of offsite.

Firefighting foam testing is no longer performed by ARFF. ARFF performs its rig water testing once per year north of the north ramp, using approximately 1,000 gallons of water only. Although the entire north ramp drainage area is connected to OWSs, these systems are used only as a back-up fail-safe. The ARFF rig water system testing uses a No Foam System that directly connects to the rigs, bypassing the foam intake, and using only water, with no foam waste. The slit drainage trench is blocked off from the storm drain system by sandbags prior to conducting the water test, allowing the water to be captured in the slit trench, but preventing it from entering the storm drain. All the wastewater is then vacuumed into a tanker truck and properly disposed of to an onsite sanitary sewer under the proper permit from the MWWD.

2) Firefighting Training

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

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

- Discharge water in a manner and direction that prevents the discharge from contacting surface pollutants in the path of the discharge.

TIDAL INTRUSION

Many of the outfalls from the storm drain system at SAN are submerged during high tides and even during low tides, allowing water from San Diego Bay to travel upstream in the storm water conveyance system. The tidal waters have the potential to transport back downstream to the receiving water any pollutants that have accumulated in the SAN storm water conveyance system. Pollutants from industrial operations, residue from spills of significant materials, construction debris, sediment, and oil from parking lots and streets have the potential to collect in the storm water conveyance system. Tidal intrusion has been identified as a source of water quality impact to receiving waters only when pollutants are allowed to accumulate in the SAN storm water drain system and then be carried downstream by the receding tidal flow. To prevent these potential impacts, the Authority regularly inspects and cleans the storm drain system to reduce potential pollutants from coming into contact with tidal flows. The Authority's monthly inspection program is more fully described in Section 7.13.4. Control measures to address the potential for tidal intrusion to transport pollutants to receiving waters are described below:

- Perform monthly and additional ad hoc inspections of the MS4.
- Perform quarterly inspection of storm water conveyance systems. Daily, inspect the sump by the trash compactor, OWS near the Menzies fueling facility, and storm drains near the California Least Turn nesting areas.
- Perform annual or as needed cleaning of all OWSs, quarterly or as needed cleaning of underground storm drain pipes, as needed cleaning of drop inlet, curb inlet, trench drains, slit drains, and high priority catch basins located near terminal areas. Additional storm drains are cleaned as needed on the basis of quarterly and ad hoc inspections, monthly, and after each storm event during the wet season.
- Install and maintain screens in front of curb inlets on the south side of SAN. Additional screens will be installed as necessary.
- Keep accurate logs on cleaning and maintenance of the storm drain system.
- Maintain a clean and waste-free facility by using foreign object damage (FOD) buckets, performing frequent dumpster service, and cleaning all dumpsters, compactors, and trash haulers.

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

- **Aircraft and Vehicle Washing**: Washing of equipment, vehicles, and aircraft is to be performed at designated wash areas where wash water is collected, recycled, or connected to an approved sanitary sewer connection. The designated wash areas at SAN include the Authority's wash rack and wash bays at the RCC. The Authority's wash rack is sloped; all flow is directed to the sanitary sewer. The wash rack operated by American Airlines was removed in 2016. The Menzies wash rack that was located in Drainage Basin 7 was removed in 2021. Rental vehicles are washed in the RCC's QTA area, located in the parking garage structure. The car washes within the RCC structure have a closed loop system where the water drains to an OWS, is treated using reverse osmosis, and reused within the car wash. Additionally, there is no threat of an unauthorized NSWD because this activity is performed within the RCC structure which is covered and is not exposed to storm water. The use of a control nozzle on all hoses is recommended to minimize the amount of water used.

