3.0 NON-STORM WATER DISCHARGES

The Authority prohibits all types of non-stormwater discharges into its storm drain system unless such discharges are authorized by either a separate NPDES permit (such as Section D.1.b of the General Industrial Permit) or Sections B.2 and B.3 of the Municipal Permit. The Authority is required by both the Municipal Permit and General Industrial Permit to eliminate unauthorized non-stormwater discharges. If the Authority identifies a non-stormwater discharge as a significant source of pollutants to the waters of the U.S. (receiving waters), the Municipal Permit requires the Authority to prohibit the discharge category or develop and implement appropriate measures to reduce the discharge of pollutants to the MEP, and the General Industrial Permit requires the Authority to prepare and implement a SWPPP to identify the sources of pollution that affect the quality of authorized non-stormwater discharges and to describe and ensure the implementation of BMPs to reduce or prevent pollutants in authorized non-stormwater discharges.

The authorized non-stormwater discharges are in compliance with the General Industrial Permit if they meet the following conditions:

- The non-stormwater discharges are in compliance with the San Diego RWQCB requirements.
- The non-stormwater discharges are in compliance with Authority ordinances and / or requirements.
- BMPs are specifically included in the SWMP to prevent or reduce the contact of non-stormwater discharges with significant materials or equipment and minimize, to the MEP, the flow or volume of discharges.
- The non-stormwater discharges do not contain significant quantities of pollutants.
- The monitoring program includes quarterly visual observations of each non-stormwater discharge and its source to ensure that BMPs are being implemented and are effective.
- The non-stormwater discharges are described annually as part of the Annual Reports.

The Authority conducts quarterly visual observations of all drainage areas within SAN for the presence of unauthorized non-stormwater discharges and any authorized non-stormwater discharges and their sources, as described in Section 7.2.4.3 of this SWMP. The objective of the quarterly inspections is to verify that BMPs are being properly implemented and are effective. Furthermore, the Authority conducts dry weather field screening and analytical monitoring in accordance with Section D.4 of the Municipal Permit to identify water quality problems that may result from any of the non-prohibited non-stormwater discharges described below to ensure that such discharges are properly managed and control to prevent impacts to receiving waters.

3.1 NON-STORMWATER DISCHARGE CATEGORIES

Potential non-stormwater discharges at SAN include the following sources: groundwater, water from crawl space pumps and footing drains, air conditioning condensation, landscape irrigation, potable water flushing, fire hydrant flushing, non-emergency fire fighting flows, and tidal intrusion into the storm drain system. The potential for these non-stormwater discharges to be a significant source of pollutants to the receiving water is discussed below.

3.1.1 GROUNDWATER, WATER FROM CRAWL SPACES, AND FOOTING DRAINS

The elevation and proximity of the airport in relation to San Diego Bay creates a relatively shallow groundwater table, generally approximately 10 to 15 feet below the ground surface. The shallow groundwater tends to infiltrate into below grade structures at the airport, including utility vaults, below-grade crawl spaces, footing drains, and the storm drain system itself. Given the absence of significant sources of groundwater contamination at the airport, the Authority has not identified these categories of non-stormwater significant sources of pollutants to receiving waters. As such, these non-stormwater discharges are not prohibited by the Authority, although common-sense control measures related to the discharge of these non-stormwaters are outlined in Section 3.3 below.

3.1.2 AIR CONDITIONING 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 discharges rates are extremely low. 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. Control measures to address the potential for air conditioner condensate to transport pollutants to receiving waters are described below.

3.1.3 LANDSCAPE IRRIGATION

Landscape irrigation constitutes a small portion of the potable water usage at the Airport, due in part to the limited landscape acreage (approximately 12 acres) and the use of xeriscaping to help reduce the need for irrigation. Given the limited use of landscape irrigation water at the airport, and that it is generally only landscape irrigation overspray that has the potential to transport pollutants, the Authority has not identified landscape irrigation as a significant source of pollutants to receiving waters. As such, this non-stormwater discharge is not prohibited by the Authority, although common-sense control measures related to the landscape irrigation discharges are outlined in Section 3.3 below.

3.1.4 POTABLE WATER FLUSHING

Each of the airline passenger loading / unloading gates at Terminals 1 and 2 features a potable water supply cabinet with a hose to dispense potable water to the aircraft. Proper use and maintenance of the water cabinets require potable water to be flushed from the system onto the ramp area. Discharges during potable water system operation, maintenance, and

testing 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 to transport pollutants to receiving waters are described below.

3.1.5 FIRE HYDRANT FLUSHING

The City of San Diego Water Department generally maintains the water mains and fire hydrants at SAN, although the Authority Facilities Maintenance Department takes some role in responding to leaks and breaks. 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. Nonetheless, fire hydrant maintenance activities are subject to RWQCB Order R9-2002-0020, and compliance with the Order should eliminate the transport of pollutants to receiving waters.

