



SAN Storm Water Management Plan March 2008

San Diego County
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Signed Certified Statement

San Diego County Regional Airport Authority

Storm Water Management Plan Report March 2008

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

Date: March 21, 2008

Signature:

A handwritten signature in black ink, appearing to read "P. Manasjan", written over a horizontal line.

Printed Name: Paul Manasjan

Title: Director, Environmental Affairs Department

March 24, 2008

Certification of Adequate Legal Authority to Implement and Enforce the Requirements of 40 CFR 122.26(d)(2)(i)(A-F) and RWQCB Order R9-2007-0001

The San Diego County Regional Airport Authority (Authority) submits this certification in its capacity as a Copermittee under San Diego Regional Water Quality Control Board (RWQCB) Order No. R9-2007-0001, in accordance with Section C.2 of that Order.

Certification

The undersigned chief legal counsel of the Authority does hereby certify that the Authority has adequate legal authority to implement and enforce each of the requirements contained in 40 CFR [Code of Federal Regulations] 122.26(d)(2)(i)(A-F) and Order No. R9-2007-0001.

Authority Department Activities [Section C.2.a. of the Order]

Section 2, Tables 1 and 2, and Figure 9 of the Authority's Storm Water Management Plan (SWMP), dated March 2008, and of which this statement is made a part, provides identification of those departments which conduct urban runoff, as well as the roles and responsibilities of those departments and the identification of key personnel.

Citation of Urban Runoff Related Ordinances [Section C.2.b. of the Order]

As noted in Section 2.2.1 of the SWMP, the San Diego County Regional Airport Authority Act of 2001 grants the Authority land use planning authority. In addition, Article 8.7 of the Authority Code, known as the San Diego County Regional Airport Authority Storm Water Management and Discharge Control and the Storm Water Code sets forth uniform requirements and prohibitions for dischargers and places of discharge to the storm water conveyance system, and receiving waters, necessary to adequately enforce and administer all laws and lawful standards and orders or special orders, that provide for the protection, enhancement and restoration of water quality.

The Authority seeks to the attainment of the following objectives as stated in the Storm Water Code:

- To reduce stormwater runoff pollution;
- To reduce non-stormwater discharge to the stormwater conveyance system and receiving waters to the maximum extent practicable;
- To comply with all federal and state laws, lawful standards and orders applicable to Stormwater and urban runoff pollution control;

- To prohibit any discharge which may interfere with the operation of, or cause damage to the stormwater conveyance system, or contribute to the impairment of the beneficial use or violation of a water quality objective of the receiving waters;
- To prohibit illegal discharges and illicit connections to the stormwater conveyance system and receiving waters; and
- To develop and implement effective educational outreach programs designed to educate the public, Authority employees and tenants on issues of stormwater and urban runoff pollution prevention.

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

Reasons these Ordinances are Enforceable

These ordinances are enforceable because the Authority has the authority under the statutes of the State of California to enact and enforce these ordinances, and because these ordinances were duly enacted. These ordinances contain specific enforcement provisions and/or are enforceable under the generally applicable enforcement provisions of the Authority Code.

The President/CEO of the Authority or his/her designated representative(s) is authorized to enforce the Authority Storm Water Ordinance.

How Ordinances are Implemented and Appealed [Section C.2.d. of the Order]

Some of these ordinances are implemented through approval programs and some are implemented as regulatory programs. Under each ordinance, the Executive Director of the Authority or his/her designee is authorized and directed in each ordinance to take the actions contemplated by the ordinance, e.g., to consider evidence and make findings, to issue or deny approvals, to impose conditions on projects, to inspect, to take enforcement action, etc.

The Authority Storm Water Code is the principle Authority ordinance addressing urban runoff. This ordinance is regulatory and applies to all development projects and to all new and existing facilities in the Authority's jurisdiction, whether or not Authority approval is required. The Storm Water Code contains discharge prohibitions and BMP requirements. This ordinance also authorizes the Authority to require the submission of Storm Water Pollution Prevention Plans (SWPPPs).

Other Authority programs and contracts require compliance with the Storm Water Ordinance as a condition for approval. For example, development project proponents are required to comply with the Storm Water Ordinance before discretionary approvals are given or recommended. Several Authority departments may impose specific conditions of approval consistent with the Storm Water Ordinance.

All Authority development and environmental programs are also implemented in part through the application of the CEQA process to proposed projects.

Authority ordinances are subject to a public notice and comment process prior to enactment. Enacted Authority ordinances can be challenged by timely filing writs of mandate in Superior Court. The initiative process can also be used to challenge enacted ordinances. The imposition of administrative penalties under these ordinances (where applicable) can be appealed to the courts. Trial court decisions to impose civil penalties or to grant injunctive or other relief can also be appealed.

Administrative and Legal Procedures [Section C.2.e. of the Order]

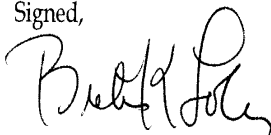
The Authority has the legal and administrative procedures listed below in place to mandate compliance with urban runoff related ordinances and programs.

- Call for Storm Water Pollution Prevention Plans
(Storm Water Control, Authority Code, Article 8, Part 8.7)
- Infraction citations/prosecution (Storm Water Control, Authority Code, Section 8.76)
- Nuisance abatement procedures (Storm Water Control, Authority Code, Section 8.76)
- Civil actions (Storm Water Control, Authority Code, Section 8.76)

The Authority can issue administrative orders without going through the Court system. The Authority cannot issue injunctions, but can seek injunctions in court.

In closing, the Authority looks forward to working with you, your Board, and Board staff on urban runoff related matters.

Signed,



Breton K. Lobner
General Counsel
San Diego County Regional Airport Authority

Executive Summary

The San Diego County Regional Airport Authority (Authority) was established by the California Legislature as a local regional government entity with authority to operate the San Diego International Airport (SAN). On January 1, 2003, the Authority was required to obtain coverage under the applicable sections of the National Pollutant Discharge Elimination System (NPDES) permit program of the Clean Water Act and to prepare any associated documentation that was required.

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

- "State Water Resources Control Board (SWRCB) Water Quality Order No. 97-03-DWQ, NPDES General Permit No. CAS000001, Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities; (referred to in this document as the General Industrial Permit); and
- "California Regional Water Quality Control Board, San Diego Region (RWQCB), Order No R9. 2007-0001, NPDES No. CAS0108758, Waste Discharge Requirements for Discharges of Urban Runoff from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds of the County of San Diego (County), the Incorporated Cities of San Diego County, the San Diego Unified Port District, and the San Diego County Regional Airport Authority; (referred to in this document as the Municipal Permit).

As an airport, SAN has been subject to the requirements of the General Industrial Permit since 1992. The General Industrial Permit requires a Permittee to develop a Storm Water Pollution Prevention Plan (SWPPP) for the facility that is covered by the permit, which identifies and evaluates sources of pollutants from the industrial activities at that facility and identifies, describes, and implements best management practices (BMPs) to reduce or prevent the discharge of those pollutants.

The Authority is subject to the Municipal Permit because it owns and operates an MS4 and the San Diego RWQCB has determined that coverage under this local permit is the most appropriate method of regulating the Authority's MS4 discharges. The Municipal Permit requires a Permittee to develop comprehensive programs, collectively referred to as a Jurisdictional Urban Runoff Management Program (JURMP) Document, to reduce and eliminate the pollutants entering and discharging from its storm drain systems. A JURMP is required to address numerous aspects of an jurisdiction's operations, including the management of the lands under their jurisdiction, approval of development, facility maintenance, and education. A Permittee is also required to identify BMPs that must be implemented for areas and activities within the jurisdiction, including industrial, commercial, and construction areas and activities.

This document serves as a SWPPP in terms of the General Industrial Permit and a JURMP Document in terms of the Municipal Permit. Because the requirements of the two permits overlap so extensively, the Authority has chosen to address the documentation requirements of the two permits with a single, comprehensive document, namely this Storm Water Management Plan.

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

Below is a summary of the various sections of this document and the permit requirements that they address. The organization of these sections is based on a standardized format developed and agreed upon by the Municipal Permit Copermittees (Copermittees) and stormwater management approaches that have been developed as guidance by others, including Copermittees and the U.S. Environmental Protection Agency. The Authority is unique compared to other Copermittees and other MS4-communities in that there are no residential uses within the jurisdiction and the Authority holds a master-lease for all of the land under its jurisdiction. Therefore, this SWMP is different in some respects to organization and approach. The SWMP includes the following elements:

- **Executive Summary** - a clear and concise description of the purpose and major elements of the SWMP.
- **Signed Certified Statements** - a signed statement addressing the certification requirements of both the General Industrial Permit and Municipal Permit, and a signed, certified statement of the Authority General Counsel that the Authority has adequate legal authority to implement and enforce each of the requirements contained in 40 CFR 122.26(d)(2)(i)(A-F) and the Municipal Permit, as required by Municipal Permit Sections C.2 and J.1.a.(3)(b)i.
- **Introduction** - an outline of the purpose of the document, an overview of the Authority and the Authority's obligations to manage stormwater runoff at the airport, and a presentation of the environmental setting of the airport.
- **Administrative and Legal Procedures** - an identification of all departments and staff that conduct urban runoff management activities. This section also identifies and describes all relevant legal authorities.
- **Non-stormwater Discharges** - an identification of all potential authorized and unauthorized non-stormwater discharges, and the BMPs in place to control or eliminate those discharges (as required by Section D.4 of the Municipal Permit and Section A of the General Industrial Permit).
- **Development and Planning Component** - a description of the Authority's development and environmental review processes and the incorporation of stormwater management elements into those processes.
- **Construction Component** - a description of the approval processes, methods of generating an inventory and the prioritization of construction activities, the BMPs required to address construction activities, and construction activity inspection and enforcement.
- **Municipal Component** - a description of methods of generating an inventory and prioritization of municipal activities and areas, characterization of potential pollutant sources from these activities and areas, the BMPs required to address municipal activities, and inspection and enforcement (as required by Section D.3.a of the Municipal Permit and Section A of the General Industrial Permit).
- **Industrial and Commercial Component** - a description of methods of generating an inventory and prioritization of industrial and commercial activities and areas, characterization of potential pollutant sources from these activities and areas, the BMPs required to address industrial and commercial activities, and inspection and enforcement (as required by Section D.3.a of the Municipal Permit and Section A of the General Industrial Permit). This section presents the bulk of documentation required by Section A of the General Industrial Permit regarding the development and implementation of a SWPPP.

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- **Residential Component** - brief explanation of the non-existent residential land uses or activity areas within the Authority's jurisdiction and the absence of stormwater management program elements relative to the Residential Component (Section D.3.c) of the Municipal Permit.
 - **Illicit Discharge Detection and Elimination Component** - a description of mechanisms for reporting illicit discharges, spill prevention and response measures, wet and dry weather monitoring programs, and inspection and enforcement activities (as required by Section D.4 of the Municipal Permit and Section A of the General Industrial Permit).
 - **Education Component** - a description of the program elements designed to address both the training requirements of the General Industrial Permit and the education requirements of the Municipal Permit (Section D.5). The section discusses education for Authority staff, as well as tenants and the public.
 - **Public Participation Component** - a description of the mechanisms in place to enable the public to participate in the implementation of the Authority's SWMP.
 - **Fiscal Analysis Component** - a description of the methods to secure funds for stormwater programs, program expenditures and budgets, and the strategy for developing standardized fiscal analysis and annual reporting.
 - **Effectiveness Assessment** - a discussion of the strategy to assess the effectiveness of the Authority's SWMP through water quality assessments, various levels of program assessment, and program review and modification.
 - **Modifications to the SWMP** - an outline of the modifications made to the SAN SWMP January 2005 to meet the requirements of the renewed Municipal Permit and to incorporate results of recent studies conducted by the Authority in 2005 and 2006.
 - **Conclusions and Recommendations** - a discussion of any key conclusions or recommendations derived as a result of updating the SWMP in response to the renewed Municipal Permit.
 - **Appendices** - The appendices to the SWMP contain supporting information such as Authority regulations, detailed BMP information, the Authority's Standard Urban Stormwater Mitigation Plan (SUSMP), and monitoring programs. Of specific relevance to permit requirements, Appendix D (Monitoring Programs) addresses the Monitoring Program and Reporting requirements of the General Industrial Permit and the dry and wet weather monitoring requirements of the Municipal Permit.

SIGNED CERTIFIED STATEMENTS	i
EXECUTIVE SUMMARY	v
TABLE OF CONTENTS.....	viii
1.0 INTRODUCTION	1
1.1 BACKGROUND	1
1.2 PURPOSE AND OBJECTIVES.....	3
1.3 ENVIRONMENTAL SETTING.....	6
1.4 OVERVIEW OF SITE DRAINAGE AND THE MS4	7
2.0 ADMINISTRATIVE AND LEGAL PROCEDURES.....	13
2.1 DEPARTMENT ROLES AND RESPONSIBILITIES.....	13
2.2 LEGAL AUTHORITY	16
2.3 ENFORCEMENT.....	17
3.0 NON-STORM WATER DISCHARGES.....	21
3.1 NON-STORMWATER DISCHARGE CATEGORIES	22
3.2 PROHIBITED NON-STORMWATER DISCHARGE CATEGORIES.....	24
3.3 CONTROL MEASURES FOR ALLOWABLE NON-STORMWATER DISCHARGE	24
3.4 PROGRAM FOR NON-EMERGENCY FIRE FIGHTING FLOWS	27
4.0 DEVELOPMENT PLANNING COMPONENT.....	31
4.1 INTRODUCTION.....	31
4.2 LAND USE PLANNING.....	34
4.3 ENVIRONMENTAL REVIEW PROCESS.....	38
4.4 DEVELOPMENT PROJECT APPROVAL AND VERIFICATION PROCESS	40
4.5 DEVELOPMENT PLANNING COMPONENT EFFECTIVENESS ASSESSMENT	43
4.6 PROGRAM REVIEW AND MODIFICATION	43
5.0 CONSTRUCTION COMPONENT	45
5.1 INTRODUCTION.....	45
5.2 SOURCE CHARACTERIZATION	48
5.3 ORDINANCE UPDATES.....	48
5.4 BEST MANAGEMENT PRACTICE REQUIREMENTS	49
5.5 PROGRAM IMPLEMENTATION	54
5.6 CONSTRUCTION ACTIVITIES EFFECTIVENESS ASSESSMENT	59
5.7 PROGRAM REVIEW AND MODIFICATION	60
6.0 MUNICIPAL COMPONENT	61
6.1 INTRODUCTION.....	61
6.2 OPERATION AND MAINTENANCE OF MS4 AND STRUCTURAL CONTROLS.....	64
6.3 MANAGEMENT OF PESTICIDES, HERBICIDES, AND FERTILIZERS.....	70
6.4 ROADS AND PARKING FACILITIES.....	72
6.5 INFILTRATION FROM SANITARY SEWER TO MS4/PREVENTATIVE MAINTENANCE	78
6.6 CLOSED LANDFILL	82
6.7 SPECIAL EVENT VENUES.....	83
6.8 MUNICIPAL COMPONENT EFFECTIVENESS ASSESSMENT	84
6.9 MUNICIPAL COMPONENT PROGRAM REVIEW AND MODIFICATION	84

7.0	INDUSTRIAL AND COMMERCIAL COMPONENT	87
7.1	INTRODUCTION	87
7.2	STATIONARY SOURCES ELEMENT	90
7.3	MOBILE SOURCES ELEMENT	115
7.4	INDUSTRIAL AND COMMERCIAL COMPONENT EFFECTIVENESS ASSESSMENT	115
7.5	INDUSTRIAL AND COMMERCIAL COMPONENT PROGRAM REVIEW AND MODIFICATION	115
8.0	RESIDENTIAL COMPONENT	117
9.0	ILLICIT DISCHARGE DETECTION AND ELIMINATION COMPONENT	119
9.1	INTRODUCTION	119
9.2	PUBLIC REPORTING OF ILLICIT DISCHARGES AND CONNECTIONS	120
9.3	SPILL PREVENTION, REPORTING, AND RESPONSE	121
9.4	URBAN RUNOFF MONITORING	124
9.5	FOLLOW-UP AND ENFORCEMENT	128
9.6	ILLICIT DISCHARGE DETECTION AND ELIMINATION COMPONENT EFFECTIVENESS ASSESSMENT	131
9.7	ILLICIT DISCHARGE DETECTION AND ELIMINATION COMPONENT PROGRAM REVIEW AND MODIFICATION	131
10.0	EDUCATION COMPONENT	133
10.1	INTRODUCTION	133
10.2	STAFF TRAINING ELEMENT	134
10.3	EDUCATION OUTREACH ELEMENT	135
10.4	OUTREACH COMPONENT EFFECTIVENESS ASSESSMENT	137
10.5	OUTREACH COMPONENT PROGRAM REVIEW AND MODIFICATION	137
11.0	PUBLIC PARTICIPATION COMPONENT	139
11.1	INTRODUCTION	139
11.2	PUBLIC PARTICIPATION OPPORTUNITIES	139
11.3	PUBLIC PARTICIPATION COMPONENT EFFECTIVENESS ASSESSMENT	142
11.4	PUBLIC PARTICIPATION COMPONENT PROGRAM REVIEW AND MODIFICATION	142
12.0	FISCAL ANALYSIS COMPONENT	143
12.1	INTRODUCTION	143
12.2	FISCAL ANALYSIS METHODS	143
12.3	UPDATE TO FISCAL ANALYSIS METHODS	145
12.4	FISCAL ANALYSIS COMPONENT PROGRAM REVIEW AND MODIFICATION	146
13.0	EFFECTIVENESS ASSESSMENT COMPONENT	147
13.1	INTRODUCTION	147
13.2	EFFECTIVENESS ASSESSMENT APPROACH	147
13.3	PROGRAM REVIEW AND MODIFICATION	150
14.0	MODIFICATIONS TO THE SWMP	153
15.0	CONCLUSIONS AND RECOMMENDATIONS	155

16.0 REFERENCES157
------------------------	-----------------

TABLES

TABLE 1	AUTHORITY DEPARTMENTAL ROLES AND RESPONSIBILITIES FOR SWMP IMPLEMENTATION
TABLE 2	AUTHORITY KEY PERSONNEL RESPONSIBLE FOR SWMP IMPLEMENTATION
TABLE 3	MONTHLY INVENTORY OF ACTIVE CONSTRUCTION SITES - MARCH 2008
TABLE 4	OVERVIEW OF SAN INDUSTRIAL/COMMERCIAL SITES/SOURCES
TABLE 5	INVENTORY OF INDUSTRIAL/COMMERCIAL SITES/SOURCES
TABLE 6	SAN ENTITIES (INDUSTRIAL/COMMERCIAL SITES/SOURCES) BY DRAINAGE BASIN
TABLE 7	SUMMARY ASSESSMENT OF POLLUTANT SOURCES AND CORRESPONDING BMPS
TABLE 8	BMPS APPLICABLE TO INDIVIDUAL INDUSTRIAL/COMMERCIAL SITES/SOURCES
TABLE 9	ACTIVITY TRACKING FOR PROGRAM EFFECTIVENESS ASSESSMENT

FIGURES

FIGURE 1	REGIONAL LOCATION MAP
FIGURE 2	GENERAL VICINITY MAP
FIGURE 3	SITE MAP FOR SDIA
FIGURE 4	LAYOUT FOR DETAILED SITE MAPS
FIGURE 5	SITE MAP FOR SDIA TERMINAL 2 AND LANDFILL
FIGURE 6	SITE MAP FOR SDIA TERMINAL 1, CARGO AREA, AND COMMUTER TERMINAL
FIGURE 7	SITE MAP FOR SDIA NORTH RAMP AND RENTAL CAR STORAGE AREAS
FIGURE 8	SITE MAP FOR SDIA FIXED BASE OPERATION
FIGURE 9	ORGANIZATION CHART FOR THE AUTHORITY
FIGURE 10	TENANT DEVELOPMENT REVIEW PROCESS
FIGURE 11	CAPITAL PROJECT DEVELOPMENT REVIEW PROCESS

APPENDICES

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

1.0 INTRODUCTION

1.1 BACKGROUND

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

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

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

The Port of San Diego was first required to manage stormwater runoff at SAN by NPDES Permit No. CAS0108758, which established stormwater management requirements through San Diego Regional Water Quality Control Board (RWQCB) Order No. 90-42 for the municipal separate storm sewer system (MS4) owned and operated by the County of San Diego, the incorporated cities within San Diego County, and the Port of San Diego. NPDES Permit No. CAS0108758 was first renewed in 2001 by RWQCB Order No. 2001-01. With the creation of the Authority and the transfer of SAN operations to the Authority in January of 2003, the RWQCB determined that the Authority itself was now subject to NPDES Permit No. CAS0108758. As such, the RWQCB amended Order No. 2001-01 and required the Authority to implement the stormwater management activities required by the permit and to prepare and submit the appropriate documentation. In August of 2003, the Authority submitted the SAN Storm Water Management Plan (SWMP) as documentation of permit

compliance. NPDES Permit No. CAS0108758 was most recently renewed again by RWQCB Order No. R9-2007-0001 in 2007, which now specifically names the Authority as a Permittee.