- **Erosion/Sediment Transport**: The amount of exposed soils at SAN should be minimized to the extent possible. For areas where soil is exposed, temporary erosion and sediment control measures can be used to minimize erosion of exposed soils and to minimize the potential for sediment transport (i.e., erosion control blankets, mulch, gravel bags, fiber rolls, and silt fences). These temporary BMPs require regular inspection and maintenance or replacement to check their effectiveness.
- **Aboveground Storage Tanks**: All ASTs are equipped with built-in cement secondary containment. ASTs used and maintained by the Authority are inspected daily by FMD and maintenance is performed as needed. The Authority ensures that all tenants perform inspection, maintenance, and safety protocols as required under their Use and Occupancy Permit if their operations require the use of ASTs.
- **Vehicle, Equipment and Material Leaks or Spills**: Preventive employee and tenant training, inspections, and vehicle and equipment maintenance activities are conducted regularly to reduce the potential for leaks and spills. All fuel operators are required to perform monthly testing of all fueling equipment. A full description of the Authority's spill prevention and cleanup program is located in Section 3.2.3. Eleven OWSs serve as a precautionary capture method for leaks and spills. Each installed OWS has an alarm system. If the oil reaches a certain level, or oil leaks to the ground, an alarm goes off. The capacities of the OWSs range from 3,000 to 40,000 gallons, depending on the respective loads anticipated in each area. If a spill occurs and must be diverted to an OWS, the person(s) who caused the spill is (are) responsible for cleaning out the OWS once the spill has been contained and the threat removed. The OWSs are inspected by P&EAD, and maintenance is conducted as needed.
- **Debris Accumulation**: Sweeping at SAN is conducted using mechanical and regenerative air sweepers. Roadway sweeping is conducted 5 days per week and daily sweeping is conducted within the aircraft operations area, including ramps, parking lots, perimeter roads, and construction areas. Each ramp area is on rotation throughout the week so that terminal and taxiway areas are swept at least once per week. As part of the SAN ramp-walk program, FMD inspects and sweeps up against each building every month.

3.2 ILLICIT DISCHARGE DETECTION AND ELIMINATION

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

Illicit connections are defined as "…any manmade conveyance or drainage system through which a non-storm water discharge to the storm water drainage system occurs or may occur. Any connection to the MS4 that conveys an illicit discharge…" These connections provide pathways for pollutants to enter the storm drain system. Improperly installed or defective rain diversion systems or devices that release pollutants into the storm drain system will also be considered illicit connections. A complete evaluation and characterization of all NSWDs, their sources, and drainage areas is included in Section 7.7.3.

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

activities itself at the cost of the responsible party. NSWD and IDDE enforcement programs are discussed in Section 3.4.

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

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

3.2.1 PUBLIC REPORTING OF ILLICIT DISCHARGES AND CONNECTIONS

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

The Authority's SAN Communication Center storm water hotline is a 24-hour telephone line that allows Authority staff and airport tenants to report complaints or concerns regarding landscape runoff, broken sprinklers, or other issues relating to over-irrigation and unauthorized NSWDs. This reporting mechanism is promoted by including the telephone number on the back of SAN Security ID Badges that are issued at SAN. An over-irrigation reporting form is also available on the SAN P&EAD webpage and on the Authority Contact Us webpage (https://www.san.org/Travel-Info/Contact-Us).

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

3.2.2 TRASH POLLUTION PREVENTION

Litter and illegal dumping can be significant sources of pollutants if allowed to reach the storm drain. Trash can be transported in runoff and accumulates at storm drains or inlets. As of December 2018, the Authority must comply with the State of California's Trash Order No. R9-2017-0077, which requires the implementation of the Trash Amendments, or Resolution 2015-0019, the Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash, and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California. The Trash Order prohibits trash from entering waterways via the storm water conveyance system. In response to the

Trash Order, the Authority has increased street sweeping, launched education programs on trash/litter/FOD, and installed devices on storm drains to help prevent these materials from entering the storm drain system. The Authority's FOD Management Plan (Appendix J) helps ensure compliance with the Trash Order.