3.1.6 NON-EMERGENCY FIRE FIGHTING FLOWS

Not all the activities conducted at the ARFF station that generate non-stormwater discharges are considered non-emergency fire fighting flows. Routine building, vehicle, and equipment cleaning and maintenance are similar to the cleaning and maintenance activities conducted by others at SAN. The Authority requires the implementation of various BMPs to address these types of activities. As such, 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. Once potable water has been left to stand in building fire suppression systems or been mixed with foaming agents, the water becomes contaminated and an obvious 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. Control measures to address the potential for non-emergency fire fighting flows to transport pollutants to receiving waters are described in Section 3.4 below.

3.1.7 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 stormwater conveyance system. The tidal waters have the potential to transport back downstream to the receiving water any pollutants that have accumulated in the SAN stormwater 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 stormwater conveyance system. Control measures to address the potential for tidal intrusion to transport pollutants to receiving waters are described below.

3.2 PROHIBITED NON-STORMWATER DISCHARGE CATEGORIES

Of the non-stormwater discharge categories described above, the Authority prohibits the discharge of non-emergency fire fighting flows which consist of potable water mixed with foaming agents. The proper disposal of non-emergency fire fighting flows consisting of potable water mixed with foaming agents is discussed in Section 3.4 below. Controls for the remaining categories of non-stormwater discharges described above are listed below in Section 3.3.

All other non-stormwater discharges are prohibited, including: discharges of waste wash water of any kind; discharges of any pollutant, chemicals, materials, wastes (including leaks and spills); and discharges of urban runoff that have been allowed to flow through areas where chemicals, fuels, grease, oil, or other hazardous materials are stored such that pollutants may potentially be carried into the storm drain system. The Authority has identified BMPs throughout the SWMP to address activities at the airport that could cause an illegal non-stormwater discharge. In addition, the Authority has employed the following structural BMPs to help prevent non-stormwater discharges from entering receiving waters:

- Five oil water separators are currently used at SAN. The capacities of the oil water separators range from 3,000 - 40,000 gallons, depending on the respective loads anticipated in each area. Each oil water separator is an "in-line" system that captures and treats stormwater flow in the connecting storm drain for subsequent discharge to the storm drain outfall. The oil water separators are equipped with inclined plate coalescers that remove sediments and encourage coalescing of oil droplets before the treated water is discharged. The oil water separators are maintained by Authority Facilities Maintenance staff as needed.

- All ASTs on SAN are provided with secondary containment.

- Temporary storm drain protection devices, such as plugs, gravel bags, and filter cloth, are used to prevent unauthorized discharges to the storm drain system during construction and maintenance projects.

3.3 CONTROL MEASURES FOR ALLOWABLE NON-STORMWATER DISCHARGE

Allowable non-stormwater discharge categories that may be significant sources of pollutants to receiving water without proper management and control are identified in Section 3.1 above. To prevent impacts to stormwater quality, the Authority requires the use of BMPs designed to either prevent these discharges from contacting pollutants or prevent these discharges from reaching the storm drain system. The Authority conducts regular inspections to ensure these BMPs are properly and fully implemented. The specific BMPs required by the Authority for the non-stormwater discharges identified above are listed below.

3.3.1 GROUNDWATER, WATER FROM CRAWL SPACES, AND FOOTING DRAINS

While groundwater, water from crawl spaces, and water from footing drains have not been identified as significant sources of stormwater pollution, in addition to the standard airport-wide BMPs described in Appendix B, the following common-sense BMPs are generally applicable to these types of non-stormwater discharges:

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

3.3.2 AIR CONDITIONING CONDENSATE

While air conditioning condensate has been identified as a significant source of stormwater pollution only when allowed to contact pollutants lying in the path of the discharge, in addition to the standard airport-wide BMPs described in Appendix B, the following BMPs are generally applicable to air conditioning discharges:

- Properly maintain the air conditioner to help reduce amount of condensate discharged;
- Prevent the discharge from contacting surface pollutants in the path of the discharge;
- Prevent discharges from entering stormwater conveyance system; if possible, by diverting the flow to a landscaped area, to an impervious area where the discharge can evaporate, to an oil water separator, or to the sanitary sewer.

3.3.3 LANDSCAPE IRRIGATION

While landscape irrigation has been identified as a significant source of stormwater pollution only when allowed to contact pollutants lying in the path of the discharge, the following BMPs are utilized during landscape irrigation to minimize, to the extent practicable, the volume of the non-stormwater discharges and to prevent these discharges from contacting sources of pollution:

- Utilize native plants to reduce need for irrigation and fertilization;

- Apply pesticide / herbicide as needed and in accordance with manufacturer instructions to maximize utility of the product and minimize potential for product residue to contact irrigation runoff;

- Employ water conservation practices, such as:

  - Use of 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, personnel should periodically observe the area being watered.

  - Conduct weekly observations to identify and correct damaged sprinkler systems and to adjust sprinkler heads. The landscape areas should also be observed for excessive over-watering and runoff.

  - 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.

  - Water only in the evening or at night.

  - Avoid overspray outside of the landscaped areas and adjust irrigation systems to prevent overspray, minimize runoff and prevent contact with surface pollutants.