Since 1992, operations at SAN have also been subject to NPDES Permit No. CAS000001, a state-wide General Permit to Discharge Storm Water Associated with Industrial Activity, established by California State Water Resources Control Board (SWRCB), Water Quality Order No. 91-13-DWQ. Certain activities are defined as 'industrial activities' subject to NPDES Permit No. CAS000001, and those defined activities include, among others, aircraft maintenance, cleaning, and deicing operations. Thus, certain activities at SAN require coverage under the permit. The permit requires a Permittee to develop a Storm Water Pollution Prevention Plan (SWPPP) for the facility that identifies and evaluates sources of pollutants arising from industrial activities and that identifies and describes the best management practices (BMPs) implemented to reduce or prevent the discharge of those pollutants. At that time, the Port of San Diego filed a Notice of Intent to Comply (NOI) with NPDES Permit No. CAS000001 (see Appendix A). NPDES Permit No. CAS000001 was subsequently renewed in 1997 by SWRCB Order No. 97-03-DWQ. In September of 2002, with the transfer of SAN from the Port of San Diego to the Authority scheduled for January 1, 2003, the Port of San Diego filed a Notice of Termination from permit compliance for SAN and listed the Authority as the new facility operator (Appendix A). In March of 2003, the Authority filed a NOI to comply with SWRCB Order No. 97-03-DWQ (Appendix A), and in August of 2003 prepared the SAN SWMP to comply with the permit.

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

- State Water Resources Control Board Water Quality Order No. 97-03-DWQ, NPDES General Permit No. CAS000001, Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities (referred to in this document as the General Industrial Permit); and
- California Regional Water Quality Control Board, San Diego Region, Order No R9. 2007-0001, NPDES No. CAS0108758, Waste Discharge Requirements for Discharges of Urban Runoff from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds of the County of San Diego (County), the Incorporated Cities of San Diego County, the San Diego Unified Port District, and the San Diego County Regional Airport Authority (referred to throughout this document as the Municipal Permit);

In regards to General Industrial Permit compliance, the primary Standard Industrial Classification (SIC) code for the site is 4500 Air Transportation, and the Waste Discharge Identification number (WDID #) for SAN under the General Industrial Permit is 937I018035.

1.2 PURPOSE AND OBJECTIVES

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

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

This document has been prepared to update the SWMP January 2005-Revision in accordance with NPDES Permit No. CAS0108758 (Municipal Permit) as renewed in January 2007, by RWQCB Order No.R9 2007-0001. The SWMP incorporates stormwater management approaches that have been developed as guidance by the Copermittees, the U.S. Environmental Protection Agency (USEPA), the California Stormwater Quality Association (CASQA), and others. In addition, this SWMP incorporates the output from several elements of a special project conducted by the Authority in 2005 and 2006 entitled the Storm Drainage System BMP Program. This program included the following elements: a hydrology assessment; a hydraulic analysis and tidal surge study; a Site Audit (MACTEC, 2005a and MACTEC, 2007b) (which the Authority intends to repeat biannually); a chemical emergency response evaluation; a Catastrophic Fuel Release Evaluation (MACTEC, 2006b); the development of a new Stormwater Sampling Plan (MACTEC, 2005b) for SAN; and a BMP Recommendations Report (MACTEC, 2006a). Many of the documents produced from these elements of the program are mentioned, discussed, or incorporated into this SWMP. Finally, the SAN SWMP seeks to present information in a manner that is intended to facilitate understanding by Authority staff and SAN tenants.

This update to the SWMP meets the requirements of section D of the renewed San Diego Municipal Order. The SWMP is intended to reduce the discharge of pollutants from the

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

1.2.1 SWMP ORGANIZATION

The content and organization of the SWMP is based, in large part, on a standardized format developed and agreed upon by the Municipal Permit Copermittees to address sections D, G, H, I.1 and 5, and J.1a of the renewed permit. Use of the standardized format creates some substantial differences between this SWMP update and the previous version, namely, the SWMP January 2005-Revision. The content and organization of the SWMP is briefly summarized below.

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

- **Executive Summary** - a clear and concise description of the purpose and major elements of the SWMP.
- **Signed Certified Statement** - a signed statement addressing the certification requirements of both the General Industrial Permit and Municipal Permit And a signed, certified statement of the Authority General Counsel that the Authority has adequate legal authority to implement and enforce each of the requirements contained in 40 CFR 122.26(d)(2)(i)(A-F) and the Municipal Permit, as required by Municipal Permit Sections C.2 and J.1.a.(3)(b)i. .
- **Introduction** - an outline of the purpose of the document, an overview of the Authority and the Authority's obligations to manage stormwater runoff at the airport, and a presentation of the environmental setting of the airport.
- **Administrative and Legal Procedures** - an identification of all departments and staff that conduct urban runoff management activities. This section also identifies and describes all relevant legal authorities.
- **Non-stormwater Discharges** - an identification of all potential authorized and unauthorized non-stormwater discharges, and the BMPs in place to control or

eliminate those discharges (as required by Section D.4 of the Municipal Permit and Section A of the General Industrial Permit).

- **Development and Planning Component** - a description of the Authority's development and environmental review processes and the incorporation of stormwater management elements into those processes.
- **Construction Component** - a description of the approval processes, methods of generating an inventory and the prioritization of construction activities, the BMPs required to address construction activities, and construction activity inspection and enforcement.
- **Municipal Component** - a description of methods of generating an inventory and prioritization of municipal activities and areas, characterization of potential pollutant sources from these activities and areas, the BMPs required to address municipal activities, and inspection and enforcement (as required by Section D.3.a of the Municipal Permit and Section A of the General Industrial Permit).
- **Industrial and Commercial Component** - a description of methods of generating an inventory and prioritization of industrial and commercial activities and areas, characterization of potential pollutant sources from these activities and areas, the BMPs required to address industrial and commercial activities, and inspection and enforcement (as required by Section D.3.a of the Municipal Permit and Section A of the General Industrial Permit). This section presents the bulk of documentation required by Section A of the General Industrial Permit regarding the development and implementation of a SWPPP.
- **Residential Component** - brief explanation of the non-existent residential land uses or activity areas within the Authority's jurisdiction and the absence of stormwater management program elements relative to the Residential Component (Section D.3.c) of the Municipal Permit.
- **Illicit Discharge Detection and Elimination Component** - a description of mechanisms for reporting illicit discharges, spill prevention and response measures, wet and dry weather monitoring programs, and inspection and enforcement activities (as required by Section D.4 of the Municipal Permit and Section A of the General Industrial Permit).
- **Education Component** - a description of the program elements designed to address both the training requirements of the General Industrial Permit and the education requirements of the Municipal Permit (Section D.5). The section discusses education for Authority staff, as well as tenants and the public.
- **Public Participation Component** - a description of the mechanisms in place to enable the public to participate in the implementation of the Authority's SWMP.

- **Fiscal Analysis Component** - a description of the methods to secure funds for stormwater programs, program expenditures and budgets, and the strategy for developing standardized fiscal analysis and annual reporting.
- **Effectiveness Assessment** - a discussion of the strategy to assess the effectiveness of the Authority's SWMP through water quality assessments, various levels of program assessment, and program review and modification.
- **Modifications to the SWMP** - an outline of the modifications made to the SAN SWMP January 2005 to meet the requirements of the renewed Municipal Permit and to incorporate results of recent studies conducted by the Authority in 2005 and 2006.
- **Conclusions and Recommendations** - a discussion of any key conclusions or recommendations derived as a result of updating the SWMP in response to the renewed Municipal Permit.

1.3 ENVIRONMENTAL SETTING

San Diego International Airport is located in San Diego County (see Figures 1 and 2) just north of downtown San Diego. The airport covers approximately 661 acres and operates as a domestic and international commercial airport. Airport operations at SAN currently include two main airline terminals, a commuter terminal, a fixed base operations facility, one main runway area, taxiways, and ancillary support facilities (including an aircraft fuel storage facility, a remote fueling facility, air cargo facilities, ground support facilities and operations areas), an airplane wash rack, overnight airplane parking areas, and the Airport Rescue and Fire Fighting Facility (ARFF), areas formerly used for aircraft manufacturing, and a closed solid waste landfill. Figures 3 through 8, the Site Maps, show the detailed layout of SAN, including boundaries, major structures, surrounding areas, direction of stormwater flow, and surface waters.

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

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

Stormwater from SAN drains to San Diego Bay, portions of which are currently 303(d) listed for impacts due to polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), chlordane, lindane, indicator bacteria, and metals, as well as benthic community effects and sediment toxicity. The 2006 303(d) list includes copper as a pollutant impacting water quality in the marinas along Harbor Island. Runoff from the airport commingles with runoff from other sources and discharges into the waters along Harbor Island. There are four Toxic Hot Spots in San Diego Bay, one of which (namely, the Downtown Anchorage, near the foot of Grape Street) is located near outfalls associated with runoff commingled from SAN and other sources. The SWRCB has designated San Diego Bay in its entirety as having rare beneficial use (RARE) in the San Diego Basin Plan (1994). Both the Sweetwater Marsh National Wildlife Refuge and the South Bay Unit of the San Diego National Wildlife Refuge are considered Areas of Special Biological Significance (ASBS), but neither is within close proximity to SAN.

1.4 OVERVIEW OF SITE DRAINAGE AND THE MS4

The majority of surface water runoff from SAN is conveyed via sheet flow into gutters and storm drain inlets. The stormwater conveyance system consists of 14 outfall basins. Each basin is comprised of sub-basins that route flow to different sections of the infrastructure. The total system consists of approximately 86,000 linear feet of pipe and approximately 210 inlets discharging through 14 outfalls. Storm drain pipe sizes vary in diameter, according to their location in the storm drain system, from 4 to 84 inches in diameter.

Stormwater runoff flows from SAN through the stormwater conveyance system and discharges through Outfalls 01 through 11 into San Diego Bay to the south of the airport, and Outfalls 12, 13, and 14 into the Navy Boat Channel portion of San Diego Bay to the west. Flow in the majority of the storm drain system is intermittent and dependent on the amount of rainfall and subsequent runoff. The runoff from SAN generally mixes with runoff from the jurisdictions of the City of San Diego and/or the Port of San Diego before discharging into the San Diego Bay. Those portions of the storm drain system that are closest to San Diego Bay receive seawater infiltration during high tides.

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

Drainage Basin 1

The majority of Drainage Basin 1 is occupied by the fixed base operations (FBO) facility to service general aviation aircraft (as opposed to regularly scheduled-commercial passenger airlines). The facility includes 4 hangars used as office space, a passenger area, storage for

small corporate jets and private aircraft, storage tanks for aircraft fuel and lavatory waste, and aircraft maintenance. The storage tanks are pumped out regularly and the fluids recycled. A refueling truck filling station is adjacent to the southwest corner of Hangar 4, which has one fuel dispenser that is fed by one 15,000-gallon underground storage tank (UST) containing jet fuel. The area also includes aircraft parking and loading/unloading areas, aircraft refueling truck parking, and a vehicle and equipment maintenance shop with a hazardous waste accumulation area. In addition to the fixed base operations facility, Drainage Basin 1 is also occupied by one air cargo operator that uses the area to load/unload, park, and maintain airplanes, and for outdoor materials storage. Finally, a portion of Drainage Basin 1 covers the far eastern end of the runway and taxiway areas. Stormwater runoff from adjacent properties, to the east of SAN, flows in a westerly direction into Drainage Basin 1.

Drainage Basin 2

Drainage Basin 2 at the far eastern end of the runway contains a lavatory waste disposal facility connected to the sanitary sewer, part of the vehicle service road (VSR) which circles the perimeter of the airfield, and the southern end of the fixed base operation parking lot.

Drainage Basin 3

Drainage Basin 3 includes vehicle parking in a public long-term parking lot. It also encompasses parts of the runway, taxiway and the California least tern nesting areas, and part of the airfield perimeter vehicle service road. Small aircraft are sometimes parked alongside the vehicle service road just west of the fixed base operation.

Drainage Basin 4

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

Drainage Basin 5

A large portion of Drainage Basin 5 is utilized for vehicle parking, rental car company car parking areas, truck parking, and a public long-term parking lot. It also encompasses parts of the runway, taxiway and least tern nesting areas, as well as portions of the vehicle service road. The southern edge of Drainage Basin 5, along the former Teledyne Ryan property, contains the runway generator area where two 500-gallon, above-ground diesel storage tanks, a couple of small buildings, and an Authority materials storage area are located. Stormwater runoff from adjacent properties to the north of SAN flows in a southerly direction into Basin 5.

Drainage Basin 6

The northeastern side of this area is used by two air cargo carriers for loading/unloading cargo onto their airplanes, and for container storage. Aircraft, vehicle, and equipment fueling and maintenance also are conducted here. The Aircraft Fuel Storage Facility (FSF) is located

on the northwest side of the drainage basin. There are two 1-million gallon above-ground jet fuel storage tanks (ASTs) within secondary containment located at the FSF. This facility is equipped with a 12,000-gallon oil water separator, plus an 8,000-gallon holding tank to treat fuel spills. There are also jet fuel, diesel, and gasoline loading and unloading areas with spill containment, an equipment pad with spill containment, gasoline and diesel USTs, and a foam equipment building with a 1,500-gallon AST containing a 3% aqueous foam concentrate. Although located on the opposite side of the runway from the FSF, Drainage Basin 6 also includes the airport Remote Fueling Facility (RFF) used to dispense fuel from the FSF to mobile aircraft refueling tanker trucks. The mobile refueling tanker trucks have the capacity to hold from 750 to 15,000 gallons, depending on the size of truck. The fuel reaches the RFF dispensers via an underground pipeline from the FSF. The RFF has four single-position refueler loading islands with spill containment, one 12,000-gallon underground waste water tank, one 3,000-gallon underground reclaimed fuel tank, and a 12,000-gallon capacity blind sump used to capture stormwater runoff at the dispenser islands.

Between the FSF and the air cargo carrier area is an Authority equipment and materials storage area, referred to as the "boneyard," containing both solid waste and hazardous waste accumulation areas, and storage for various parts and equipment. The boneyard is just north of the Air Traffic Control Tower (ATCT). The ARFF Facility is located to the south of the FSF. The ARFF station participates in fire fighting vehicle and equipment testing at least twice a year on a large concrete pad called the north ramp area, just to the east of ARFF facility. The north ramp area drains through two oil water separators. Also located in Drainage Basin 6 are portions of the runway, taxiways, and the vehicle service road. This drainage basin also includes the Commuter Terminal ramp area, where aircraft, vehicle, and equipment fueling, off-loading of trash and aircraft waste, and minor aircraft and equipment maintenance occur. A portion of the Commuter Terminal ramp drainage is directed towards a storm drain inlet equipped with a 20,000-gallon capacity oil water separator. Stormwater runoff from adjacent properties, those to the north of SAN, flows in a southerly direction into Basin 6.

Drainage Basin 7

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

Drainage Basin 8

The eastern portion of Drainage Basin 8 contains a trash compactor, recycling bin, and dewatering bin. This area is used by the Authority, the airlines, and other tenants to dispose of trash and recyclables. Wastewater from the power washing of sidewalks, daily ramp

scrubbing, and aircraft cleaning passes through the dewatering bin, where solids are removed before the wastewater is discharged to the sanitary sewer. The trash compactors and dewatering bin are located within a bermed area. Drainage in the bermed area is directed towards a sump that also pumps the water and liquids into the dewatering bin before being discharged to the sanitary sewer. No GSE washing is permitted in the trash compactor area.

To the south of the trash compactor area are the cargo buildings where outdoor loading and unloading of cargo occurs. West of the cargo buildings are the Terminal 1 gate and ramp areas and building. Fueling, maintenance, deicing, lavatory servicing, washing, and loading/unloading of passenger aircraft occur at the main terminal ramp. Approximately 350,000 gallons of jet fuel is brought to the Terminals 1 and 2 ramp area daily by the mobile refueling tankers and loaded by positive lock hose into the aircraft. Aircraft maintenance equipment, vehicles, deicing fluids, hazardous waste accumulation areas, trash dumpsters, parts, and flammable materials storage lockers containing mainly oils and lubricants are stored under overhangs and around jet ways and gates in this area. Two 3,000-gallon grease receptacles, one 250-gallon grease container, plus several grease traps are located next to the Terminal building to trap and/or collect grease from the airport restaurants. The receptacles and traps are linked to the sanitary sewer and are serviced regularly. The wastewater and grease from cleaning of the units are transported offsite for processing and disposal to the sanitary sewer or to a landfill.

Drainage Basin 8 also encompasses parts of the runway, taxiway, vehicle service road, a generator and 500-gallon gasoline AST to the north of the vehicle service road on the north side of the runway and southwest of the ARFF facility. This drainage basin also includes the Terminal 1 short-term parking lot.

Drainage Basins 9, 10, AND 11

Runoff from the Terminal 2 public short-term parking lot and access roads, as well as the majority of the terminal building, is captured in three drainage basins: 9, 10, and 11, spanning from the east to the west. Drainage Basin 9 also includes office buildings, the central heat/air (HVAC) building and power plant building, equipment fueling, maintenance, and storage areas, and other materials and waste storage areas.

Drainage Basin 12

The Terminal 2 gate and ramp areas and part of the terminal building are located in Drainage Basin 12, and have very similar activities and storage as in the Terminal 1 gate and ramp areas in Drainage Basin 8 (described above). The Terminal 2 area has three 3,000-gallon grease receptacles, two 250-gallon grease containers, plus several grease traps. A GSE storage area is located on the western portion of Drainage Basin 12, northwest of Gate 41, where an oil water separator is also located. Trash dumpsters are present at Terminal 2 West and in between Terminal 2 West and East. There is also a loading/unloading dock at Terminal 2 West. Four emergency generators are located near the terminal areas, with a substation and 500-gallon diesel AST located at the west end of the runway. To the west of Terminal 2 is an inactive closed solid waste landfill. This area is generally

unpaved and covered with sparse vegetation. The area is the former disposal facility for the Marine Corps Recruit Depot and the Naval Training Center (NTC). Wastes were disposed of at the landfill between 1950 and 1971. Following the closure in 1971 the site was covered with additional fill soils. The area is occasionally used for staging construction materials and Authority equipment.

Drainage Basin 13

Drainage Basin 13 is a small area in the far northwestern section of the airport, which covers the western end of the runway and portion of the vehicle service road. Stormwater runoff from adjacent properties, to the north of SAN, flows in a southerly direction into Basin 13.