A central element of the Trash Order is a land-use based compliance approach that targets high trash-generating areas. Within this are two alternative compliance tracks:

- Track 1: Permittees install, operate, and maintain a network of certified Full Capture Systems to capture trash in the storm drains, located in priority land use areas for municipal systems, and the entire facility for industrial and commercial permit holders.
- Track 2: Permittees install, operate, and maintain any combination of controls (structural and/or institutional) anywhere in their jurisdiction as long as they can demonstrate that their system performs as well as Track 1 (i.e., Full Capture Systems Equivalency).

The Authority chose to implement Track 1 based on analysis of the priority land use areas, multiple NPDES permit requirements, and anticipated projects to address the water quality goals and objectives at SAN set forth in the San Diego Bay WQIP.

The Authority's compliance with Federal Aviation Administration (FAA) regulations prohibits trash and debris from being present in the aircraft operations area and thus prevents trash from reaching the MS4. The FOD Program is consistent with the Trash Order's outright prohibition of trash and debris for areas subject to Industrial General Permit requirements.

SAN currently implements the following measures aligned with the FAA regulations and guidance:

- Designation of a FOD program manager to oversee implementation and adherence to the FOD Program.
- Prohibition of any dumping or littering of trash within the Authority's jurisdiction, as follows from the Authority Code Article 7: Safety and Security (https://www.san.org/airport-authority/codes-policies):
  - Authority Code Section (§)7.41 (a). It shall be unlawful for any person to dump any material or throw garbage, offal, rubbish, litter, sewage, refuse, or foreign material of any kind upon any lot, tract of land, street, alley, lane, court, sidewalk, or place under the jurisdiction of the Authority without the written permission of the Authority's Executive Director or his or her designee (the "Executive Director").
  - Authority Code §7.41 (b). It shall be unlawful for any occupant, lessee, tenant, or licensee of any premises within said area to place, or allow to be placed, or allow to remain on any premises within said area such garbage, offal, rubbish, litter, sewage, refuse, or foreign material of any kind without the written permission of the Executive Director.
- Regulation of litter, refuse, and FOD generated by airport staff, tenants, and contractors through the Authority Rules and Regulations document (Sections 2.3, 3.4.9, and 4.3 of Attachment 3 of the FOD Management Plan, updated in 2018), as follows:
  - No person shall transport litter or refuse without covering the materials being transported;
  - All tenants providing receptacles for litter or refuse shall provide adequate covers to ensure against any leaking, dripping, sifting or otherwise escaping of any materials;
  - Every person depositing garbage, debris, or refuse in any unauthorized location shall clean up the deposited material immediately in an effective manner;
  - All tenants shall keep their leased areas and adjacent areas clean and free of rubbish and trash;

  - Every person with access to the aircraft operations area shall keep the aprons, ramps, and grounds of SAN free of all FOD;
  - Every tenant providing a trash container at SAN (e.g., cans, dumpsters, compactors) shall ensure that the container is covered, checked frequently, and emptied as necessary to prevent spillover of trash; and
  - No person shall establish a break area (tables, chairs, trash can, etc.) on the ramp without prior approval from the Authority.

- Daily self-inspections for identification and removal of FOD—the Authority's Airport Safety Self-Inspection Checklist is provided in Attachment 3 of the FOD Management Plan.
- Removal of FOD from the airport environment once FOD is detected.
- Provision of FOD buckets for continuous "clean-as-you-go" debris collections at all terminal loading areas.
- Weekly sweeping of each terminal and taxiway with a mechanical sweeper.
- Power washing and vacuuming activities at least quarterly or as-needed to capture trash and debris.
- Monthly inspections to identify potential pollutants, including identifying FOD and ensuring that trash cans and dumpsters are covered.
- Interaction with staff and tenants during monthly inspections to identify and discuss trash issues.
- Ramp walks every month, alternating between Terminal 1 and Terminal 2 to inspect for and remove FOD.
- Annual storm water and spill (including trash spill) training for all staff and tenant management, highlighting trash issues as a potential storm water pollutant.
- Annual FOD prevention training curricula for Authority personnel.
- Evaluation of the amount and kind of FOD during characterization studies.
- Maintenance of FOD documentation for program design and assessment.