- Avoid placing, storing, or parking equipment and vehicles in areas being irrigated, so that the potential for runoff caused by blocking the spray or water delivery patterns is limited, and thus, the potential for inadvertent runoff to contact pollutants is precluded.

3.3.4 POTABLE WATER FLUSHING

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

- 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 allows the water to pond on the surface and evaporate without ever reaching a storm drain;

- Flush 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 also maximized;

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

3.3.5 FIRE HYDRANT FLUSHING

While fire hydrant flushing has been identified as a significant source of stormwater pollution only when allowed to contact pollutants lying in the path of the discharge, fire hydrant flushing and maintenance activities are subject to RWQCB Order R9-2002-0020. Since compliance with the Order should eliminate the transport of pollutants to receiving waters, the Authority requires no additional control measures to address fire hydrant flushing discharges.

3.3.6 NON-EMERGENCY FIRE FIGHTING FLOWS

Specific measures to control non-emergency fire fighting flows are described in Section 3.4 below.

3.3.7 TIDAL INTRUSION

Tidal intrusion has been identified as a significant source of impact to receiving waters only when pollutants are allowed to accumulate in the SAN stormwater drain system and then be carried down stream by the receding tidal flow. To prevent these potential impacts, the Authority inspects and cleans, as necessary, the storm drain system to reduce potential pollutants from coming into contact with tidal flows. The Authority's quarterly inspection program is more fully described in Section 6. In addition to the standard airport-wide BMPs described in Appendix B, the following BMPs are employed to maintain a clean storm drain system:

- Regular inspections of the storm drain system;
- Cleaning and maintaining catch basins, inlet structures, and all drain lines;
- Keeping of accurate logs on the number of catch basins cleaned.

3.4 PROGRAM FOR NON-EMERGENCY FIRE FIGHTING FLOWS

As noted in Section 3.1 above, non-emergency fire fighting flows that have the potential to transport pollutants to receiving waters include: potable water that has been left to stand in building fire suppression systems; or potable water that has been mixed with fire fighting foaming agents; or potable water discharged from the ARFF rigs during fire fighting practice drills and other exercises if allowed to contact pollutants lying in the path of the discharge.

The Authority requires implementation of the BMPs described below to reduce pollutants in non-emergency fire fighting flows to the MEP.

3.4.1 FIRE SUPRESSION 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 Waste Water Department (MWWD) to discharge the water directly to the sanitary sewer; or
- Discharge the water directly into a tanker truck for proper disposal offsite; or
- Capture the discharge in a holding tank or lined, bermed area or sump of sufficient capacity to store the water prior to discharge to an on-site sewer under proper permit(s) from MWWD or prior to transferring the water to a tanker truck for proper disposal offsite; or
- Submit a workplan to the Authority Environmental Affairs Department detailing where and how the water will be capture, stored, and tested for water quality. Submit a report to the Environmental Affairs Department, signed by a registered civil engineer, recommending any necessary treatment required prior to discharging to the storm drain system and requesting the Authority's approval to treat and discharge to the Authority's storm drain system. The Authority will determine if such discharge meets the requirements of the Municipal Permit to protect receiving water quality, or if the water must be disposed of properly to an onsite sanitary sewer or offsite disposal facility.

3.4.2 FIRE FIGHTING FOAM DISCHARGE

While fire fighting equipment is tested annually at the FSF, the test is conducted using water only and the water is discharged into storm drains connected to the on-site oil water separator. 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.

Fire fighting foam testing is only performed by the ARFF Facility. ARFF performs its testing twice a year north of the North Ramp, using approximately 1,000 gallons of water and 50 gallons of foaming agent. Although the entire North Ramp drainage area is connected to oil water separators, these systems are only used as a back-up fail-safe. The slit drainage trench is blocked off from the storm drain system by sandbags prior to conducting the foam test. This allows the foam to be captured in the slit trench, but prevents the foam from entering

the storm drain. All of the foam is then vacuumed into a tanker truck and properly disposed to an on-site sanitary sewer under proper permit from MWWD.

3.4.3 FIRE FIGHTING TRAINING

Fire fighting training typically involves discharges of potable water from the ARFF rigs. These discharges may transport stormwater 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 fire fighting training discharges:

- Pre-plan training exercises to allow integration of structural BMPs to control runoff;
- Use lower gallon per minute (GPM) nozzle settings;
- Use fog streams for short durations and change the direction of discharge as frequently as possible;
- Avoid training activities and discharges near storm drains and do not discharge water directly to a storm drain;
- Discharge water in the direction of landscaped or pervious areas whenever possible.
- Discharge water in a manner and direction that allows the water to pond on the surface and evaporate without ever reaching a storm drain;
- Utilize techniques for storm drain inlet protection when possible;
- Utilize techniques for berming, diking the discharge to allow evaporation whenever possible;
- Utilize techniques for velocity reduction (energy dissipaters) when possible;
- Utilize techniques for sediment control in training whenever possible;
- Discharge water in a manner and direction that 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 also maximized;
- Discharge water in a manner and direction that prevents the discharge from contacting surface pollutants in the path of the discharge.