Drainage Basin 14

A long-term parking lot and the taxi cab/shuttle hold lot (a staging area for taxis and shuttles accessing the airport) are located in Drainage Basin 14, which is to the west of Terminal 2 and south of the inactive closed landfill area.

2.0 ADMINISTRATIVE AND LEGAL PROCEDURES

This section identifies and describes the Authority departments and staff that conduct urban runoff management related activities. This section also addresses the roles and responsibilities of these departments and individuals as required by Section C of the Municipal Permit and Section A.3.a of the General Industrial Permit.

2.1 DEPARTMENT ROLES AND RESPONSIBILITIES

As previously described, the Authority was created by state legislation to operate SAN, and in January of 2003, the Authority filed an NOI to comply with the General Industrial Permit. The Authority has elected to assume a lead role with regard to the General Industrial Permit. Airport tenants that conduct industrial activities are also subject to the General Industrial Permit and must comply with the Authority direction regarding stormwater management at SAN. This approach conforms to federal regulations, was the preferred option of the SWRCB, and allows for the implementation of consistent stormwater pollution prevention measures throughout the entire airport site. This approach provides for consistency in the programs that the Authority has developed and implemented to comply with the requirements of the both the General Industrial Permit and the Municipal Permit.

Several Authority departments share responsibility for the implementation of the SAN SWMP, specifically: the Environmental Affairs Department, the Facilities Maintenance Department, the Airside Operations Department, the Facilities Development Department, the Landside Operations Department, the Airport Planning Department, the Real Estate Management Department, and the Aviation Security & Public Safety Department. The Directors and key staff members from these departments are integral to the efforts made to eliminate and reduce the pollutants in stormwater that runs off SAN. Together they ensure the Authority meets compliance with the NPDES Permits.

The Environmental Affairs Department assumes a lead role in performing the following tasks required by the General Industrial Permit:

- Conducting meetings with and training appropriate stakeholders;
- Ensuring the proper implementation of required BMPs;
- Conducting wet and dry season monitoring;
- Conducting wet weather stormwater sampling;
- Conducting annual facility inspections of all industrial areas and activities;
- Preparing and submitting an annual report to the RWQCB;
- Revising and updating the SWMP annually, as necessary.

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

- Prohibiting all identified illicit discharges;
- Prohibiting and eliminating illicit connections to the storm drain system;
- Controlling the discharge of spills, dumping, or disposal of materials other than stormwater to the storm drain system at SAN;
- Controlling the contribution of pollutants in discharges of runoff associated with industrial and construction activity;
- Requiring compliance with Authority ordinances, permits, contracts, or orders related to stormwater management and/or control, and using enforcement mechanisms as necessary to ensure compliance;
- Controlling the contribution of pollutants from one portion of any shared MS4 to another portion of the MS4 through interagency agreements among Copermittees;
- Conducting all inspections, surveillance, and monitoring necessary to determine compliance and noncompliance with local ordinances and permits;
- Requiring the use of BMPs to prevent/reduce the discharge of pollutants to the MS4;
- Requiring and/or preparing documentation of the effectiveness of BMPs implemented to reduce the discharge of pollutants to the MS4 to the MEP.

The Environmental Affairs Department manages or coordinates the management of information and records required by the General Industrial Permit and the Municipal Permit. The Director of Environmental Affairs has been duly authorized by the President/Chief Executive Officer (CEO) as the position having responsibility for overall operation of the facilities and activities regulated by any NPDES Permit applicable to the Authority. As such, the Director of Environmental Affairs signs and certifies all reports and other information required by an NPDES Permit or requested by the USEPA, SWRCB, or RWQCB.

The Environmental Affairs Department assumes overall responsibility for developing, implementing, and revising the SWMP, as necessary. The Environmental Affairs Department conducts all monitoring program activities required in Section B of the General Industrial Permit. The Environmental Affairs Department generally conducts all inspections required by the Municipal Stormwater Permit, with the assistance of the Facilities Maintenance Department and the Airside Operations Department. The Environmental Affairs Department conducts/coordinates the majority of the stormwater education and outreach required by the Municipal Permit, with the assistance of key supervisory or lead staff from the other departments listed above.

The Facilities Maintenance Department conducts many of the municipal activities described in Sections 6 and 7 of this SWMP. The Airside Operations Department staff and the Facilities Maintenance Department staff are generally first on-scene for spills and other facility maintenance and repair issues. The Environmental Affairs Department assumes responsibility for determining the need for and reporting, as necessary, any significant incidents of non-compliance to the appropriate agencies. The Airport Planning Department and the Facilities Development Department are generally responsible for project planning, design, and approval, with assistance as necessary from the Environmental Affairs Department. The Landside Operations Department and the Real Estate Management Department assist the Environmental Affairs Department in coordinating activities with the airport tenants and service providers. The Environmental Affairs Department, the Airside Operations Department, the Landside Operations Department, and the Real Estate Management Department generally assume responsibility for assisting airport tenants and service providers in maintaining compliance with the General Industrial Permit and Municipal Permit. These departments also assist Authority staff and airport tenants in formulating and implementing BMPs to prevent stormwater pollution from their operational areas/activities.

Table 1 presents the departments with roles and responsibilities for implementing various elements of the SAN SWMP. Table 2 presents the key Authority personnel, listed by department, directly involved or assisting in the implementation of the SWMP. Figure 9 presents a current organizational chart for the Authority.

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

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

2.2 LEGAL AUTHORITY

On September 20, 2002, the Authority Board adopted the Authority Code Sections 8.70 to 8.79, known as the "San Diego County Regional Airport Authority Storm Water Management and Discharge Control" and the "Storm Water Code" (Article 8.7).

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

- To reduce stormwater runoff pollution;
- To reduce non-stormwater discharge to the stormwater conveyance system and receiving waters to the maximum extent practicable;
- To comply with all federal and state laws, lawful standards and orders applicable to stormwater and urban runoff pollution control;
- To prohibit any discharge which may interfere with the operation of, or cause damage to the stormwater conveyance system, or contribute to the impairment of the beneficial use or violation of a water quality objective of the receiving waters;
- To prohibit illegal discharges and illicit connections to the stormwater conveyance system and receiving waters; and
- To develop and implement effective educational outreach programs designed to educate the public, Authority employees and tenants on issues of stormwater and urban runoff pollution prevention.

The Storm Water Code provides for the prevention, control, treatment, diversion and regulation of discharges to the stormwater conveyance system and receiving waters, through a program of education and enforcement of general and specific prohibitions and requirements. The Storm Water Code applies to all dischargers and places located on property within the Authority's jurisdiction that discharge stormwater or non-stormwater into any stormwater conveyance system or receiving waters. The President/CEO or his or her designee administers, implements and enforces the provisions of the Storm Water Code. Any person violating any of the provisions or failing to comply with the mandatory requirements of the Storm Water Code is guilty of a misdemeanor unless such violation or failure is declared to be an infraction by the Code.

2.2.1 CERTIFICATION OF LEGAL AUTHORITY

Attached at the front of this SWMP is the signed, certified statement of the Authority General Counsel that the Authority has adequate legal authority to implement and enforce each of the requirements contained in 40 CFR 122.26(d)(2)(i)(A-F) and the Municipal Permit, as required by Municipal Permit Sections C.2 and J.1.a.(3)(b)i.

2.3 ENFORCEMENT

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

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

- To limit environmental impacts resulting from non-compliant activities or conditions;
- To educate the regulated community (Authority staff, airport tenants and service providers, and contractors);
- To promote compliance with laws and regulations;
- To return violators to compliance in a timely manner;
- To initiate and conclude enforcement activities in a timely manner;
- To penalize violators, as appropriate, and to deprive violators of any significant benefit gained from violations;
- To prevent any business from having an unfair business advantage through noncompliance;
- To treat similar airport tenants, service providers, and contractors equally and consistently with regard to the same types of violations.

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

The Environmental Affairs Department will conduct follow-up inspections to determine if corrective actions have been taken in accordance with the corrective action orders, the Authority's ordinances, and the minimum BMP requirements. Escalating enforcement procedures, which provide flexibility in the establishment of appropriate compliance time frames, are implemented as needed. If a significant and/or immediate threat to water quality is observed, appropriate actions will be taken to require the responsible party to immediately cease the discharge and/or correct the situation. Typical escalating enforcement procedures include:

The Environmental Affairs Department will conduct follow-up inspections to determine if corrective actions have been taken in accordance with the corrective action orders, the Authority's ordinances, and the minimum BMP requirements. Escalating enforcement procedures, which provide flexibility in the establishment of appropriate compliance time frames, will be implemented as needed. If a significant and/or immediate threat to water quality is observed, appropriate actions will be taken to require the responsible party to immediately cease the discharge and/or correct the situation. Typical escalating enforcement procedures will include:

2.3.1 VERBAL WARNINGS

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

2.3.2 WRITTEN WARNINGS

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

2.3.3 DISCIPLINARY ACTIONS

If an Authority employee is the cause of non-compliant activities, the Authority may choose to take disciplinary actions against the employee in accordance with established procedures.

2.3.4 ENFORCEMENT OF CONTRACTS, LEASES, OR USE PERMITS

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

2.3.5 CEASE AND DESIST ORDER

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

2.3.6 NOTICE AND ORDER TO CLEAN, TEST, OR ABATE

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

2.3.7 CIVIL AND CRIMINAL COURT ACTIONS

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

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

provision within a year of the first violation. Third violations are misdemeanor offenses subject to a fine and/or imprisonment.

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

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 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 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.

4.0 DEVELOPMENT PLANNING COMPONENT

4.1 INTRODUCTION

Section 4.0 of this SWMP addresses requirements in sections of the Municipal Permit that the Authority has determined are relevant to the Development Planning Component. These sections are: D.1.a -f, D.1.h, D.2.a, D.5, I.1, J.1.a.(3)(c)i-viii, J.1.a.(3)(c)x, J.1.a.(3)(i), and J.1.a.(3)(l).

Municipal Permit Section D.1.a requires that the Authority revise the SWMP for the purpose of providing effective water quality and watershed protection principles and policies that direct land-use decisions, and requires the implementation of consistent water quality protection measures for Development Projects. Section 4.0 has been prepared to satisfy this requirement.

Municipal Permit Section D.1.b requires that the Authority revise their environmental review processes to accurately evaluate water quality impacts and identify appropriate measures to avoid, minimize, and mitigate those impacts for all Development Projects. Section 4.3 has been prepared to satisfy this requirement.

Municipal Permit Section D.1.c requires that the Authority include approval process criteria and requirements so Development Projects' discharges of pollutants from the MS4 will be reduced to the MEP, will not cause or contribute to a violation of water quality standards, and will comply with the Authority's ordinances, permits, plans, and requirements. The requirements shall include, but not be limited to: implementation of Source Control BMPs, Low Impact Development (LID) BMPs, buffer zones for natural water bodies, measures to reduce construction site discharge of pollutants from the MS4 to the MEP, and proof of a mechanism under which ongoing long-term maintenance of structural post-construction BMPs will be conducted. Section 4.2.3 has been prepared to satisfy this requirement.

Municipal Permit Section D.1.d requires that the Authority implement and update a Standard Urban Runoff Mitigation Plan (SUSMP) that will reduce Priority Development Project discharges of pollutants from the MS4 to the MEP, prevent Priority Development Project discharges from the MS4 from causing or contributing to a violation of water quality standards, and manage increases in runoff discharge rates and durations from Priority Development Projects that are likely to cause increased erosion of stream beds and banks, silt pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force. Priority Development Projects are defined in Municipal Permit Section D.1.d.(1) and categorized in Municipal Permit Section D.1.d.(2) which are included in Appendix A of this document. Appendix C has been prepared to satisfy this requirement.

Municipal Permit Section D.1.e requires that the Authority develop and utilize a watershed-based database to track and inventory approved treatment control BMPs and treatment control BMP inspection and maintenance, and implement a program to verify that treatment

control BMPs are operating effectively and have been adequately maintained. Section 4.4.4 has been prepared to satisfy this requirement.

Municipal Permit Section D.1.f requires that the Authority inspect constructed LID, source control, and/or treatment control BMPs, prior to occupancy of a Development Project, to verify they have been constructed in compliance with specifications, plans, permits, ordinances, and the Municipal Permit. Section 4.4.4 has been prepared to satisfy this requirement.

Municipal Permit Section D.1.h requires that the Authority enforce its stormwater ordinances for Development Projects to maintain compliance with the Municipal Permit. Ordinances shall include sanctions such as: non-monetary penalties, fines, bonding requirements, and/or permit or occupancy denials for non-compliance. Section 4.4.4 has been prepared to satisfy this requirement.

Municipal Permit Section D.2.a requires that the Authority update the grading ordinances and other ordinances as necessary to achieve full compliance with the Municipal Permit, including requirements for the implementation of all designated BMPs and other measures within 356 days of the adoption of the Municipal Permit. Prior to approval and issuance of local construction and grading permits, the Authority must: require all individual proposed construction sites to implement designated BMPs and other measures so that pollutants discharged from the site will be reduced to the maximum extent practicable and will not cause or contribute to a violation of a water quality standard; require and review the project proponent's stormwater management plan to verify compliance with their grading ordinance, other ordinances, and the Municipal Permit prior to permit issuance; and verify that project proponents subject to General Construction Permit have existing coverage under the General Construction Permit. Section 4.2.3 has been prepared to satisfy this requirement.

Municipal Permit Section D.5 requires that the Authority implement an education program using all media as appropriate to: 1) measurably increase the knowledge of the target communities regarding MS4s, impacts of urban runoff on receiving waters, and potential BMP solutions for the target audience; and 2) to measurably change the behavior of target communities and thereby reduce pollutant releases to MS4s and the environment. At a minimum, the education program shall meet the requirements of this section and address Municipal Departments and Personnel; Construction Site Owners and Developers; Industrial Owners and Operators; and Commercial Owners and Operators. Section 10.0 describes the Educational Component of the SWMP. This is briefly addressed in Sections 4.2.4 and 4.4.4.

Municipal Permit Section I.1 requires that the Authority annually assess and report the effectiveness of the Development Planning component of their SWMP addressing significant and/or types of activities/BMPs being implemented. Based on the results of the effectiveness assessment, the Authority is required to annually review its jurisdictional activities or BMPs to identify modifications and improvements needed to maximize SWMP effectiveness as they pertain to the Development Planning component. Section 4.5 has been prepared to address this requirement.

Municipal Permit Sections J.1.a.(3)(c)i-viii and J.1.a.(3)(c)x require that the Authority's Development Planning component of the SWMP be revised to include:

- 1 A description of the water quality and watershed protection principles that have been or will be included in the Copermittees General Plan, and a time schedule for when modifications are planned, if applicable. Section 4.0 has been prepared to satisfy this requirement.
- 2 A description of the Copermittees' current environmental review process and how it addresses impacts to water quality and appropriate mitigation measures. If the Copermittee plans to modify the process during the permit term, a time schedule for modifications shall be included. Section 4.3 has been prepared to satisfy this requirement.
- 3 A description of the development project approval process and requirements. Sections 4.2.3 and 4.4.4 have been prepared to satisfy this requirement.
- 4 An updated SUSMP document that meets the applicable requirements specified in sections D.1.d and D.1.g.(6), including a description of LID BMP requirements to be used prior to the Model SUSMP update. Appendix C has been prepared to satisfy this requirement.
- 5 A description of the database to be used to track and inventory approved treatment control BMPs and treatment control BMP maintenance. Sections 4.4.4 and 6.2 have been prepared to satisfy this requirement.
- 6 A completed watershed-based inventory of approved treatment control BMPs. Sections 4.4.4 and 6.2 have been prepared to satisfy this requirement.
- 7 A description of the program to be implemented to verify that approved treatment control BMPs are operating effectively and have been adequately maintained, including information on treatment control BMP inventory, prioritization, inspection, and annual verification. Sections 4.4.4 and 6.2 have been prepared to satisfy this requirement.
- 8 A description of inspections that will be conducted to verify BMPs have been constructed according to requirements. Sections 4.4.4 and 6.2 have been prepared to satisfy this requirement.
- 9 A description of enforcement mechanisms and how they will be used. Section 4.4.4 has been prepared to satisfy this requirement.

Municipal Permit Sections J.1.a.(3)(i) and J.1.a.(3)(l) describe the required updates and revisions to this SWMP as they pertain to the Educational and Effectiveness Assessment Components respectively.

Section 10.0 describes the Educational component of the SWMP and Section 13.0 describes the Effectiveness Assessment component of the SWMP. These requirements are briefly addressed in Sections 4.2.4, 4.4.4, and 4.5.

4.2 LAND USE PLANNING

4.2.1 BACKGROUND

The Authority became responsible for the planning and operations of the SAN on January 1, 2003, in accordance with the San Diego County Regional Airport Authority Act (SDCRAA Act). The SDCRAA Act grants the Authority all land use planning authority and jurisdiction over lands within the original SAN leasehold, along with any other lands that might be acquired adjacent to the existing airport property and necessary to operate the Airport.

The Authority has proposed a land use plan - more appropriately referred to as an Airport Master Plan (Master Plan) - for SAN that, when adopted, will be the document that formally defines the allowable land uses within SAN property. The proposed Master Plan is a policy document only. The proposed Master Plan is a figure that depicts the properties and boundaries under the planning jurisdiction of the Authority, and is a program level planning guide to ensure that Airport facilities are planned with thought and foresight to serve the greatest number of Airport users. The proposed Master Plan guides and groups similar Airport uses to ensure compatible, shared, and orderly development of Airport facilities within the limited physical space available for Airport purposes. All lands under the Authority's jurisdiction and in the proposed Master Plan are designated as airport land use and categorized as one of the following: Airfield, Terminal, Ground Transportation, or Airport Support. The land uses at SAN are also categorized as Municipal, Industrial, or Commercial to comply with the Municipal Permit and to be consistent with the previous SWMP and previous Annual Reports.

4.2.2 SOURCE CHARACTERIZATION

Pollutants typically found in SAN runoff include: sediment, nutrients (fertilizers), oxygen-demanding substances (for example, decaying vegetation), bacteria, heavy metals, synthetic organics (fuels, oils, solvents, lubricants), pesticides, and other toxic substances. The Authority recently implemented a source identification monitoring program according to its Sampling Plan (MACTEC, 2005b) in order to more thoroughly identify sources of pollutants of concern (POCs) at SAN.

Non-stormwater discharges also have the potential to degrade the quality of receiving waters - San Diego Bay. Dry weather flows conveyed by the stormwater conveyance system consist of flows from groundwater infiltration and accidental, improper, or illegal discharges to the stormwater conveyance system. Non-stormwater discharges have been addressed in Section 3.0 of this JURMP.

The Authority has developed a SUSMP based on the Model SUSMP developed by the Copermittees for projects that are determined to be Priority Development Projects. The Authority's SUSMP is included in Appendix C. The Authority's SUSMP describes procedures to identify pollutants and conditions of concern for each Priority Development Project. In order to properly classify pollutants of concern, each Priority Development Project must identify the receiving water that the project will discharge to, list any and all pollutants which the receiving water are impaired using the most recent Clean Water Act Section 303(d), and then compare the list of pollutants for which the receiving waters are impaired with the pollutants anticipated to be generated by the project. The Authority must also evaluate each Priority Development Project for conditions of concern (that is, conditions with the potential to permanently impact downstream channels and habitat integrity). The Authority may request a drainage report to include all or a subset of the following items to conduct their evaluation: the relevant hydrologic and environmental factors, geotechnical concerns and mitigation measures, a field reconnaissance to observe and report downstream conditions and the area's susceptibility to erosion or habitat alteration, and rainfall runoff characteristics from the project area developed for a two-year and 10-year frequency. The Authority's SUSMP is included in Appendix C. The categories of pollutants and conditions of concern are discussed in detail in Appendix C and a guide to identifying anticipated and potential pollutants generated by land use type is presented in Table 1 of Appendix C.