The Authority's Web-based database will be employed to track incidents of intentional littering or dumping. During monthly visual observations, inspectors will identify (if known) the illegal dumping hot spots, patterns and types of occurrences, mode of dumping, reporting mechanism, and known or suspected source or responsible party in the Web-based database. If large amounts of debris are found in a tenant's operational area, a warning is provided, and the tenant has 3 days to address the issue.

3.2.3 SPILL PREVENTION, REPORTING, AND RESPONSE

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

3.2.3.1 Spill Prevention

SANITARY SEWERS

As discussed in Section 6.4, the Authority's preventive and corrective sanitary sewer maintenance programs focus heavily on those areas of known problems or concerns. Known problem areas typically consist of the lines immediately downstream of food services, which have a tendency to be impacted by grease. For all

locations, the Authority provides for or requires the food service provider (as a requirement of the lease) to conduct, at a minimum, annual routine monitoring, inspection, and cleaning. Wastewater from restaurants moves through three grease interceptors before entering the sanitary sewer system. Grease interceptors are maintained and cleaned every 1 to 2 months. When system malfunctions do occur, such as stoppages, the cause of the problem is investigated and analyzed. Maintenance schedules are then adjusted accordingly. If necessary, repairs are initiated by Authority maintenance crews or food service provider, as appropriate. If appropriate, the infrastructure component is referred for repair or replacement by maintenance crews. Larger, more complex issues generally become recommendations for capital improvement projects as part of the Authority budget planning and approval process (Section 10.0).

OTHER SPILLS

Refueling and equipment maintenance activities use jet fuel, aviation gas, automotive fuel, hydraulic oils, oil, deicing fluids, degreasers, and other solvents. Because of the intensity of use, there is a higher possibility of significant spills of jet fuel. Jet fuel is stored in ASTs at the FSF and distributed via pipeline to the WRF. USEPA requires facilities with "an aggregate aboveground oil storage capacity greater than 1,320 United States gallons or a completely buried storage capacity greater than 42,000 United States gallons" (USEPA, 2015) to develop and implement a Spill Prevention, Control, and Countermeasure (SPCC) Plan. Each tenant who must file a SPCC Plan with USEPA is also required to file a copy with P&EAD. Tenants must also contract a hazardous materials emergency response and cleanup services provider and provide the information to the SAN Communication Center and P&EAD. Aircraft fueling is performed by a fleet of fuel trucks (containing several hundred gallons of fuel) operated by two refueling operations. The fuel trucks operate on the ramp areas of the main terminals, the FBO building, the air cargo area, and the overnight aircraft parking areas. The Authority requires the implementation of spill response BMPs, secondary containment, frequent inspection and maintenance of vehicles, equipment, and storage containers, and proper labeling and dating of material containers. Spills from tenants are reduced through the required use of BMPs, education, and enforcement of relevant regulations for the storage and usage of hazardous materials.

3.2.3.2 Spill Reporting

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

3.2.3.3 Spill Response

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

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

SMALL SPILL CLEANUP PROCEDURES

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

LARGE SPILL CLEANUP PROCEDURES

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

- Stop the source:
  - Shut off valves on aircraft or refueler trucks;
  - Install plugs in ruptured tanks or valve fittings;
  - Relocate leaking vehicle to nearby area of secondary containment; and
  - Transfer fuel into other vessels, tanker trucks, etc.
- Perform notifications:
  - Tenants contact the SAN Communication Center (619-400-2710) and SAN Rescue and Firefighting Facility (619-231-5204);
  - Harbor Police (619-686-8000); and
  - National Response Center (800-424-8802 or 202-267-2675), as necessary or required by law.

- SAN Operations Contact:
  - Authority P&EAD (619-400-2782);
  - California Department of Fish and Game/Office of Spill Prevention and Response 24-hour hotline (916-445-9338) or CalTip line (888-334-2258), as necessary or required by law;
  - State of California Office of Emergency Management Agency (800-852-7550 or 916-845-8911);
  - United States Coast Guard (619-683-6495), as necessary or required by law;
  - RWQCB (619-516-1990), as necessary or required by law; and
  - USEPA Office of Emergency Services (800) 300-2193, as necessary or required by law.
- Contain and absorb the spill:
  - Prevent the spill from reaching the storm drain.
  - Turn on emergency shutoff valves if they are installed in the nearby storm drains.
  - Create dikes with absorbent or other material.
  - Plug storm drain inlets with rubber mats and tarps and collect ponded materials by vacuum truck, drum-mounted vacuum, squeegee roller, or other means. If the spill is too large to control or if it reaches the storm drain, the person responsible for the spill should immediately contact a Hazardous Materials Contractor.
- Protect San Diego Bay, as necessary, by installing barrier booms and/or absorbent booms at the storm drain outfall and monitoring outfall for signs of release.
- Ensure that emergency diversion to a storm drain is conducted only on the north ramp or the Terminal 2 West ramp where the storm drains have approved separation devices. The responsible party must clean and remove the spilled fluids from the separation device once the spill has been controlled and the surrounding area has been cleaned.
- Make follow-up notifications and submit reports, as necessary, to agencies necessary or required by law.

INCIDENT COMMAND SYSTEM IMPLEMENTATION

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

3.3 DRY WEATHER MONITORING PROGRAMS

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

As required by Provision B of the Municipal Permit, the Authority is collaborating with the County of San Diego, Port of San Diego, and the cities of Chula Vista, Coronado, Imperial Beach, La Mesa, Lemon Grove, National City, and San Diego (collectively, the San Diego Bay WMA Responsible Parties) to develop, implement, and report on the San Diego Bay WQIP, which includes goals and strategies to reduce pollutant discharges from MS4 outfalls in the San Diego Bay WMA during wet and dry weather. The monitoring programs described below were developed to prevent NSWDs to the MS4 and to meet water quality goals outlined in the WQIP. In addition, the dry weather visual observations as required by the Industrial Permit, are carried out monthly to identify sources of NSWDs, BMP implementation, and elimination and reduction of NSWDs, including over-irrigation.

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

3.3.1 RECEIVING WATER MONITORING

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

3.3.2 REGIONAL MONITORING

The Copermittees are required to participate in regional monitoring programs, including the Storm Water Monitoring Coalition and Southern California Bight 2013 Regional Monitoring programs. The Copermittees have chosen to participate in the Southern California Bight 2013 Regional Monitoring Program, Storm Water Monitoring Coalition Stream Survey, Hydromodification Regional Monitoring Program, and San Diego County Beach Water Quality Monitoring Program.

3.3.3 SEDIMENT QUALITY MONITORING

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

3.3.4 MS4 OUTFALL MONITORING

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

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

SELECTION OF OUTFALLS

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

A storm drain system map was created in geographic information system (GIS) 10.8 to depict the storm drain system, the 15 drainage basins, and the monitoring locations. The storm drain system map is used in source investigations and satisfies the requirements of Provision E.2.b.(1). of the Municipal Permit. During the dry weather monitoring, the storm drain system map is checked for accuracy, and corrections and changes are made accordingly.

DRY WEATHER MS4 OUTFALL DISCHARGE FIELD SCREENING

The Authority conducts dry weather field screening and analytical monitoring in accordance with Provision D.2 of the Municipal Permit to identify water quality problems that may result from any of the NSWDs described in Section 3.1. Field screening will be conducted at the 2 major MS4 outfalls within the Authority's jurisdiction, as well as at 20 compliance locations and outdoor industrial equipment and storage areas to identify any unauthorized and authorized NSWDs, as required under the Industrial Permit (Section XI.A.1.a).