Descriptions of the pollutants, sources, and/or activities to be addressed through land use planning are further described in Sections 3.0 Non-Storm Water Discharges, 5.0 Construction Component, 6.0 Municipal Component, 7.0 Industrial and Commercial Component, and 9.0 Illicit Discharge Detection and Elimination Component.

4.2.3 BEST MANAGEMENT PRACTICE REQUIREMENTS

The Authority requires all projects to ensure that pollutant discharges and runoff flows from Development Projects are reduced to the MEP and that receiving water quality objectives are not violated throughout the life of the project. Priority Development Projects, as defined in Municipal Permit Section D.1.d.(1) and categorized in Municipal Permit Section D.1.d.(2), are further described in Appendix A of the Authority's SUSMP.

Development Projects at SAN are required to:

- Implement Source Control BMPs that reduce stormwater pollutants of concern in urban runoff, including storm drain system stenciling and signage, properly designed materials and trash storage areas, and efficient irrigation systems.
- Implement LID BMPs, where feasible, that maximize infiltration, provide retention, slow runoff, minimize impervious footprint, direct runoff from impervious areas into landscaping, and construct impervious surfaces to minimum widths necessary.
- Implement buffer zones for natural water bodies where feasible, or other buffers such as trees or access restrictions where buffer zones for natural water bodies are not feasible.

- Incorporated and implement BMPs required by the Authority's SUSMP as applicable for Priority Development Projects.
- Implement measures to reduce construction site discharges of pollutants from the storm drain system to the MEP and prevent construction site discharges from the storm drain system from causing or contributing to a violation of water quality standards.
- Provide proof that Development Projects subject to California's General NPDES Permit for Storm Water Discharges Associated with Construction Activities (aka General Construction Permit) have coverage under the existing General Construction Permit.
- For those structural post-construction BMPs which will not be maintained by the Authority, provide proof of a mechanism under which ongoing long-term maintenance of structural post-construction BMPs will be conducted.

4.2.4 PROGRAM IMPLEMENTATION

A Draft Master Plan for SAN was released for public review in September 2007. The Master Plan is an update to a previous land use plan that was prepared by the Port of San Diego in 2001 (at the time the Port of San Diego owned and operated the airport), but that was never adopted. Four key events necessitated preparation of the Master Plan, including the events of September 11, 2001, the transfer of ownership and operation of the airport from the Port of San Diego to the Authority in January 2003, the preparation of a new aviation activity forecast in 2004 analyzing future aviation activity and its impact on the San Diego Region through 2030, and the Airport Site Selection Program to study potential airport locations in the San Diego region to replace the existing SAN facility. The Master Plan documents the Authority's planning process for SAN and provides guidance for development of the airport to meet continued passenger, cargo, and operations growth at SAN. The goal of the Master Plan is: "to provide guidelines for future airport development which will satisfy aviation demand in a financially feasible manner, while at the same time resolving the aviation, environmental, and socioeconomic issues existing in the community." The Master Plan released to the public in September 2007 has yet to be adopted.

The Authority prepared the Phase I Airport Master Plan to guide the development of SAN to the year 2030. The proposed improvements in Phase 1 are:

- **10 new jet gates at Terminal 2** - The addition of 10 gates will accommodate the expected increase in travelers.
- **Additional parking for remain-over-night aircraft** - The additional parking for remain-over-night (RON) aircraft will increase the efficiency of airport operations by eliminating the need to taxi aircraft from one side of the runway to the other.

- **Second-level roadway at Terminal 2** - A second-level roadway will provide separate departure and arrival areas at Terminal 2 to relieve the current congestion associated with the dual arrival and departure location.
- **Parking structure** - A new structure will provide additional options for passengers and meeters/greeters to park their vehicles for short-term trips. The Draft EIR is evaluating an alternative with and without the parking structure.
- **Taxiway improvements on the north and south sides** - Taxiway improvements will increase the flow of aircraft traffic by efficiently lining up aircraft waiting to take off.

The Draft Environmental Impact Report (EIR) pertaining to the Phase I Master Plan was released on October 2, 2007. The EIR is a comprehensive study of all potential impacts on the environment resulting from proposed improvements to SAN and enhancements to travel experiences for San Diego County residents and visitors. It ensures that actions being taken are in the best interest of surrounding communities and the environment. The EIR covers potential impacts on aesthetics, air and water quality, archaeological and historical issues, impacts on endangered species, potential noise, the coastal zone, toxic and hazardous issues, and all cumulative effects to the environment as well. As part of the California Environmental Quality Act, the EIR is an objective, full-disclosure report meant to inform the public about any and all possible impacts to the environment and seek input on alternatives to reduce the impacts.

All Development Projects described in the Master Plan are subject to this SWMP. This SWMP requires that all Development Projects provide BMPs to minimize, to the MEP, impacts relative to construction, grading, and erosion and sedimentation. This SWMP includes the SAN SUSMP, which is provided in Appendix C.

Outreach and Staff Training

The Authority has developed internal and external education programs to educate the Authority staff, Authority boards, and tenants of water quality issues. The Authority's Education component is described in Section 10.0 of this document.

The Authority's education program ensures its planning and development review staffs have an understanding of federal, state, and local water quality laws and regulations applicable to Development Projects; the connection between land use decisions and short- and long-term water quality impacts; methods of minimizing impacts to receiving water quality resulting from development; and how to integrate LID BMP requirements into the Authority's land use planning program. The training is designed to present an understanding of relevant stormwater management topics, including:

- Determining methods to control downstream erosion impacts;

- Identifying pollutants of concern and appropriate treatment control BMPs for pollutants of concern;
- Implementing LID and Source Control BMPs.

4.3 ENVIRONMENTAL REVIEW PROCESS

The Authority has reviewed our current environmental review processes for all Development Projects to ensure: accurate evaluation of water quality impacts and cumulative impacts; identification of appropriate measures to avoid, minimize, and mitigate those impacts. Provided below is a description of our current environmental review process and how it addresses impacts to water quality and ensures appropriate mitigation measures.

To begin and as required by law, Authority staff use CEQA to evaluate projects for approval. The CEQA process begins with determining whether the act of project approval is "ministerial" or "discretionary". Ministerial project approval generally involves the use of fixed standards and objective measurements and precludes the imposition of project-specific conditions. Prior to issuing a discretionary approval, however, CEQA requires that the Authority first evaluate the effects of the proposed project on the environment. The Authority's approval to execute a development project is typically a discretionary act. The State of California, Governor's Office of Planning and Research (OPR) is responsible for carrying out various state-level environmental review activities pursuant to the CEQA, including the preparation of the state CEQA Guidelines (part of the California Code of Regulations) for implementation of CEQA. CEQA Guidelines Appendix G contains the "Environmental Checklist Form," which is a model checklist for use in determining whether the effects of a proposed project on the environment are significant. The Authority has adopted the checklist in CEQA Guidelines Appendix G as part of its environmental review process.

Authority planning and development review staff, in the Airport Planning Department, use the following questions from the "Environmental Checklist Form" pertaining to hydrology and water quality to evaluate the potential stormwater impacts of any particular project:

Would the Project:

- 1 Violate any water quality standards or waste discharge requirements?
- 2 Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?
- 3 Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site?

- 4** Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

These four standard questions are then routinely supplemented with 9 questions derived from the previous Municipal Permit (RWQCB Order 2001-01), specifically:

Would the Project:

- 1** Result in an increase in pollutant discharges to receiving waters, considering water quality parameters such as temperature, dissolved oxygen, turbidity, and other typical stormwater pollutants (heavy metals, pathogens, petroleum derivatives, synthetic organics, sediment nutrients, oxygen-demanding substances, and trash)?
- 2** Result in significant alteration of receiving water quality during or following construction?
- 3** Result in increased impervious surfaces and associated increased runoff?
- 4** Create significant adverse environmental impact to drainage patterns due to changes in runoff flow rates or volumes?
- 5** Be a tributary to an already impaired water body as listed on the Clean Water Act Section 303(d) list? If so, can it result in an increase in any pollutant for which the water body is already impaired?
- 6** Be a tributary to environmentally sensitive areas (for example, RARE, Areas of Special Biological Significance, etc.)? If so, can it exacerbate already existing sensitive conditions?
- 7** Have a potentially significant environmental impact on surface water quality to either marine, fresh, or wetland waters?
- 8** Have a potentially significant adverse impact on groundwater quality?
- 9** Cause or contribute to an exceedance of applicable surface water or groundwater receiving water quality objectives or degradation of beneficial uses?
- 10** Can the project impact aquatic, wetland, or riparian habitat?

4.4 DEVELOPMENT PROJECT APPROVAL AND VERIFICATION PROCESS

4.4.1 BACKGROUND

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

4.4.2 SOURCE CHARACTERIZATION

Descriptions of the pollutants, sources, and activities to be addressed through the Development Project approval process are described in Sections 3.0 Non-Stormwater Discharges, 5.0 Construction Component, 6.0 Municipal Component, 7.0 Industrial and Commercial Component, and 9.0 Illicit Discharge Detection and Elimination Component.

4.4.3 BEST MANAGEMENT PRACTICE REQUIREMENTS

The Authority has developed a SUSMP based on the Model SUSMP developed by the Copermittees for projects that are determined to be Priority Development Projects. The SUSMP process is an integral part of this SWMP. The Authority's SUSMP is included in Appendix C. Priority Development Projects are defined in Municipal Permit Section D.1.d.(1) and categorized in Municipal Permit Section D.1.d.(2). Priority Development Projects are required, to the MEP, minimize the introduction of pollutants of concern to the stormwater conveyance system that may result in significant impacts to the receiving water. This objective can be most effectively achieved through the use of a combination of Site Design, Source and Treatment Control BMPs. The Authority's SUSMP describes the selection and design criteria for the Source Control, LID, and Treatment Control BMPs to be implemented at Priority Development Projects. For Priority Development Projects, the Authority's SUSMP requires the selection of stormwater BMPs to maximize the removal of the primary pollutant(s) of concern identified on the project site. The SUSMP process will lead to the selection of Treatment Control BMPs with high or medium pollutant removal efficiencies for the most significant pollutants of concern. Matrices are provided in the Authority SUSMP to guide BMP selection, including Table 3, which depicts treatment control BMPs and their pollutant removal efficiencies. The project review and approval process is described in Section 4.4.4.

4.4.4 PROGRAM IMPLEMENTATION

All Development Projects at SAN undergo a review as part of the project review and approval process as described below and illustrated in Figures 10 (Tenant Projects) and Figure 11 (Capital Development Projects).

Tenant Projects

Whenever an airport tenant desires to make surface or subsurface improvements or perform new construction, reconstruction, modification, or demolition, the tenant must submit a request for approval through the Facilities Development Department which then, in turn, submits appropriate information to the Real Estate Management Department. The request must be accompanied by plans and specifications that indicate the nature and extent of the proposed work and conform to Authority policies and all relevant laws, ordinances, rules, and regulations. The plans may include references to specific sections or parts of the Uniform Building Code or other applicable codes, ordinances, or laws.

The Facilities Development Department, acting as project engineers, initiates the review process by completing a "Project Evaluation Form" (PEF). The PEF is then submitted to the Authority Environmental Affairs and Airport Planning Departments. Projects are evaluated by the two departments for environmental impacts as discussed in the following sections. The approval of an Airport tenant project becomes part of the lease or part of a use and occupancy permit. Any mitigation measures or conditions of approval required by the review process of these departments become part of the lease or use permit and may be adopted by the Airport Authority Board as a CEQA Mitigation Monitoring and Reporting Program.

Authority Projects

Whenever an Authority department desires to make surface or subsurface improvements or perform new construction, reconstruction, modification, or demolition, the project sponsor/proponent/manager must submit appropriate information to the Facilities Development Department. The Facilities Development Department staff complete the PEF for submittal to the Environmental Affairs and Airport Planning Departments. Projects are evaluated by the two departments for environmental impacts, as discussed in the following sections. Any mitigation measures or conditions of approval required by the review process of these departments become part of the project design and/or implementation and are formalized as a CEQA Mitigation Monitoring and Reporting Program adopted by the Board at the time of project approval.

Application of California Coastal Act

Discretionary projects proposed at SAN may require a coastal development permit in conformance with the California Coastal Act. Once the Authority determines that a project is a "development" and requires a coastal development permit, an application will be prepared and submitted to the California Coastal Commission. Under the California Coastal Act, "development" means, on land, in or under water, the placement or erection of any solid material or structure; discharge or disposal of any dredged material or of any gaseous, liquid, solid, or thermal waste; grading, removing, dredging, mining, or extraction of any materials; change in the density or intensity of use of land, change in the intensity of use of water, or of access thereto; construction, reconstruction, demolition, or alteration of the size of any structure, including any facility of any private, public, or municipal utility. As used in this section, "structure" includes, but is not limited to, any building, road, pipe, flume,

conduit, siphon, aqueduct, telephone line, and electrical power transmission and distribution line (California Public Resources Code §30106).

The California Coast Act contains water quality and watershed related policies with which a coastal development must comply. The Authority will propose project alternations or mitigation measures to be consistent with these policies for Development Projects that require a coastal development permit, which will then be reviewed and approved by the Coastal Commission.

The Authority's SUSMP describes the selection criteria, design criteria, and maintenance requirements for the Source Control, LID, and Treatment Control BMPs to be implemented at Priority Development Projects. The Authority's SUSMP also describes the criteria to control or maintain runoff discharge rates, durations, and velocities to reduce downstream erosion and protect stream habitat, the waiver provisions for meeting the numeric sizing criteria, and restrictions on use of infiltration BMPs to protect groundwater resources to meet the requirements in Municipal Permit Sections D.1.d.(10), D.1.d.(11), and D.1.d.(12). The Authority's SUSMP is included in Appendix C. Inspection, maintenance, and annual verification requirements are also described in Section 6.2 of this document.

The Authority's SUSMP is implemented by the Environmental Affairs Department. When the Environmental Affairs Department receives a PEF, it reviews it for hazardous materials and stormwater issues. Based on its review of the PEF, Environmental Affairs will determine if the project is subject to the SUSMP. Facilities Development will be advised of the necessity for the development of a Stormwater Mitigation Plan and will in turn notify the proponent of the project (either the tenant or appropriate Authority project sponsor/manager) if the project is subject to the SUSMP. Review and approval of the Stormwater Mitigation Plans will be conducted by Environmental Affairs. Incorporation of the elements of the Stormwater Mitigation Plans into the project design, CEQA Mitigation Monitoring and Reporting Program, lease, or other implementation mechanism will be the responsibility of Facilities Development and Airport Planning.

BMP Verification

Prior to occupancy of each Priority Development Project subject to SUSMP requirements, the Authority will develop an inspection schedule for each newly-constructed LID, source control, and treatment control BMP to verify that they have been constructed in compliance with all specifications, plans, permits, ordinances, and the Municipal Permit. This initial BMP verification inspection will be separate from the regular operation and maintenance inspections for each BMP.

Outreach and Staff Training

The Authority has developed internal and external education programs to educate the Authority staff, Authority boards, and tenants of water quality issues. The Authority's Education Component is described in Section 10.0 of this document.

The Authority's education program ensures its development review staffs have an understanding of federal, state, and local water quality laws and regulations applicable to Development Projects; the connection between project implementation decisions and short- and long-term water quality impacts; methods of minimizing impacts to receiving water quality resulting from development; and how to integrate BMP requirements into the Authority's development review programs. The training is designed to present an understanding of relevant stormwater management topics.

Enforcement of Development Sites

For details on enforcement procedures, see Section 2.4.

4.5 DEVELOPMENT PLANNING COMPONENT EFFECTIVENESS ASSESSMENT

The Authority has developed internal and external effectiveness assessment programs to evaluate the Authority staff, Authority boards, and tenant compliance with water quality issues. The Authority's Effectiveness Assessment component is described in Section 13.0 of this document.

4.6 PROGRAM REVIEW AND MODIFICATION

The Authority has reserved this section to identify and document future changes to the Development Planning Component of the SWMP. Section 14.0 of this SWMP details the program modifications made to the *SWMP January 2005-Revision* to bring this document into compliance with the renewed Municipal Permit.

5.0 CONSTRUCTION COMPONENT

5.1 INTRODUCTION

Section 5.0 of this SWMP addresses the requirements in Municipal Permit Sections D.2.a.(1), D.2.a.(2)(a), D.2.b, D.2.c.(1) through (4), D.2.d-f; I.1, J.1.a.(3)(d)i, J.1.a.(3)(d)iii through J.1.a.(3)(d)xiv, and J.1.a.(3)(l) that the Authority has determined are relevant to the Construction Component.

Municipal Permit Section D.2.a.(1) requires that the Authority review and update its grading ordinances and other ordinances as necessary to achieve full compliance with the Municipal Permit, including requirements for the implementation of all designated BMPs and other measures. Section 5.3 has been prepared to address this requirement.

Municipal Permit Section D.2.a.(2)(a) requires that the Authority implement designated BMPs and other measures at all individual proposed construction sites, so that pollutants discharged from the site will be reduced to the MEP and will not cause or contribute to a violation of water quality standards. Section 5.2 has been prepared to address this requirement.

Municipal Permit Section D.2.b requires that the Authority maintain and update, on a monthly basis, a watershed-based inventory of all construction sites within its jurisdiction. The use of an automated database system, such as Geographical Information System (GIS) is recommended. Sections 5.2, 5.2.1, and 5.2.2 have been prepared to address this requirement.

Municipal Permit Section D.2.c.(1) requires that the Authority designate a minimum set of BMPs and other measures to be implemented at construction sites. The designated minimum set of BMPs shall include general site management and erosion and sediment controls. Sections 5.4 and 5.5 have been prepared to address this requirement.

Municipal Permit Section D.2.c.(1)(a)vi requires that the Authority develop limitations of grading to a maximum disturbed area before either temporary or permanent erosion controls are implemented to prevent stormwater pollution. The Authority has the option of temporarily increasing the size of disturbed soil areas by a set amount beyond the maximum, if the individual site is in compliance with applicable stormwater regulations and the site has adequate control practices implemented to prevent stormwater pollution. Section 5.4.1 has been prepared to address this requirement.

Municipal Permit Section D.2.c.(2) requires that the Authority require implementation of advanced treatment for sediment at construction sites that are determined by the Authority to be an exceptional threat to water quality. Soil erosion potential or soil type, site's slopes, project size and type, sensitivity of receiving water bodies, proximity to receiving water bodies, non-stormwater discharges, ineffectiveness of other BMPs, and any other relevant factors shall be considered by the Authority in evaluating the threat to water quality. Section 5.4 has been prepared to address this requirement.

Municipal Permit Section D.2.c.(3) requires that the Authority implement or require the implementation of the designated minimum BMPs and any additional measures necessary to comply with the Municipal Permit at each construction site within its jurisdiction year round. BMP implementation requirements can vary based on wet and dry seasons. Dry season BMP implementation must plan for and address rain events that may occur during the dry season. Sections 5.4.1 and 5.5 have been prepared to address this requirement.

Municipal Permit Section D.2.c.(4) requires that the Authority implement or require implementation of additional controls for construction sites tributary to CWA section 303(d) water body segments impaired for sediment and additional controls for construction sites within or adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas (as defined in Attachment C of the Municipal Permit). Section 5.4.2 has been prepared to address this requirement.

Municipal Permit Section D.2.d requires that the Authority conduct construction site inspections for compliance with its local ordinances (grading, stormwater, etc.), permits (construction, grading, etc.), and the Municipal Permit. Section 5.5 has been prepared to address this requirement.

Municipal Permit Section D.2.e requires that the Authority develop and implement an escalating enforcement process that achieves prompt corrective actions at construction sites for violations of the Authority's water quality protection permit requirements and ordinances. This enforcement process shall include authorizing the Authority's construction site inspectors to take immediate enforcement actions when appropriate and necessary. The enforcement process shall include appropriate sanctions such as stop work orders, non-monetary penalties, fines, bonding requirements, and/or permit denials for non-compliance. Section 5.5 has been prepared to address this requirement.

Municipal Permit Section D.2.f requires that the Authority, in addition to the notification requirements in section 5(e) of Attachment B, shall notify the Regional Board when the Authority issues a stop work order or other high level enforcement to a construction site in their jurisdiction as a result of stormwater violations. Section 5.5 has been prepared to address this requirement.

Municipal Permit Section I.1 requires that the Authority annually assess and report the effectiveness of the Construction component of their SWMP addressing significant and/or types of activities/BMPs being implemented. Based on the results of the effectiveness assessment, the Authority is required to annually review its jurisdictional activities or BMPs to identify modifications and improvements needed to maximize SWMP effectiveness as they pertain to the Construction component. Sections 5.6 and 13.0 have been prepared to address this requirement.

Municipal Permit Sections J.1.a.(3)(d)I and J.1.a.(3)(d)iii through J.1.a.(3)(d)xiv require that the Authority's Construction component of the SWMP be revised to include:

- 1 Updated grading and other applicable ordinances. Section 5.3 has been prepared to address this requirement.
- 2 Updated construction and grading project requirements. Section 5.4.1 has been prepared to address this requirement.
- 3 A completed watershed-based inventory of all construction sites. Section 5.2.1 has been prepared to address this requirement.
- 4 A description of steps that will be taken to maintain and update monthly a watershed-based inventory of all construction sites.
- 5 A list and description of the minimum BMPs that will be implemented, or will be required to be implemented, including pollution prevention. Section 5.4.1 has been prepared to address this requirement.
- 6 A description of the maximum disturbed area allowed for grading before either temporary or permanent erosion controls are implemented. Section 5.4.3 has been prepared to address this requirement.
- 7 A description of construction site conditions where advanced treatment will be required. Section 5.4.4 has been prepared to address this requirement.
- 8 A description of the steps that will be taken to require and verify the implementation of the designated BMPs at all construction sites. Section 5.5 has been prepared to address this requirement.
- 9 A description of planned inspection frequencies. Section 5.5 has been prepared to address this requirement.
- 10 A description of inspection procedures. Section 5.5 has been prepared to address this requirement.
- 11 A description of steps that will be taken to track construction site inspections to verify that all construction sites are inspected at the minimum frequencies required. Section 5.5 has been prepared to address this requirement.
- 12 A description of available enforcement mechanisms, under what conditions each will be used, and how they will escalate. Section 5.5 has been prepared to address this requirement.
- 13 A description of notification procedures for non-compliant sites. Section 5.5 has been prepared to address this requirement.

Municipal Permit Sections J.1.a.(3)(l) describe the required updates and revisions to the SWMP as they pertain to the Effectiveness Assessment Component. Section 13.0 describes the Effectiveness Assessment component of the SWMP. These requirements also are addressed in Sections 5.5 and 13.0.

5.2 SOURCE CHARACTERIZATION

The Construction component will address the following activities: demolition, grading, excavation, clearing, and structure and road construction that can result in the disturbance of soil and/or the production of materials that can result in the transport of trash, debris, or sediment to the stormwater conveyance system. Sources identified by the Authority include any existing or future developments or construction sites at SAN. Designated Construction BMPs will be implemented at all construction sites to reduce the discharge of trash, debris, and/or sediment from the site to the MEP and not cause or contribute to a violation of water quality standards.

5.2.1 SITE INVENTORY

The Authority Environmental Affairs Department maintains a monthly watershed-based inventory of active construction projects at SAN. All construction projects at SAN lie in the same watershed, specifically, the Pueblo San Diego hydrologic unit, San Diego Mesa hydrologic area, Lindbergh hydrologic sub-area (908.21). The list of active construction sites is presented in Table 3.

5.2.2 INVENTORY UPDATES

The inventory is updated by the Environmental Affairs Department during the first week of each month. Up-to-date information is obtained from the Authority Facilities Development Department which grants final project approvals and provides daily oversight/inspection of all construction activity underway at SAN.

5.3 ORDINANCE UPDATES

The Authority has not adopted a grading ordinance. The absence of a grading ordinance is largely due to the following:

- 1 Mass grading activities are generally not expected to be necessary with most construction activities in the Authority's jurisdiction because SAN is naturally relatively flat and, thus, most sites are ready for buildings.
- 2 Grading ordinances are generally adopted by municipalities in order to regulate activities on private property, and as previously noted, there is no private property in the Authority's jurisdiction; the Authority holds a master lease for the land with the Port of San Diego.

The approval of a development or improvement project carried out by the Authority itself includes the self-imposition of environmental mitigation measures that are necessary to any impacts. Such mitigation measures become part of the project design and/or implementation. The approval of a tenant project becomes part of the lease or part of a use and occupancy permit. Any mitigation measures required by the environmental review process become part of the lease or use permit. These mitigation measures would address the type of impacts that a grading ordinance would address. Thus, the Authority imposes by design and implementation or by lease or by permit the same types of controls on site preparation that a grading ordinance would seek to impose.

5.4 BEST MANAGEMENT PRACTICE REQUIREMENTS

5.4.1 UPDATED BMP REQUIREMENTS

This section provides a designation of the minimum BMPs for construction activities at the SAN. All construction sites must be protected to prevent discharges to the MEP. The minimum BMP requirements are the same for each construction project regardless of the project's threat to water quality. Each construction site must be protected by an effective combination of erosion and sediment controls, materials and waste management controls, and site management controls. The effectiveness of each in preventing or reducing stormwater pollution associated with construction activities is dependent upon the proper implementation and maintenance of these BMPs.

The following BMPs are required for all construction sites year-round, depending on their applicability to the activity at hand.

General Site Management BMPs:

- Pollution prevention where appropriate;
- Development and implementation of a Construction Site SWPPP;
- Maintenance of all BMPs, until removed;
- Retention, reduction, and proper management of all pollutant discharges on site to the MEP standard;
- Use of smaller quantities of toxic materials or substitution of less-toxic materials, where feasible;
- Modification of practices to reduce waste;
- Decrease process wastewater flows;
- Cleaning up without water whenever possible;

- Minimizing the volume of cleaning water to decrease wastewater;
- Minimizing outside storage areas;
- Development of a schedule of preventive maintenance for equipment;
- Recycling of wastes on-site or off-site;
- Segregation of wastes;
- Keeping liquid wastes out of dumpsters or trash containers;
- Keeping any hazardous or harmful wastes out of dumpsters or trash containers;
- Keeping waste containers covered;
- Requesting that leaking dumpster or trash cans be fixed or replaced;
- Disposal of wastes properly and on a frequent and regular basis;
- Having rags handy for cleanup;
- Keeping absorbents on hand to help clean up spills;
- Implementing spill response procedures;
- Training employees in pollution prevention.

Depending on the specific activities being conducted at a construction site, the Authority requires the use of BMPs designed to control those particular activities. These BMPs are described below in general terms. BMPs must be employed to the industry standards as listed in the California BMP Handbook for Construction Activity (2003), produced by the California Stormwater Quality Association and available at <http://www.cabmphandbooks.com> or in the Caltrans Construction Site BMP Manual available at <http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm>. Those BMPs, as listed in the California BMP Handbook for Construction Activity or in the Caltrans Construction Site BMP Manual, include

Non-Stormwater Management BMPs

NS-1 Water Conservation Practices	NS-9 Vehicle and Equipment Fueling
NS-2 Dewatering Operations	NS-10 Vehicle and Equipment Maintenance
NS-3 Paving and Grinding Operations	NS-11 Pile Driving Operations
NS-4 Temporary Stream Crossing	NS-12 Concrete Curing
NS-5 Clear Water Diversion	NS-13 Concrete Finishing
NS-6 Illicit Connection/Discharge	NS-14 Material and Equipment Use
NS-7 Potable Water/Irrigation	NS-15 Demolition Adjacent to Water
NS-8 Vehicle and Equipment Cleaning	NS-16 Temporary Batch Plants

Waste Management & Materials Pollution Control BMPs

WM-1 Material Delivery and Storage	WM-6 Hazardous Waste Management
WM-2 Material Use	WM-7 Contaminated Soil Management
WM-3 Stockpile Management	WM-8 Concrete Waste Management
WM-4 Spill Prevention and Control	WM-9 Sanitary/ Septic Waste Management
WM-5 Solid Waste Management	WM-10 Liquid Waste Management

Erosion and Sediment Control BMPs

- Minimization of areas that are cleared and graded to only the portion of the site that is necessary for construction;
- Minimization of exposure time of disturbed soil areas;
- Minimization of grading during the wet season and correlation of grading with seasonal dry weather periods to the extent feasible;

- Limitation of grading to a maximum disturbed area of 1 acre, as determined by the Authority, before either temporary or permanent erosion controls are implemented to prevent stormwater pollution; the Authority has the option of temporarily increasing the size of disturbed soil areas by a set amount beyond the maximum, if the individual site is in compliance with applicable stormwater regulations and the site has adequate control practices implemented to prevent stormwater pollution;
- Temporary stabilization and reseeding of disturbed soil areas as rapidly as feasible;
- Preservation of natural hydrologic features where feasible;
- Preservation of riparian buffers and corridors where feasible;
- Erosion prevention, to be used as the most important measure for keeping sediment on site during construction, but never as the single method;
- Sediment controls, to be used as a supplement to erosion prevention for keeping sediment on-site during construction;
- Slope stabilization on all inactive slopes during the rainy season and during rain events in the dry season;
- Slope stabilization on all active slopes during rain events regardless of the season;
- Permanent re-vegetation or landscaping as early as feasible.

Again, depending on the specific activities being conducted at a construction site, the Authority requires the use of BMPs designed to control those particular activities. These BMPs are described below in general terms. The BMPs, as listed in the California BMP Handbook for Construction Activity (as cited above) or in the Caltrans Construction Site BMP Manual, include:

Erosion Control BMPs

EC-1 Scheduling

EC-8 Wood Mulching

EC-2 Preservation of Existing
Vegetation

EC-9 Earth Dikes and Drainage Swales

EC-3 Hydraulic Mulch

EC-10 Velocity Dissipation Devices

EC-4 Hydroseeding

EC-11 Slope Drains

EC-5 Soil Binders

EC-12 Streambank Stabilization

EC-6 Straw Mulch

EC-13 Polyacrylamide

EC-7 Geotextiles & Mats

Temporary Sediment Control BMPs

SE-1 Silt Fence

SE-6 Gravel Bag Berm

SE-2 Sediment Basin

SE-7 Street Sweeping and Vacuuming

SE-3 Sediment Trap

SE-8 Sandbag Barrier

SE-4 Check Dam

SE-9 Straw Bale Barrier

SE-5 Fiber Rolls

SE-10 Storm Drain Inlet Protection

Wind Erosion Control BMPs

WE-1 Wind Erosion Control

Temporary Tracking Control BMPs

TC-1 Stabilized Construction Entrance/ Exit

TC-2 Stabilized Construction Roadway

TC-3 Entrance/Outlet Tire Wash

5.4.2 ADDITIONAL CONTROLS FOR CONSTRUCTION SITES

Construction sites will be categorized as posing either a high, medium, or low threat to water quality. Soil erosion potential, site slope, project size and type, sensitivity of receiving water bodies, proximity to receiving water bodies, non-stormwater discharges, past record of non-compliance by the contractor/operator at the construction site, and any other relevant factors will be considered in evaluating the threat to water quality posed by construction sites. Project size and type, sensitivity of receiving water bodies, and proximity to receiving water bodies are generally the most significant for projects at the SAN.

In accordance with Municipal Permit Section D.2.c.(2), the Authority requires implementation of advanced treatment for sediment at construction sites that are determined by the Authority to be an exceptional threat to water quality. Soil erosion potential or soil type, site's slopes, project size and type, sensitivity of receiving water bodies, proximity to receiving water bodies, non-stormwater discharges, ineffectiveness of other BMPs, and any other relevant factors shall be considered by the Authority in evaluating the threat to water quality and determining the need for advanced treatment. The Authority may require the implementation of multiple BMPs as described in Section 5.4.1 to provide "multiple lines of defense" for high priority construction sites.

In evaluating Municipal Permit Section D.2.c.(4), the Authority has determined that this particular Permit Section is not applicable to the Authority's jurisdiction for 2 reasons, namely: 1) runoff from the airport drains into San Diego Bay, which is not listed as a CWA 303(d) water body segment impaired for sediment; and 2) runoff from the airport does not drain directly into San Diego Bay, but rather is commingled with runoff from other areas.

5.5 PROGRAM IMPLEMENTATION

This section includes a description of the steps that will be taken to require and verify the implementation of the designated BMPs at all construction sites. The detailed content and organization of this section reflects the specific processes used by the Authority, and is further sub-divided as needed (private and public projects). Program implementation includes the following:

5.5.1 EDUCATION

The Authority's stormwater construction education efforts focus on construction activities and their relationship to urban runoff impacts on water quality. The Construction education program will utilize available guidance mechanisms, BMP information, and training programs to create the awareness of 1) pollution causing activities related to construction sites, and 2) the methods used to minimize these pollutants.

This program is designed to address the following primary objectives:

- Provide useful guidance in developing outreach and training programs that will support the successful implementation of the Authority SWMP;
- Encourage the consistent application of reasonable and effective BMPs and pollution prevention strategies by construction personnel;
- Maximize consistency in information and facilitate the adaptation of education and outreach to appropriate construction personnel, raising knowledge and awareness of the issues related to stormwater and urban runoff.

The education program includes annual training prior to the rainy season so that its construction project proponents/sponsor/managers, construction site personnel, inspection staff, and other relevant persons have, at a minimum, an understanding of the following topics, as appropriate for the target audience:

- 1 Basic urban runoff training for all personnel, followed when appropriate by more advanced training for targeted groups;
- 2 California's Statewide NPDES Permit requirements and federal, state, and local water quality regulations where applicable;
- 3 Federal, state, and local water quality laws and regulations applicable to construction and grading activities;
- 4 Water quality impacts associated with land development and control measures to address them;
- 5 The connection between construction activities and water quality impacts (i.e., impacts from land development and urbanization and impacts from construction material such as sediment);
- 6 Proper implementation of erosion and sediment control and other BMPs to minimize the impacts to receiving water quality resulting from construction activities;
- 7 The Authority's plan review, inspection, and enforcement policies and procedures to verify consistent application;
- 8 Stormwater compliance construction site inspections and self-inspections;
- 9 Prohibited discharges to the storm drain system and the Authority's Illicit Discharge Detection and Elimination Program;
- 10 Preventive maintenance;

11 Spill response, containment, and recovery.

10 Current advancements in BMP technologies;

5.5.2 TRAINING

The education program will address the training needs of all construction personnel. Using formal and informal training mechanisms, the education program will provide construction personnel with an understanding of the topics listed above and the relevance of stormwater issues and BMPs. The Authority will provide in-house training and, to the extent possible, provide or support training efforts directed at the construction industry. It is also anticipated that those business communities and trade associations related to construction activities will also train their colleagues in response to changing business practices resulting from implementation of the Authority's SWMP. In addition to the education topics listed in Section 10, the construction training agendas will address the following:

The Authority will use the following mechanisms in our education efforts. Current, continued, and planned use of these mechanisms enables the Authority to meet many of the obligations and education requirements in the Municipal Permit.

- Pre-bid, pre-construction, and on-going project progress meetings;
- On-site inspections, tailgate meetings, and site visits;
- Development and distribution of BMP guidance for certain potentially polluting construction activities;
- Classroom training and workshops;
- Community/staff meetings;
- Posters, pamphlets, and flyers;
- Educational videos;
- Authority newsletter articles;
- Tenant advisories;
- Website updates;
- Outreach to business associations;
- Participation in joint outreach efforts (for example, the THINK BLUE campaign).

Classroom training for Facilities Development Department and Environmental Affairs Department staff will be conducted at least annually. Training includes review of the SWMP Construction requirements, introduction of resources for Best Management Practice information, bid document preparation, and plan review and contract compliance requirements. Continuous training may also include in-house presentations, emails, joint field walk-inspections, new hire review, as well as attendance at training programs put on by outside agencies. When feasible, the Authority will help sponsor outreach and/or training activities other municipal, quasi-government, private construction, and development industry representatives.

5.5.3 CONSTRUCTION PROJECT APPROVAL PROCESS

Section 4.4.4 of this SWMP outlined the process for approving development or improvement projects carried out by the Authority or airport tenants. These processes lead to the identification and imposition of required construction and post-construction BMPs. In general, conditions of approval require the project sponsor/manager/contractor/tenant to prepare a SWPPP. These SWPPPs are reviewed and approved by the Environmental Affairs Department. Smaller projects may be required to implement specific BMPs identified by the Authority, without the need for preparation or submittal of a SWPPP.

5.5.4 DIRECT IMPLEMENTATION OF BMPs

Section 5.4.1 describes the BMPs required for all construction sites, depending on their applicability to the activity at hand. Each construction site must be protected by an effective combination of erosion and sediment controls, materials and waste management controls, and site management controls. The effectiveness of each in preventing or reducing stormwater pollution associated with construction activities is dependent upon the proper implementation and maintenance of these BMPs.

5.5.5 INSPECTION OF CONSTRUCTION SITES

The Authority inspects all construction sites to monitor compliance with the Authority's ordinances, permits, approvals, and the Municipal Permit. The Authority's inspection program exceeds the minimum requirements of the Municipal Permit. All high priority construction sites will be inspected at least weekly on a year-round basis. It is also the Authority's goal to inspect medium priority sites and low priority sites (generally sites less than 1 acre in size) at least weekly on a year-round basis.

The Authority is concerned with every aspect of a construction project and has staff that is responsible for inspecting all improvements in the Authority's jurisdiction. The Authority must verify either contract compliance for Authority "public works-type" projects or lease/use permit compliance for tenant projects. The construction inspector in the Authority's Facilities Development Department is generally on-site any day there is construction activity. He is responsible for inspecting all construction activities and is trained to identify stormwater issues. He also alerts the Environmental Affairs Department to issues that cannot be corrected immediately.

The Environmental Affairs Department conducts the regular weekly inspections. The inspection include a review of the adequacy and effectiveness of the BMP being implemented at the site. If the project is subject to the General Construction Permit, then the inspection will also include review of: 1) the SWPPP and supporting documentation; 2) contractor site inspection records; and 3) any available monitoring results, if applicable. Previous inspection records for the site will be reviewed prior to any inspection. The inspector carries the following forms and equipment during the inspection:

- **Inspection Form** - To be completed during the inspection (See Appendix G);
- **SWPPP Checklist** - To review the SWPPP if applicable;
- **BMP Checklist** - To verify implementation of minimum BMPs;
- **Stormwater Discharge Parameter Benchmarks** - This table of generally acceptable analyte values for stormwater discharges may be used by the inspector during the review of monitoring results;
- **Camera** - To document site conditions.

A copy of the completed Inspection Form, is be provided to the site supervisor at the end of the inspection, or the next day. The inspector will review the results of the inspection with the site supervisor.

5.5.6 ENFORCEMENT MEASURES FOR CONSTRUCTION SITES

Any BMP violations noted, and/or exceedances of the benchmark water quality parameters, will be discussed with the site supervisor. If BMP violations and/or elevated levels are not being addressed by the site supervisor, the inspector will require the submittal of a written explanation and description of the actions that will be taken to correct the problem. The site supervisor will be given a corrective action order on the inspection form for each violation documented during the inspection. Corrective actions will be taken as soon as possible by the site supervisor (given safety considerations).