NON-STORM WATER PERSISTENT FLOW MS4 OUTFALL DISCHARGE MONITORING

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

INDUSTRIAL DRY WEATHER VISUAL OBSERVATIONS

The Authority conducts monthly visual observations of all drainage areas within SAN for the presence of unauthorized NSWDs and any authorized NSWDs and their sources, as described in Section 7.13.4.2. As a prohibited or unauthorized NSWD, over-irrigation will be inspected for during these dry weather visual observations. The objective of the monthly inspections is to identify sources of NSWDs and to check that BMPs are being properly implemented and are effective, and to prevent or eliminate unauthorized discharges.

3.3.5 SPECIAL STUDIES

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

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

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

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

3.4 FOLLOW-UP AND ENFORCEMENT

Source investigations are conducted by the Authority when an illicit discharge is detected or suspected, and the source of the illicit discharge is not readily identifiable. The purpose of these investigations is to locate the source of an illicit discharge so that necessary measures required to eliminate the illicit discharge can be implemented. This section has been prepared to meet the requirements in Provision E.2.d of the Municipal Permit. Section 3.4.3 provides a detailed description of the Authority's ERP.

3.4.1 FOLLOW-UP SOURCE INVESTIGATION PROCEDURE

The Authority encourages staff, contractors, and developers to assist in identifying and reporting illicit discharges and connections to the SAN Communication Center if observed during daily activities. The investigation action criteria for dry weather monitoring results were developed by the Copermittees and are provided in Appendix D-2. Additionally, the Municipal Permit now includes non-storm water action levels. Within 2 business days of receiving dry weather field screening or laboratory results that exceed any action levels, the Authority will conduct an investigation to identify the source or provide a rationale for why the discharge does not pose a TTWQ and does not require further investigation. The trash assessment information collected may also provide the Authority with useful information with regard to problem areas or activities. Source investigations will typically be conducted by the Authority's P&EAD monitoring personnel. In some cases, other onsite Authority personnel may conduct a source investigation. If a source investigation reveals an upstream source outside of SAN's jurisdiction, the Authority will notify and work with responsible Copermittees to eliminate the source.

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

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

- Report of an illicit or suspected illicit discharge and over-irrigation reports through the SAN hotline, to the Communication Center, or to P&EAD;
- Exceedance of field or analytical action levels;
- Ceasing of the discharge prior to arrival at the point of observation or during a source investigation, and inability to determine the source without the discharge;
- Insufficient information produced during source investigations to locate the source or provide enough evidence to identify a responsible party;

- An order issued by the Authority to a responsible party and a follow-up investigation necessary to ensure that the responsible party has complied with the required abatement actions; and
- An area or activity identified as having a high potential for the occurrence of an illicit discharge, and therefore periodic follow-up visits to ensure that future discharges are rapidly identified and eliminated.

3.4.2 DOCUMENTATION AND REPORTING

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

- The location of the violation, the hydrologic subarea, the impacted receiving water body, the point of discharge from the MS4;
- The initial source of information that triggered the investigation;
- The date on which and method through which the information was received;
- The date of the investigation;
- The corrective action or enforcement procedures implemented;
- Any follow-up investigations that were conducted and the dates and results of each investigation;
- The identified or suspected source of the discharge;
- Any known or suspected incidents that may relate to the source of the discharge; and
- Final results of the investigation.

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

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

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

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

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

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

3.4.3 ENFORCEMENT

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

The Authority has increased tenant BMP inspections from quarterly to monthly. Ad hoc inspections are also performed. Inspections will focus on pollutant generating areas and activities, and tenants will be encouraged to improve and increase BMP implementation through a graphic scoring system developed every 2 years. A detailed list of BMPs evaluated during tenant inspections is included in Appendix B.