All construction activities undertaken in the Authority's jurisdiction are required to maintain compliance with the Authority Storm Water Code (Article 8.7), the Municipal Permit, the General Construction Permit (if applicable), and any requirements established in this SWMP.

The Authority will pursue appropriate enforcement actions as detailed in Article 8.7 of the Authority Code and described in Section 2.4 if violations discovered during an inspection are not resolved voluntarily by the site supervisor. Incidents of serious violations may result in the issuance of stop work orders and penalties.

5.5.7 NOTIFICATIONS TO THE RWQCB

Sites are considered non-compliant if one or more stormwater violations are discovered at a site. The Authority may issue a stop work order or other notice for incidents of repeat or serious violations. The Authority will notify the RWQCB of any stop work orders or other high level enforcement action issued to a construction site for stormwater violations.

If an incident or practice of non-compliance occurs, Authority Environmental Affairs Department staff will then determine if the incident poses a threat to human health or environmental health by considering the following criteria:

- Characteristics, quantity, and toxicity of substances/materials involved;
- Proximity of site to a sensitive water body (San Diego Bay);
- Proximity of site to an impaired water body (San Diego Bay);
- Proximity of site to a sensitive habitat/endangered species;
- Estimated volume of actual and/or potential discharge;
- If discharges to storm drain;
- Condition of storm drain (clog, etc.).

If the Authority determines that the incident does endanger human health or the environment, then the Authority will provide verbal notification to the RWQCB within 24 hours from the time the Authority becomes aware of the circumstances. Within 5 days of the time the Authority becomes aware of the circumstances, the Authority will provide the RWQCB with a written submission containing a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

5.6 CONSTRUCTION ACTIVITIES EFFECTIVENESS ASSESSMENT

The Authority has developed internal and external effectiveness assessment programs to evaluate the Authority staff, Authority boards, and tenant compliance with water quality issues. The Authority's Effectiveness Assessment component is described in Section 13.0 of this document.

5.7 PROGRAM REVIEW AND MODIFICATION

The Authority has reserved this section to identify and document future changes to the Construction Component of the SWMP. Section 14.0 of this SWMP details the program modifications made to the *SWMP January 2005-Revision* to bring this document into compliance with the renewed Municipal Permit.

6.0 MUNICIPAL COMPONENT

6.1 INTRODUCTION

Section 6.0 of this SWMP addresses requirements in sections of the Municipal Permit that the Authority has determined are relevant to the Municipal section of the Existing Development Component. These sections are: D.3.a.(1 - 8), and J.1.a.3.(e)i - x.

Municipal Permit Sections D.3.a.(1) and J.1.a.3.(e)i require that the Authority annually update a watershed based inventory of municipal areas and activities that could generate pollutants and the significant materials in or generated by those areas. Table 6-1 and Sections 6.2.2, 6.3.2, 6.4.2, 6.5.2, 6.6.2, and 6.7.2 have been prepared to satisfy this requirement.

Municipal Permit Sections D.3.a.(2) and J.1.a.3.(e)ii and iii require that the Authority designate, describe and implement pollution prevention methods and BMPs for all municipal areas and activities. Sections 6.2.3, 6.3.3, 6.4.3, 6.5.3, 6.6.3, and 6.7.3, and Appendix B have been prepared to satisfy this requirement.

Municipal Permit Sections D.3.a.(3) and J.1.a.3.(e)v require that the Authority properly operate, inspect and maintain its MS4s and structural controls. Sections 6.2.3 and 6.2.4, and BMPs SC17 and TC01 in Appendix B have been prepared to satisfy this requirement.

Municipal Permit Sections D.3.a.(4) and J.1.a.3.(e)vi require that the Authority implement BMPs to reduce the contribution of pollutants associated with the application, storage, and disposal of pesticides, herbicides, and fertilizers from municipal areas and activities to MS4s. Sections 6.3.3 and 6.3.4, and BMPs SC06, SC09, SC10, SC18, SC19, and SR01 in Appendix B have been prepared to satisfy this requirement.

Municipal Permit Sections D.3.a.(5) and J.1.a.3.(e)vii require that the Authority implement sweeping programs for roads and parking facilities designed to reduce pollutant discharges to its MS4s to the MEP. Section 6.4 and BMPs SC12 and SC16 in Appendix B have been prepared to satisfy this requirement.

Municipal Permit Sections D.3.a.(6) and J.1.a.3.(e)viii require that the Authority implement controls and measures to prevent and eliminate infiltration of seepage from municipal sanitary sewers to MS4s through thorough, routine preventative maintenance of the MS4 that will include overall sanitary sewer and MS4 surveys and thorough, routine preventative maintenance of both. Section 6.5 and BMPs SC01, SC11, SC17, and SR01 in Appendix B have been prepared to satisfy this requirement.

Municipal Permit Sections D.3.a.(7) and J.1.a.3.(e)ix require that the Authority inspects high priority municipal areas and activities annually, with other municipal areas and activities inspected as needed, and implement all follow-up actions necessary to comply with the Municipal Permit. Sections 6.6, 6.7 and 7.2.4 - Facility Inspections have been prepared to satisfy this requirement.

Municipal Permit Sections D.3.a.(8) and J.1.a.3.(e)x require that the Authority enforces its stormwater ordinance for all municipal areas and activities as necessary to comply with the Municipal Permit. Section 2.4 has been prepared to satisfy this requirement.

Municipal Permit Section J.1.a.3.(e)iv requires that the Authority describes the steps that will be taken to require and verify the implementation of designated BMPs at municipal facilities and activities. Sections 7.2.4 - Facility Inspections and 13.0 have been prepared to satisfy this requirement.

6.1.1 OVERVIEW OF MUNICIPAL AREAS AND ACTIVITIES

This section outlines the information presented in the remainder of Section 6 regarding the municipal source areas and activities conducted by the Authority at SAN, and the associated significant materials, that could generate stormwater pollutants. The Municipal Permit requires discussion of specific municipal activities, namely: 1) the storm drain system and associated structural controls; 2) the management of pesticides, herbicides, and fertilizers; 3) the sweeping of municipal areas; 4) the infiltration from the sanitary sewer system into the storm drain system and preventive maintenance for both systems; 5) activities deemed high priority by the Municipal Permit or determined to be high priority by the Authority. The following subsections discuss each of these activities in the same general order.

The operation of the airport is also subject to the General Industrial Permit. Many of the activities classified as municipal activities by the Municipal Permit are also considered to be industrial activities by the General Industrial Permit. As such, many of the municipal activities discussed below are also detailed in Section 7 of this SWMP, which discusses the Industrial and Commercial Component. For instance, inspection and maintenance of the storm drain system is discussed in both sections, as well as pesticide, herbicide, and fertilizer management and the sweeping of municipal areas. It should be noted that the Authority does not currently own or operate any flood control devices.

The municipal areas and activities are prioritized according to the threat to water quality as deemed so by the Municipal Permit or as determined by the Authority. The inventory and the prioritization will be updated annually. The Authority uses a standardized process to determine the potential threat to water quality for municipal areas and activities. The areas and activities are prioritized as a high or low threat to water quality based on several factors, including: Municipal Permit definitions, the nature of the activities, the location, exposure to stormwater or precipitation, the materials used and wastes generated, pollutant discharge potential, non-stormwater discharges, past performance and discharges, size of operation/facility, applicability of the General Industrial Permit, and other relevant factors. Of the municipal areas/activities defined as high priority by the Municipal Permit, only the following are applicable to SAN:

- Roads and parking facilities;
- A closed municipal landfill;
- Corporate yards (used for maintenance or storage of materials, waste, equipment, and vehicles);

- Special event venues; and
- Power washing.

Table 6-1 presents the inventory of municipal areas and activities/operations at SAN. As shown in the table, only the landscaped areas of the facility grounds and the buildings are identified as low priority threats to surface water quality. Each of the remaining land uses and areas listed in Table 6-1 are defined as high priority threats to surface water quality by the Municipal Permit.

Municipal airfields are defined as high priority by the Municipal Permit. That particular area/activity has not included in the bullet list above, simply because the entire jurisdiction of the Authority is an airfield and subject to the General Industrial Permit, and as such, the whole of this SWMP fully describes stormwater management at SAN (a municipal airfield). The remainder of Section 6 provides detailed information on:

- the storm drain system and associated structural controls, Section 6.2;
- the management of pesticides, herbicides, and fertilizers, Section 6.3;
- the sweeping of municipal areas, within the discussion of roads and parking lots, Section 6.4;
- the infiltration from the sanitary sewer system into the storm drain system and preventive maintenance for both systems, Section 6.5;
- the high priority area of the closed NTC landfill, Section 6.6; and
- the high priority area/activity of special event venues, Section 6.7.

Section 6.2 provides the most complete description of the program elements required by the Municipal Permit Copermittees Standardized Format, with each subsequent element referencing the relevant portions of Section 6.2. Again, given the overlap between the Municipal Permit and the General Industrial Permit, this SWMP provides more discussion of roads and parking facilities, sweeping of municipal areas, the closed NTC landfill, the Authority's corporate yards, and power washing in Section 7.

6.2 OPERATION AND MAINTENANCE OF MS4 AND STRUCTURAL CONTROLS

6.2.1 BACKGROUND

As required by Section D.3.a.(3) of the Municipal Permit, the Authority has implemented a schedule of inspection and maintenance activities for the entire storm drain system (MS4) within its jurisdiction and control, including any structural controls designed to reduce pollutant discharges to or from its storm drain system and related drainage structures. The Authority's storm drain system consists of roads with drainage systems, curbs, catch basins, gutters, inlets, culverts, trench drains, and pipes of varying materials and widths. The structural treatment controls incorporated into the storm drain system by the Authority include 6 oil water separators (2 at the north ramp, 1 northeast of the Commuter Terminal, 1 down stream of both the vehicle/equipment and aircraft wash racks, 1 on the west ramp north of Terminal 2 West, and 1 in the Fuel Storage Facility (FSF)), 1 Vortechs hydrodynamic separator unit in the NTC Taxi Hold Lot, and numerous drain inlet inserts.

6.2.2 SOURCE CHARACTERIZATION

As indicated in Table 6-1, the Authority has 86,000 feet of storm drain pipe and 210 inlets. As a consequence of its function, the stormwater conveyance system collects and transports stormwater runoff at SAN that may contain certain pollutants if adequate BMPs are not being implemented or adequate inspections and maintenance of the storm drain system are not being performed. At SAN, these pollutants could include: sediment, trash and debris, oil and grease, hydrocarbons/fuels, hydraulic fluids, solvents, soap/cleaning fluids, lavatory chemicals and waste, paints, used batteries and battery acid, anti-freeze, hazardous wastes (mostly oils), metals, deicing chemicals, herbicides and pesticides, adhesives, rust preventers, aircraft fire fighting foam (AFFF), and sealants. Structural treatment controls that are not properly maintained can also be sources of sediment, oil and grease, trash and debris, and other associated pollutants such as metals.

6.2.3 BEST MANAGEMENT PRACTICE REQUIREMENTS

Updated BMP Requirements

The Authority conducts storm drain system inspection and maintenance activities on a year-round, as-needed basis, with a major storm drain system inspection and cleaning program scheduled annually, in the dry season, May 1 through September 30, in accordance with the Municipal Permit. These activities include inspection and cleaning, as necessary, of storm drain system components, proper disposal of sediment and debris removed from the storm drain system, and implementation of measures to prevent waste discharges to receiving waters during these maintenance activities.

All oil water separators, except the west ramp oil water separator, have an alarm system. If the oily liquid reaches a certain level, or oil leaks to the ground, an alarm goes off. Alarms are checked weekly, and monthly inspections of all oil water separators are conducted. The FSF operator contracts with outside vendors to service their oil water separator and the 12,000-gallon wastewater UST annually. Annual sampling is done on the effluent side of the oil water separator. Facilities Maintenance performs or contracts for inspection and

maintenance of the remaining oil water separators. Service companies are contracted to pump out the oil water separators on an as-needed basis.

The Vortechs hydrodynamic separator unit that is located in the NTC Taxi Hold Lot is inspected and maintained according to the manufacturer's recommendations, but at least annually.

A contractor to the Authority maintains a series of drain inlet inserts in the rental car lot, cell phone parking area, cargo area, across from the triturator, and the California least tern nesting area. These are cleaned every three months in the dry season. During the wet season they are cleaned monthly and after any rain event.

The Authority's BMP category SC17 "Storm Drain Maintenance" and TC01 "Treatment Controls" cover BMPs aimed at mitigating pollutant sources from the operation and maintenance of the storm drain system and from structural treatment controls. Descriptions of these BMPs can be found in Appendix B.

6.2.4 PROGRAM IMPLEMENTATION

Education and Staff Training

All Authority staff attend an annual mandatory SWMP training session to cover items such as prohibited discharges, inspections, spill response, good housekeeping, implementation of BMPs, and record keeping procedures. For more details on staff training, see Section 10.0.

Maintenance Inspections

Both the Authority Environmental Affairs Department and the Facilities Maintenance Department inspect the storm drain system as part of their routine facility inspections. Nearly two-thirds of the airport tenants also perform some inspections, either sporadically or as part of their own routine facility inspections. Airport tenants also share in maintaining the storm drains by working to prevent dirt and trash from entering the storm drain system.

In general, the Environmental Affairs Department inspects all municipal operations. The inspections conducted include: 1) quarterly inspections, 2) municipal land use area-specific inspections, and 3) a comprehensive annual inspection conducted once during the fiscal year. All areas of municipal land use and activity, the associated sources of stormwater pollution, and authorized non-stormwater discharges will be visually inspected during the quarterly inspections and unauthorized discharges will be noted, as described in Section 7.2.4 - Facility Inspections. Inspections are designed to ensure that site specific BMPs are properly implemented and maintained. The program includes timely follow-up inspections whenever BMP deficiencies are found at any particular site.

The following inspection procedures and maintenance indicators (established by Caltrans, 2003) are used as a guide to establish when maintenance of oil water separators under the control of the Authority is required.

- 1 Prior to the wet season, inspect for sediment accumulation in the pre-separator and/or separator chambers, and if it is greater than 12 inches deep, remove the accumulated material (for example, with a vacuum truck), characterize it, and properly dispose of it.
- 2 Prior to the wet season, inspect for oil accumulation in the oil chamber, and if it is more than 50 percent of the chamber volume, remove the oil and grease, characterize it, and properly dispose of it.
- 3 Inspect coalescer for debris and gummy deposits. If these are present, wash the coalescer in an appropriate area with high pressure hot water.
- 4 Inspect for general mechanical integrity per manufacturer's guidelines at least annually and operate each mechanical component to ensure proper operation. Repair as needed.
- 5 Record all inspection, maintenance, characterization, and disposal activities.

Although Caltrans recommends annual inspections, the monthly inspections by the Authority will be continued to establish trends in operating conditions of the SAN oil water separators. CASQA recommends cleaning of water quality inlets (which includes oil water separators) at least twice during the wet season, however, the schedule again depends on the operating conditions of the SAN oil water separators

Administrative Controls

The following standard procedures will be incorporated into all storm drain system maintenance and cleaning activities:

- Appropriate recordkeeping of all maintenance activities. The inspection and waste removal records will contain the following information as appropriate:
 - The date and time the inspection was performed,
 - Name of the inspector,
 - Items inspected,
 - Location of facility inspected or cleaned,
 - Condition of facility,
 - Overall amount (estimated in volume or dry weight) of material removed,
 - Type(s) of materials removed,
 - Disposal site(s),

- Problems noted,
 - Illegal/Illicit connection detected,
 - Corrective action required,
 - Date corrective action was taken,
 - Photographs (digital or 35mm),
 - Additional field notes,
 - Drawings and maps.
-
- Appropriate disposal of the waste removed pursuant to applicable laws will also be incorporated into the maintenance and cleaning activities. If wastes are suspected of containing hazardous materials, they will be sampled to determine if there are any special handling and/or disposal needs.
 - Appropriate practices will be implemented to ensure that maintenance and cleaning activities will not discharge wastes into the downstream storm drain system. The practices include: gravelbagging/berming, capturing any runoff from hydro-cleaning, use of material beneath waste piles to prevent seepage of liquids, covering waste piles to prevent water or wind transport of wastes, and blocking off downhill drainages and inlets to prevent entry of maintenance or cleaning wastes.
 - Non-emergency storm drain system facility repairs and construction will generally be scheduled to take place between May 1 and September 30 (dry season).
 - Emergency repairs to storm drain system facilities will be completed on an as-needed basis, regardless of time of year.

Direct Implementation of BMPs

The Authority has established a quarterly inspection and cleaning program for the storm drain system that includes cleaning as necessary following inspections of all catch basins, inlets, trench drains, and open channels. This is done using a hose, which is pointed upstream, after "pig plugs" are installed at all t-connections upstream and downstream. Debris is pushed downstream after bouncing off the plug and is vacuumed up using an HVAC. The debris is disposed of at the dewatering bin in the trash compactor area. Records are kept of these activities, including manpower hours spent on the activity and volume or weight of material removed, as described below. In addition to the annual cleaning, maintenance of catch basins or inlets will be conducted if accumulated trash and debris is greater than 33 percent of design capacity, with any open channels cleaned of litter in a timely manner.

Compliance Assessment

Compliance assessments are conducted as part of the inspections described in Section 7.2.4 - Facility Inspections.

Facility Inspections and Improvements

Inspections or investigations of the storm drain system will determine whether any subsequent improvements need to be made. If so, these need to be brought forth through the capital improvement program and Authority Board budget approval process described in Section 12.

Enforcement Measures

For enforcement measures, see Section 2.4.

RWQCB Notifications

In compliance with the Municipal Permit, if the Authority determines that the incident does endanger human health or the environment, then the Authority will provide verbal notification to the RWQCB within 24 hours from the time the Authority becomes aware of the circumstances. Within 5 days of the time the Authority becomes aware of the circumstances, the Authority will provide the RWQCB with a written submission containing a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

For RWQCB notifications required under the General Industrial Permit, see Section 7.2.4 - Reporting of Industrial Non-Filers and Incidents of Non-Compliance.

Annual Reporting

On or before September 30 of each year, beginning in 2008, the Authority will generate an Annual Report which describes the implementation of its jurisdictional activities during the annual reporting period (July 1 to June 30). The Municipal Permit Annual Report will be a comprehensive description of all activities conducted by the Authority to meet all requirements of each component of section D of the Municipal Permit. In addition to a discussion of the efforts directed at inspection and maintenance of the storm drain system, the Annual Report will also at a minimum contain the following information regarding implementation of the Municipal Component of this SWMP:

- 1 Any updates to the municipal inventory and prioritization;
- 2 Confirmation that the designated BMPs were implemented, or required to be implemented, for municipal areas and activities, as well as special events;

- 3** A description of inspections and maintenance conducted for municipal treatment controls;
- 4** Identification of the total number of catch basins and inlets, the number of catch basins and inlets inspected, the number of catch basins and inlets found with accumulated waste exceeding cleaning criteria, and the number of catch basins and inlets cleaned;
- 5** Identification of the total distance (feet) of the storm drain system, the distance of the storm drain system inspected, the distance of the storm drain system found with accumulated waste exceeding cleaning criteria, and the distance of the storm drain system cleaned;
- 6** Identification of the total distance (feet) of open channels, the distance of open channels inspected, the distance of open channels found with anthropogenic litter, and the distance of open channels cleaned;
- 7** Amount of waste and litter (tons or cubic yards) removed from catch basins, inlets, the storm drain system, and open channels, by category;
- 8** Identification of any storm drain system facility found to require inspection less than annually following two years of inspection, including justification for the finding;
- 9** Confirmation that the designated BMPs for pesticides, herbicides, and fertilizers were implemented, or required to be implemented, for municipal areas and activities;
- 10** Identification of the total distance of curb-miles of improved roads and streets within the Authority's jurisdiction, as well as the frequency of sweeping conducted;
- 11** Identification of the total distance of curb-miles swept;
- 12** Identification of the number of municipal parking lots, the number of municipal parking lots swept, and the frequency of sweeping;
- 13** Amount of material (tons or cubic yards) collected from street and parking lot sweeping;
- 14** A description of efforts implemented to prevent and eliminate infiltration from the sanitary sewer to the storm drain system;
- 15** Identification of the number of sites requiring inspections, the number of sites inspected, and the frequency of the inspections;
- 16** A description of the general results of the inspections;

- 17 Confirmation that the inspections conducted addressed all the required inspection steps to determine full compliance;
- 18 The number of violations and enforcement actions (including types) taken for municipal areas and activities, including information on any necessary follow-up actions taken; the discussion should exhibit that compliance has been achieved, or describe actions that are being taken to achieve compliance;
- 19 A description of notable activities conducted to manage urban runoff from municipal areas and activities, including the evaluation of data from the dry weather monitoring and trash assessment programs to determine program modifications.

6.3 MANAGEMENT OF PESTICIDES, HERBICIDES, AND FERTILIZERS

6.3.1 BACKGROUND

As required by Section D.3.a.(4) of the Municipal Permit, the Authority is required to reduce the contribution of pollutants associated with the application, storage, and disposal of pesticides, herbicides, and fertilizers from municipal areas and activities to the storm drain system. Important municipal areas and activities associated with these potential pollutants at SAN include municipal facility structures/building and landscaped areas. This section and Section 7.2.2 discuss these potential pollutant sources and the BMPs implemented by the Authority to reduce or eliminate impacts to the storm drain system.

The Authority Facilities Maintenance Department maintains the 12.5 acres of landscaping at the airport. The landscaped areas are planted with a combination of California-native grasses, shrubs, trees, and palms. These native species are drought tolerant, generate smaller amount of plant litter and debris, and require the application of less fertilizers, pesticides, and herbicides to maintain than other exotic plants. The Airport uses Hybrid Bermuda grass on all turf areas. The grass is self-repairing and requires one-third less water than normal fescue-type lawns and less maintenance. Any clippings that are generated during maintenance are left on the turf as an organic fertilizer, reducing the amount of green waste generated and the amount of fertilizer needed. Examples of the types of shrubs that are used on airport grounds are bougainvillea, trailing lantana, and New Zealand flax. Floss silk, Kaffir bloom Coral, and Canary Island Pines are the types of trees used in landscaping, along with Mexican Fan Palms and Canary Island Palms. Maintenance of these plants typically generates less green waste than other plants that previously adorned the airport grounds. All of the green waste collected from landscape maintenance activities is recycled into mulch and compost.

The Authority Facilities Maintenance Department has implemented an integrated pest management (IPM) program that encourages methods of pest control that use natural processes and chemicals and that limit the need for man-made biocides. The IPM program promotes the use of native plant species in the landscaped areas and around structures/

buildings to: 1) control pests without the need for pesticides and herbicides; 2) help minimize the application of fertilizers; and 3) limit the need for irrigation. In addition to encouraging minimal use of man-made biocides, the IPM program also ensures the Facilities Maintenance Department properly uses and disposes these chemicals. The Facilities Maintenance Department also maintains a minimal inventory of these chemicals as part of the IPM program. The department strives to purchase only the amount of these chemicals that are needed to reduce waste. Any unused fertilizers, pesticides, and herbicides are properly disposed. The department files a "Monthly Summary Pesticide Use Report" with the State of California Department of Pesticide Regulation stating the amount of pesticides or herbicides used during the period. A copy of the report is also provided to the Authority Environmental Affairs Department.

6.3.2 SOURCE CHARACTERIZATION

The Authority generally uses pesticides and/or herbicides to control pest and weeds. The Facilities Maintenance Department stores small amounts outdoors within secondary containment at the runway generator area. Although the use of pesticides and herbicides at the airport does not result in significant discharges to the ground, during rainfall events, pesticide and herbicide residuals that accumulate at the application sites can be washed into the storm drain system. However, based on the small quantities used at the airport, this activity appears to present a low potential for impacting stormwater discharge.

6.3.3 BEST MANAGEMENT PRACTICE REQUIREMENTS

Updated BMP Requirements

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

6.3.4 PROGRAM IMPLEMENTATION

Education and Staff Training

All Authority staff attend an annual mandatory SWMP training session to cover items such as prohibited discharges, inspections, spill response, good housekeeping, implementation of BMPs, and record keeping procedures. In addition, the Facilities Maintenance Department staff attend an annual mandatory training session on proper pesticide and herbicide storage, application, and disposal. For more details on staff training, see Section 10.0.

Maintenance Inspections

In general, the Environmental Affairs Department inspects all municipal operations, as described in Sections 6.2.4 and 7.2.4 - Facility Inspections. The Facilities Maintenance Department also regularly inspects the pesticide, herbicide, and fertilizer storage areas as part of their normal routine.

Compliance Assessment

Compliance assessments are conducted as part of the inspection program described in Section 7.2.4 - Facility Inspections.

Enforcement Measures

For enforcement measures, see Section 2.4.

RWQCB Notifications

For RWQCB notifications requirements and procedures, see Section 6.2.4 - RWQCB Notifications.

Annual Reporting

For annual reporting requirements, see Section 6.2.4.

6.4 ROADS AND PARKING FACILITIES**6.4.1 BACKGROUND**

As required by Section D.3.a.(5) of the Municipal Permit, the Authority has implemented a schedule of maintenance activities for the Authority's sweeping programs designed to reduce pollutant discharges to its storm drain system. This section deals with road and parking facility sweeping only. The Authority's program for ramp sweeping is described in Section 7.2.3 - Pollution Prevention Programs, Ramp Sweeping.

6.4.2 SOURCE CHARACTERIZATION

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

6.4.3 BEST MANAGEMENT PRACTICE REQUIREMENTS**Updated BMP Requirements**

The entities responsible for implementing BMPs for roads and parking facilities are the Authority, the parking lot management service provider, the FSF operator, the refueling operators, and the FBO. The parking lot management service provider manages the public

short-term and some of the long-term parking facilities at SAN, and sweeps Authority employee parking lots. The FSF operator has a small employee parking area within the boundaries of their facility, and the FBO has a parking lot for customers at their facility, as well as a fuel tanker parking area. One of the refueling operators has a parking area, used solely for parking of the fuel tankers trucks that refuel the aircraft, and is located next to their wash rack and maintenance shop. The Authority's BMP category SC16 "Parking Lots" covers BMPs aimed at mitigating pollutant sources in parking areas, and category SC12 "Outdoor Washdown/Sweeping (Apron Washing, Ramp Scrubbing)" covers BMPs aimed at mitigating pollutant sources in not only ramp areas, but also from roads. Descriptions of these BMPs can be found in Appendix B.

Additional Controls for Municipal Areas and Activities

Additional controls have been added to parking lot facilities, specifically, a Vortechs unit and storm drain inlet inserts. The Vortechs hydrodynamic separator unit is located in the paid-public NTC Parking Lot and is inspected and maintained according to the manufacturer's recommendations, but at least annually. In addition, a series of drain inlet inserts in the car rental lot, cell-phone parking area, cargo area, the California least tern nesting area, and between the triturator and the blast fence are regularly inspected and cleaned (see Section 6.2). These structural treatment controls mitigate pollutants such as sediment, oil and grease, gross pollutants (i.e., trash and debris), and any associated pollutants such as particulate and particulate-bound metals.

6.4.4 PROGRAM IMPLEMENTATION

Education and Staff Training

All Authority staff attend an annual mandatory SWMP training session to cover items such as prohibited discharges, inspections, spill response, good housekeeping, implementation of BMPs, and record keeping procedures. For more details on staff training, see Section 10.0.

Maintenance Inspections

Inspection of roads, parking lots, and curbs for cleaning is continuous. Authority and tenant employees are encouraged to identify areas that should be cleaned and to contact Facilities Maintenance. In general, the Environmental Affairs Department inspects all municipal operations, as described in Sections 6.2.4 and 7.2.4 - Facility Inspections.

Administrative Controls

The following standard procedures will be incorporated into all road and parking facility maintenance and cleaning activities:

- Appropriate recordkeeping of all maintenance activities. The inspection and waste removal records will contain the following information as appropriate:
 - The date and time the inspection was performed,
 - Name of the inspector,
 - Items inspected,

- Location of facility inspected or cleaned,
 - Condition of facility,
 - Overall amount (estimated in volume or dry weight) of material removed,
 - Type(s) of materials removed,
 - Disposal site(s),
 - Problems noted,
 - Illegal/Illicit connection detected,
 - Corrective action required,
 - Date corrective action was taken,
 - Photographs (digital or 35mm),
 - Additional field notes,
 - Drawings and maps.
- Appropriate disposal of the waste removed pursuant to applicable laws will also be incorporated into the maintenance and cleaning activities. If wastes are suspected of containing hazardous materials, they will be sampled to determine if there are any special handling and/or disposal needs.
 - The Authority's Storm Water Code (see Appendix F) in Section 8.74 requires the Authority, or any persons owning or operating parking lots or impervious surfaces used for similar purposes, to clean the areas frequently and thoroughly and to prevent discharge of pollutants to the storm drain system by removing sweepings and debris.

Direct Implementation of BMPs

Sweeping

A contractor is hired by the Authority to sweep the roads into and out of the airport (Monday through Friday, 1 am - 4 am). The roadways to the main vehicle access gates, vehicle service road, and paved area around the ARFF facility (where there is a small parking lot) are swept on an as-needed basis. As necessary, sweepers or other clean up crews respond to requests to collect debris and/or sweep roads, including emergencies. The debris/sweepings are vacuumed up into the sweeping unit and are disposed of in the regular trash dumpster near the maintenance shop in Terminal 2. The parking lot management service provider sweeps

the terminal parking lots daily using motorized sweeper unit, and the employee parking lots are swept weekly. As mentioned in Section 6.2.3 and 6.3.3 above, a Vortechs unit and drain inlet inserts have also been implemented as structural treatment control BMPs in parking facilities. The maintenance of these units is described in Section 6.2.

Compliance Assessment

Compliance assessments are conducted as part of the inspections described in Section 7.2.4 - Facility Inspections.

Roads and Parking Facilities Inspections, Repairs, and Improvements

Inspection of roads, parking lots, and curbs is continuous. Where repairs are required in parking lots, minor parking lot repairs are performed by the parking lot management service provider. However, major maintenance work would likely be contracted out. The Authority is responsible for any repairs to the roads and other than minor repairs to parking lots, and conducts those repairs as follows:

- Pavement installation and/or sealing operations shall not be performed during rain events or during any period for which the National Weather Service is forecasting a 50% chance of precipitation at Lindbergh Field. These restrictions do not apply to pavement grinding or removal operations.
- Protect storm drain inlets and manholes during paving operations, including the application of seal coat, tack coat, slurry seal, or fog seal. Storm drain inlets, including slit trenches, within 10 yards of the work area must be covered with spill pads and/or mats or otherwise protected to prevent discharges of solid and liquid materials and waste to the storm drain system. Storm drain inlet protection devices will be regularly inspected for proper installation by those persons performing the work. All protection devices will be removed when no longer needed.
- During rain events, stockpiles of "cold mix" asphalt (premixed aggregate and asphalt binders) shall be completely covered.
- During rain events, stockpiles of soil and/or debris, and/or rubble, and/or base materials shall be covered or protected with a temporary perimeter sediment barrier.
- Waste and debris generated by pavement cutting activities shall be collected/ vacuumed immediately, properly disposed of, and prevented from entering the storm drain system.
- Work sites shall be kept clean at all times. Dry cleanup methods (for example, vacuuming, sweeping, dry rags) will be used when and where possible. Use of water will be kept to the minimum necessary to perform tasks. All water hoses will be equipped with positive shutoff type nozzles.

- All products and/or by-products of asphalt release agents (such as citrus, soy-based, or diesel) used for cleaning and coating of equipment shall be captured and reused, recycled, and/or disposed of properly. Asphalt release agents shall not be discharged to the storm drain system.
- Pavers and other paving equipment shall be cleaned over absorbent pads, drip pans, plastic sheeting, or other material to collect residual cleaning wastes. Remove and dispose of collection materials properly.
- "Water used for cleaning and washing must be collected and disposed of properly. The Authority Environmental Affairs Department should be contacted to discuss options (619-400-2782).
- All products used to clean surfaces must be approved for use by the Authority Environmental Affairs Department (619-400-2782) prior to application.
- All waste shall be disposed of properly. The site shall be policed for litter daily and all litter shall be disposed of properly.
- No solid and/or liquid materials, and/or waste shall be discharged to the storm drain system.
- Equipment will be maintained in good working conditions to minimize leaks and drips.
- All containers used to hold fluids will be kept in leak-proof condition.
- Spill cleanup materials will be readily available at the work area.
- All spills will be cleaned up immediately, provided it is safe to do so.

For concrete repair and/or installation operations, including concrete cutting, these activities shall not be performed during rain events or during any period for which the National Weather Service is forecasting a 50 percent chance of precipitation at Lindbergh Field. While these restrictions apply to concrete cutting activities, the restrictions do not apply to the actual digout or removal operations. The Authority is responsible for any concrete repairs, and conducts those repairs as follows:

- Protect storm drain inlets and manholes during concrete repair and/or installation operations. Storm drain inlets, including slit trenches, within 10 yards of the work area must be covered with spill pads and/or mats, or otherwise protected to prevent discharges of solid and liquid materials and waste to the storm drain system. Storm drain inlet protection devices will be regularly inspected for proper installation by those persons performing the work. All protection devices will be removed when no longer needed.
- During rain events, dry-powder concrete mixing products (such as Readymix and Portland cement) shall be stored under cover or be completely covered.

- During rain events, stockpiles of soil and/or debris, and/or rubble, and/or base materials shall be covered or protected with a temporary perimeter sediment barrier.
- Slurry, waste, and debris generated by concrete cutting activities shall be collected/ vacuumed immediately, properly disposed of, and prevented from entering the storm drain system. Sufficient, yet minimal, amounts of water shall be used to allow for capture and removal of all cutting slurry and debris.
- Work sites shall be kept clean at all times. Dry cleanup methods (for example, vacuuming, sweeping, dry rags) will be used when and where possible. Use of water will be kept to the minimum necessary to perform tasks. All water hoses will be equipped with positive shutoff type nozzles.
- If tools, equipment, and/or trucks are to be cleaned onsite, then concrete washout facilities will be provided and maintained for cleaning all tools, equipment, and trucks. Alternatively, liquid waste can be contained in buckets or drums with tight-fitting lids for transport and proper disposal offsite. Washout facilities may be above or below grade. Facilities shall be at least 50 feet away from natural drainages or man-made drainage structures. Facilities will be maintained with a minimum 12" freeboard and be cleaned or replaced when the washout is 75% full. No overflow from concrete washouts is permitted to runoff site or into the storm drain system. Onsite washout facilities shall be covered during rain events. All concrete washout debris shall be disposed of properly.
- Water used for cleaning and washing must be collected and disposed of properly. Contact the Authority Environmental Affairs Department to discuss options (619-400-2782).
- All products used to clean surfaces must be approved for use by the Authority Environmental Affairs Department (619-400-2782) prior to application.
- All waste shall be disposed of properly. The site shall be policed for litter daily and all litter shall be disposed of properly.
- No solid and/or liquid materials and/or waste shall be discharged to the storm drain system.
- Equipment will be maintained in good working conditions to minimize leaks and drips.
- All containers used to hold fluids will be kept in leak-proof condition.
- Spill cleanup materials will be readily available at the work area.
- All spills will be cleaned up immediately, provided it is safe to do so.

Enforcement Measures

For enforcement measures, see Section 2.4.

RWQCB Notifications

For RWQCB notifications requirements and procedures, see Section 6.2.4 - RWQCB Notifications.

Annual Reporting

For annual reporting requirements, see Section 6.2.4 - Annual Reporting

6.4.5 ROADS AND PARKING FACILITIES EFFECTIVENESS ASSESSMENT

The Authority has developed internal and external effectiveness assessment programs to evaluate the Authority staff, Authority boards, and tenant compliance with water quality issues. The Authority's Effectiveness Assessment component is described in Section 13.0 of this document. Section 13 includes a discussion of the Roads and Parking Lot Facilities element of the Authority's stormwater management program.

6.5 INFILTRATION FROM SANITARY SEWER TO MS4/PREVENTATIVE MAINTENANCE**6.5.1 BACKGROUND**

The Authority does not own or manage a municipal sanitary sewer system, and therefore, is not subject to Section D.3.a.(6) of the Municipal Permit. The City of San Diego Metropolitan Wastewater Department (MWWD) provides municipal sanitary sewer service to the airport. However, the Authority is responsible for those portions of the on-site sanitary sewer system that connect to the MWWD system. As such, the Authority has implemented controls and measures to prevent and eliminate infiltration of seepage from airport sanitary sewers to the storm drain systems through thorough routine inspection and preventative maintenance of the sanitary sewer system and inspection of the storm drain system. In general these measures will also identify issues related to the municipal sanitary sewer system operated by MWWD. Issues related to the municipal sanitary sewer system will reported to and resolve in coordination with MWWD. The Authority Facilities Maintenance Department and Facilities Development Department oversee a thorough programmed maintenance process for inspection, maintenance, repair, and upgrade of physical plant structures at SAN, including the sanitary sewer system.

6.5.2 SOURCE CHARACTERIZATION

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

6.5.3 BEST MANAGEMENT PRACTICE REQUIREMENTS

Updated Bmp Requirements

The constant surveillance at SAN includes the routine daily inspection of the airport terminals, runways, and airside operations by the Airside Operations Supervisors. These inspections are one element of the Illicit Discharge Detection and Elimination program, since any environmental issues are both reported to the Environmental Affairs Department and captured in the SAN daily log.

The Authority must implement controls identified in the SAN SWMP that have been designed to limit infiltration into the stormwater conveyance system from the sanitary sewer system and to prevent and respond to sewage spills. The Authority's BMP categories SC01 "Non-Storm Water Management", SC11 "Lavatory Service Operation", SC17 "Storm Drain Maintenance" and SR01 "Spill Prevention, Control and Cleanup" cover BMPs aimed at mitigating pollutant sources from sewage spills or seepage. Descriptions of these BMP can be found in Appendix B of this document.

6.5.4 PROGRAM IMPLEMENTATION

Education and Staff Training

All Authority staff attend an annual mandatory SWMP training session to cover items such as prohibited discharges, inspections, spill response, good housekeeping, implementation of BMPs, and record keeping procedures. For more details on staff training, see Section 10.0.

Maintenance Inspections

The Authority's preventive and corrective sanitary sewer maintenance programs focus heavily on those areas of known problems or concerns. Known problem areas typically consist of the lines immediately downstream of food services, which have a tendency to be impacted by grease. For all locations, the Authority provides for or requires the food service provider (as a requirement of the lease) to conduct the minimum of annual routine monitoring, inspection, and cleaning. 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 the 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 (described in Section 12 of this SWMP).

As noted in Section 6.2 above, both the Authority Environmental Affairs Department and the Facilities Maintenance Department inspect the storm drain system as part of their routine facility inspections. Nearly two-thirds of the airport tenants also perform some inspections, either sporadically or as part of their own routine facility inspections. In the event that any infiltration from the sanitary sewer into the storm drain system is observed or suspected, the Authority will investigate the source of the sewage. The Authority will conduct any required maintenance or repair on the on-site lateral lines, and issues related to the municipal sanitary sewer system main lines will be reported to MWWD. The Authority will coordinate with MWWD, as necessary.