Violations are determined based on non-compliance with Authority rules and regulations, permit requirements, provisions in the Storm Water Code, or applicable laws and regulations. Any violations noted during a site inspection by the P&EAD inspector will be discussed onsite if appropriate personnel are available, be reported as outlined in Section 3.4.2, and be recorded in the Web-based database. Immediate action will be taken to stop or control active prohibited discharges, spills, or obvious illicit discharges. Issues concerning over-irrigation are directed to FMD to address. FMD are available on a 24/7 basis to respond to over-irrigation incidents. Field screening and monitoring of other NSWDs, as outlined in Appendix D-2, will be conducted to prioritize responses and follow-up investigations. The inspection report will detail the corrective actions required, the timeframe in which corrective actions must be completed, and any enforcement actions issued.

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

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

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

- Enforcement Level 1 is initiated by the findings of BMP deficiencies. The issues will be documented in the Web-based database so that the responsible party and interested parties are notified of the violation. The responsible party can then notify the inspector via the Web-based database when the corrective action has been completed. Corrective actions are expected to be completed within 30 days. Photos of the corrective action should be uploaded to the Web-based database within 30 days, or the agreed upon timeframe, if longer. The Web-based database generates a date associated with each photo, which reflects the photo's upload date. If the finding is not corrected after the first reinspection, a Notice of Violation is issued to escalate enforcement, which may include an order to clean, test, or abate. Upon the second reinspection, if the finding is still not corrected the issues will be directed to Airline Relations for escalated enforcement.
- Enforcement Level 2 is initiated when the non-compliant activity or violation may impact water quality, human health, or the environment (i.e., prohibited discharge). A written notice to clean, test, or abate, and/or a CDO is used to initiate enforcement and compliance is expected within 24 hours. If a CDO is issued, the recipient must cease and desist all activities that cause or contribute to illegal discharges or remove illicit connections. A notice and order to clean, test, and abate is a written or verbal order to perform the activities listed in the Authority's Storm Water Code. If the violation is not corrected Airline Relations will be notified for escalated enforcement. Penalties and fines may be issued if the notice to clean, test, or abate and/or the CDO are ineffective and the violation continues. Additionally, the Authority or tenants may be subject to a meeting with the Director of P&EAD to discuss the reasons for failing to comply and the means of resolving the issue.

If the non-compliance resulted in a spill or discharge, the party responsible for the discharge is responsible for conducting cleanup measures appropriate to the degree of the spill or discharge, or if needed, for contacting the appropriate emergency response or cleanup contractor. Enforcement tools are being built into

the Authority's Web-based database, whereby over-irrigation and other illicit discharges will be automatically identified as an issue for Level 2 escalated enforcement.

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

3.5 MONITORING PROGRAM ASSESSMENTS

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

RECEIVING WATER ASSESSMENTS

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

NON-STORM WATER MS4 OUTFALL DISCHARGE ASSESSMENTS

The Authority will review the data collected during the MS4 outfall discharge monitoring programs at least once during the term of the Municipal Permit. Assessments of the data collected during the MS4 Outfall Receiving Water Monitoring Program will be made to assess the overall effectiveness of the IDDE program. These assessments will be included in the WQIP Annual Report (Provision F.3.b.(3) and ROWD. Additional information on MS4 outfall assessments is provided in Section 5.3 of the WQIP.

SPECIAL STUDIES ASSESSMENTS

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

3.6 ILLICIT DISCHARGE DETECTION AND ELIMINATION COMPONENT PROGRAM REVIEW AND MODIFICATION

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

- Updates were made to the NSWDs/IDDE Component, Section 3.0, in December 2017 and January 2019 to incorporate over-irrigation prohibitions and add details on the FOD Management Program at SAN. The outline of potential NSWDs at SAN were reorganized in Sections 3.1.1 and 3.1.2.

- Updates were made to the escalated enforcement levels in the Enforcement Section of the NSWDs/IDDE Component, Section 3.0, in January 2022.