In general, the Environmental Affairs Department inspects all municipal operations, as described in Sections 6.2.4 and 7.2.4 - Facility Inspections.

Administrative Controls

The following standard procedures will be incorporated into all sanitary sewer system maintenance and cleaning activities:

- Appropriate recordkeeping of all maintenance activities. The inspections and waste removal records will generally contain the following information as appropriate:
 - The date and time the inspection was performed,
 - Name of the inspector,
 - Items inspected,
 - Location of facility inspected or cleaned,
 - Condition of facility,
 - Overall amount (estimated in volume or dry weight) of material removed,
 - Type(s) of materials removed,
 - Disposal site(s),
 - Problems noted,
 - Illegal/Illicit connection detected,
 - Corrective action required,
 - Date corrective action was taken,
 - Photographs (digital or 35mm),
 - Additional field notes,
 - Drawings and maps.
- Appropriate practices will be implemented to ensure that maintenance and cleaning activities will not discharge wastes into the storm drain system. The practices include: gravelbagging/berming, capturing any runoff from cleaning activities, use of material beneath waste piles to prevent seepage of liquids, covering waste piles to prevent water or wind transport of wastes, and blocking off downhill drainages and inlets to prevent entry of maintenance or cleaning wastes.

Direct Implementation of BMPs

The Environmental Affairs Department conducts monthly inspections of the entire facility and the aboveground portions of the storm drain system during the wet season (October 1-May 31). These inspections are designed to identify unauthorized stormwater discharges and to ensure that BMPs are being implemented properly and operating as designed. The Environmental Affairs Department also conducts visual observations for authorized and/or unauthorized non-stormwater discharged on a quarter-annual basis.

Non-stormwater discharges and potential illicit discharges are monitored through the Dry Weather Monitoring Program. The program features designated monitoring locations and frequencies, field screening/sampling procedures, data interpretation techniques, and follow-up investigation and reporting procedures. For more details refer to Sections 3 and 9 of this document.

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

Compliance Assessment

Compliance assessments are conducted as part of the inspections described in Section 7.2.4 - Facility Inspections.

Facility Inspections and Improvements

Inspections or investigations of the stormwater conveyance system will help identify any improvement needed for the sanitary sewer system or the storm drain system. If sanitary sewer system lateral pipe improvements are required, the improvements may be initiated by Authority maintenance crews or the food service provider, as appropriate. Recommendations for capital improvement projects become part of the Authority budget planning and approval process (described in Section 12 of this SWMP) and need to be approved by the Authority Board. Sewer main improvements to the municipal sanitary sewer system are the responsibility of MWWD.

Enforcement Measures

For enforcement measures, see Section 2.4.

RWQCB Notifications

For RWQCB notifications requirements and procedures, see Section 6.2.4 - RWQCB Notifications.

Annual Reporting

For annual reporting requirements, see Section 6.2.4.

6.6 CLOSED LANDFILL

6.6.1 BACKGROUND

As required by Section D.3.a.(7) of the Municipal Permit, the Authority is required to inspect high priority municipal areas and activities, including active or closed municipal landfills. This section discusses the potential pollutant sources and BMPs implemented to mitigate pollutants to the storm drain system from the closed NTC landfill area.

6.6.2 SOURCE CHARACTERIZATION

The Authority has sole responsibility for stormwater management at the closed NTC landfill. Other than maintenance of the site as a closed landfill, the main activities now conducted at the closed landfill involve the staging of materials and bulky recyclable parts (mostly metals and plastic). Materials are generally covered and/or on wooden pallets and/or placed in dumpsters, as necessary. It should also be noted that there are both landfill gas monitoring and groundwater monitoring systems installed at the closed landfill site. Potential pollutants of concern in the closed NTC landfill area include trash, debris, metals, and sediment.

6.6.3 BEST MANAGEMENT PRACTICE REQUIREMENTS

Updated BMP Requirements

BMPs applicable to outdoor materials and waste storage by the Authority are summarized in Appendix B and include BMP categories SC07 "Outdoor Material Storage" and SC08 "Waste Handling and Disposal".

6.6.4 PROGRAM IMPLEMENTATION

Education and Staff Training

All Authority staff attend an annual mandatory SWMP training session to cover items such as prohibited discharges, inspections, spill response, good housekeeping, implementation of BMPs, and record keeping procedures. For more details on staff training, see Section 10.0.

Maintenance Inspections

In general, the Environmental Affairs Department inspects all municipal areas/activities/operations, as described in Sections 6.2.4 and 7.2.4 - Facility Inspections. The Environmental Affairs Department also conducts site-specific inspections of the closed NTC Landfill portion of SAN on a quarterly basis.

Compliance Assessment

Compliance assessments are conducted as part of the quarterly site-specific landfill inspections and the inspection program described in Section 7.2.4 - Facility Inspections.

Enforcement Measures

For enforcement measures, see Section 2.4.

RWQCB Notifications

For RWQCB notifications requirements and procedures, see Section 6.2.4 - RWQCB Notifications.

Annual Reporting

For annual reporting requirements, see Section 6.2.4.

6.7 SPECIAL EVENT VENUES

6.7.1 BACKGROUND

As required by Section D.3.a.(2)(f) of the Municipal Permit, the Authority requires the implementation of additional controls for special events that are expected to generate significant trash and litter. Section D.3.a.(7) of the Municipal Permit also requires the Authority to inspect high priority municipal areas and activities, including special event venues. This section discusses the potential pollutant sources and BMPs implemented to mitigate pollutants to the storm drain system from special event venues.

6.7.2 SOURCE CHARACTERIZATION

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

6.7.3 BEST MANAGEMENT PRACTICE REQUIREMENTS

Updated BMP Requirements

BMPs applicable to the proper management of special event venues are summarized in Appendix B and include BMP categories SC06 "Outdoor Loading/Unloading of Materials," SC08 "Waste Handling and Disposal," SC09 "Building and Grounds Maintenance," SC10 "Employee Training," SC12 "Outdoor Washdown/Sweeping (Apron Washing, Ramp Scrubbing)," SC16 "Parking Lots," SC18 "Housekeeping," and SR01 "Spill Prevention, Control, and Clean-up."

Additional Controls

Special events sponsored/coordinated by Authority staff and/or airport tenants are required to implement the BMPs listed above. If the special event sponsors/coordinators are not Authority staff or airport tenants, they must generally obtain Authority approval in the form of a "use permit." The conditions of the "use permit" typically include: fencing and barricades as necessary to delineate event area; appropriate signage regarding recycling, trash disposal, and stormwater pollution prevention; adequate number of recycling containers and trash cans; portable restrooms, as necessary; adequate number of on-site event management staff

to monitor and control trash and litter; adequate number of on-site event staff to promptly cleanup after event; street sweepers, as necessary.

6.7.4 PROGRAM IMPLEMENTATION

Education and Staff Training

All Authority staff attend an annual mandatory SWMP training session to cover items such as prohibited discharges, inspections, spill response, good housekeeping, implementation of BMPs, and record keeping procedures. For more details on staff training, see Section 10.0.

Maintenance Inspections

In general, the Environmental Affairs Department inspects all municipal operations, including special event venues, as described in Sections 6.2.4 and 7.2.4 - Facility Inspections.

Compliance Assessment

Compliance assessments are conducted as part the inspection program described in Section 7.2.4 - Facility Inspections.

Enforcement Measures

For enforcement measures, see Section 2.4.

RWQCB Notifications

For RWQCB notifications requirements and procedures, see Section 6.2.4 - RWQCB Notifications.

Annual Reporting

For annual reporting requirements, see Section 6.2.4.

6.8 MUNICIPAL COMPONENT EFFECTIVENESS ASSESSMENT

The Authority has developed internal and external effectiveness assessment programs to evaluate the Authority staff, Authority boards, and tenant compliance with water quality issues. The Authority's Effectiveness Assessment component is described in Section 13.0 of this document.

6.9 MUNICIPAL COMPONENT PROGRAM REVIEW AND MODIFICATION

The Authority has reserved this section to identify and document future changes to the Municipal Component of the SWMP. Section 14.0 of this SWMP details the program modifications made to the *SWMP January 2005-Revision* to bring this document into compliance with the renewed Municipal Permit.

7.0 INDUSTRIAL AND COMMERCIAL COMPONENT

7.1 INTRODUCTION

This Section 7.0 of this SWMP addresses the requirements of the General Industrial Permit and the appropriate sections of the Municipal Permit that the Authority has determined are relevant to the Industrial and Commercial Component. The specific sections of the General Industrial Permit addressed are: A.3-9, B.3-5, B.7, B.10, B.13, and B.14. The specific sections of the Municipal Permit addressed are Sections D.3.b and J.1.a.(3)(f).

General Industrial Permit Section A.3.a requires that the SWMP identify the individuals, and their positions, who are members of the SAN stormwater pollution prevention team. Section 2.1 and Tables 1 and 2 have been prepared to address this requirement.

General Industrial Permit Section A.4 requires that the SWMP include a site map or maps which features the following information. SWMP Figure 3 and Figures 5 through 8 have been prepared to address the requirements of Section A.4.

General Industrial Permit Section A.4.a requires the SWMP site map to include the facility boundaries; the outline of all stormwater drainage areas within the facility boundaries; portions of the drainage area impacted by run-on from surrounding areas; and direction of flow of each drainage area, onsite surface water bodies, and areas of soil erosion. The map shall also identify nearby water bodies (such as rivers, lakes, and ponds) and municipal storm drain inlets where the facility's stormwater discharges and authorized non-stormwater discharges may be received. Figure 3 and Figures 5 through 8, and Figures SC-01 and SC-09 in Appendix B have been prepared to address this requirement.

General Industrial Permit Section A.4.b requires the SWMP site map to include the location of the stormwater collection and conveyance system, associated points of discharge, direction of flow, structural control measures, authorized non-stormwater discharges, and run-on. Examples of structural control measures are catch basins, berms, detention ponds, secondary containment, oil/water separators, diversion barriers, etc. Figure 3 and Figures 5 through 8, Figure SC-01 in Appendix B, and Figures E-3, and E-22 in Appendix E have been prepared to address this requirement.

General Industrial Permit Section A.4.c requires the SWMP site map to include an outline of all impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures. Figure 3 and Figures 5 through 8, and Figure SC-09 in Appendix B have been prepared to address this requirement.

General Industrial Permit Section A.4.d requires the SWMP site map to include locations where materials are directly exposed to precipitation and the locations where significant spills or leaks have occurred. Figure 3 and Figures 5 through 8, and Figure E-26 in Appendix E have been prepared to address this requirement.

General Industrial Permit Section A.4.e requires the SWMP site map to include areas of industrial activity, i.e., the locations of all storage areas and storage tanks, shipping and receiving areas, fueling areas, vehicle and equipment storage/maintenance areas, material handling and processing areas, waste treatment and disposal areas, dust or particulate generating areas, cleaning and rinsing areas, and other areas of industrial activity which are potential pollutant sources. Figure 3 and Figures 5 through 8, the Tenant and Authority figures in Appendix E, and Figures SC-02B through SC-08, SC-11, SC-18, and SR-01 in Appendix B have been prepared to address this requirement.

General Industrial Permit Section A.5 requires the SWMP to include a list of significant materials handled and stored at the site, describing the locations where the materials are stored, received, shipped, and handled, as well as the typical quantities and frequency. Section 7.2.2, Figure 3 and Figures 5 through 8, and Appendices B and E have been prepared to address this requirement.

General Industrial Permit Section A.6 requires the SWMP to include a narrative description of the facility's industrial activities, the associated potential pollutant sources, and potential pollutants that could be discharged in stormwater discharges or authorized non-stormwater discharges. At a minimum, the following items related to a facility's industrial activities should be considered: Industrial Processes, Material Handling and Storage Areas, Dust and Particulate Generating Activities, Significant Spills and Leaks, Non-Stormwater Discharges, and Soil Erosion. Sections 3 and 7.2.2 have been prepared to address this requirement.

General Industrial Permit Section A.7.a requires the SWMP to include a narrative assessment of all industrial activities and potential pollutant sources to determine:

- i. Which areas of the facility are likely sources of pollutants in stormwater discharges and authorized non-stormwater discharges, and
- ii. Which pollutants are likely to be present in stormwater discharges and authorized non stormwater discharges.

Section 7.2.2 and Table 7 have been prepared to address this requirement.

General Industrial Permit Section A.7.b requires the Authority to summarize the areas of the facility that are likely sources of pollutants and the corresponding pollutants that are likely to be present in stormwater discharges and authorized non-stormwater discharges, and to develop and implement additional BMPs as appropriate and necessary to prevent or reduce pollutants associated with each pollutant source. Sections 7.2.2 and 7.2.3, and Table 7 have been prepared to address this requirement.

General Industrial Permit Section A.8 requires the SWMP to include a narrative description of the non-structural and structural stormwater BMPs to be developed and implemented at the facility for each potential pollutant and its source identified in the site assessment phase to reduce or prevent pollutants in stormwater discharges and authorized non-stormwater

discharges. Sections 6.2 and 7.2.3 and Appendices B and E have been prepared to address this requirement.

General Industrial Permit Section A.9 requires that the Authority conduct one comprehensive site compliance evaluation (evaluation) in each reporting period (July 1-June 30) to include the following:

- 1 A review of all visual observation records, inspection records, and sampling and analysis results.
- 2 A visual inspection of all potential pollutant sources for evidence of, or the potential for, pollutants entering the drainage system.
- 3 A review and evaluation of all BMPs (both structural and non-structural) to determine whether the BMPs are adequate, properly implemented and maintained, or whether additional BMPs are needed. A visual inspection of equipment needed to implement the SWMP, such as spill response equipment, shall be included.
- 4 An evaluation report.

Section 7.2.4.3 has been prepared to address this requirement.

General Industrial Permit Section B.3 requires the Authority to perform non-stormwater discharge visual observations. Section 7.2.4 has been prepared to address this requirement.

General Industrial Permit Section B.4 requires the Authority to perform stormwater discharge visual observations. Section 7.2.4 has been prepared to address this requirement.

General Industrial Permit Section B.5 requires the Authority to conduct appropriate stormwater sampling and analysis. Sections 7.2.4 and 9.4 and Appendix D have been prepared to address this requirement

General Industrial Permit Section B.7 requires the Authority to visually observe and collect samples of stormwater discharge from all drainage areas that represent the quality and quantity of the facility's storm discharges from the storm event. Sections 7.2.4 and 9.4 and Appendix D have been prepared to address this requirement.

General Industrial Permit Section B.13 requires that the Authority retains records of all stormwater monitoring information and copies of all reports (including the Annual Reports) for a period of at least five years. Section 7.2.4 has been prepared to address this requirement.

General Industrial Permit Section B.14 requires that the Authority submits an Annual Report by July 1 of each year to the Executive Officer of the Regional Water Board responsible for the

area in which the facility is located and to the local agency (if requested). Section 7.2.4 has been prepared to address this requirement.

Municipal Permit Sections D.3.b.(1) and J.1.a.(3)(f)i require that the Authority annually update a watershed-based inventory of all industrial and commercial sites/sources within its jurisdiction (regardless of ownership) that could contribute a significant pollutant load to the MS4. Sections 7.2.1 and 7.2.2, Figure 3 and Figures 5 through 8, and Appendix E have been prepared to address this requirement.

Municipal Permit Sections D.3.b.(2) and J.1.a.(3)(f)ii require that the Authority designate, describe and implement pollution prevention methods and a minimum set of BMPs for all industrial and commercial sites/sources. The designated BMPs shall be specific to facility types and pollutant generating activities, as appropriate. Section 7.2.3, and Appendix B, and Appendix E have been prepared to address this requirement.

Municipal Permit Sections D.3.b.(3) and J.1.a.(3)(f)iii-viii require that the Authority describe, conduct and track industrial and commercial site inspections for compliance with its ordinances, permits, and the Municipal Permit. Sections 7.2.1 and 7.2.4 have been prepared to address this requirement. Follow-up actions and enforcement required by Sections D.3.b.(3)(e) and J.1.a.(3)(f)x of the Municipal Permit are addressed in Sections 7.2.4 and 2.4 of this SWMP.

Municipal Permit Sections D.3.b.(4) and J.1.a.(3)(f)ix require that the Authority develop and implement a program to reduce the discharge of pollutants from mobile businesses to the MEP, including a listing of mobile businesses known to operate within its jurisdiction. Section 7.3 has been prepared to address this requirement.

Municipal Permit Sections D.3.b.(5) and J.1.a.(3)(f)x require that the Authority shall enforce its stormwater ordinance for all industrial and commercial sites/sources as necessary to maintain compliance with this Order. Section 2.4 has been prepared to address this requirement.

Municipal Permit Sections D.3.b.(6) and J.1.a.(3)(f)xi require that the Authority annually report a list of industrial sites, including the name, address, and SIC code, that may require coverage under the General Industrial Permit for which a NOI has not been filed. Section 7.2.4 has been prepared to address this requirement.

7.2 STATIONARY SOURCES ELEMENT

7.2.1 BACKGROUND

The Authority and a number of airport tenants conduct industrial activities that are subject to the General Industrial Permit (General Permit) and Section D.3.b of the Municipal Permit. There are 30 tenants conducting industrial or commercial activities, plus the ARFF Facility and the Authority itself as operator of the airport, for a total of 32 entities conducting

industrial or commercial activities that could contribute a significant pollutant load to the storm drain system. These 32 entities and the type of industrial activity into which they have been categorized are listed in Table 4 (overview) and Table 5 (Inventory). The location of these 32 entities on the airport is shown in Figure 3 and Figures 5 through 8.

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

The Municipal Permit requires that Copermitees prioritize their inventories of industrial and commercial sites/sources based on threat to water quality. The Municipal Permit also requires that the prioritization be updated annually. The process implemented by the Authority for determining the potential threat of those operations conducting industrial and commercial activities is described Section 7.2.2 below.

All other airport tenants are either a) subtenants to and/or operate as integral parts of the 30 industrial/commercial tenants listed in Table 4 or b) not considered to be sources of significant pollutant loads to the storm drain system. In general, those entities operating as subtenants or integral parts of the 30 industrial/commercial tenants are evaluated and inspected for compliance with the Municipal Stormwater Permit, the General Industrial Permit, and this SWMP as part of the tenant's own operation. However, there may be industrial/commercial tenants/subtenants that, although they are integral to airline and/or airport operations, are identified as individual operations in Table 4 for reasons detailed in Section 7.2.2 below. Those airport tenants and subtenants that are not considered to be sources of significant pollutant loads to the storm drain system are named in the SWMP, but are nonetheless addressed in the Illicit Discharge Detection and Elimination, Education and Outreach, Public Participation, and enforcement elements of the SWMP.

7.2.2 SOURCE CHARACTERIZATION

The Authority first modified its stormwater management program in 2003 to address the Municipal Permit as an additional element to a program that the Port of San Diego already put in place in 1992, to address the General Industrial Permit. Under the General Industrial

Permit, commercial passenger air carriers, cargo air carriers, FBOs (of which there is only one at SAN), fuel vendors, aircraft refuelers, aircraft and airport service and maintenance providers, and all airfield/airport related activities (including aircraft rescue and fire fighting - ARFF Facilities) are defined as industrial operations. There is now a record of more than 15 years of site visits and annual inspections that include information regarding significant materials (potential pollutants sources) handled and stored at the airport, as well as descriptions of those industrial activities that are potential sources of pollutants. This information is presented below.

It is the record of site visits and annual inspections that is used to determine the need to list certain tenants/subtenants as individual industrial/commercial operations, even though they could be considered as integral to the operations of other industrial/commercial tenants and managed as a subset of larger operation. Reasons to support such a determination might be the number of larger operations to which tenant/subtenant is an integral part, the scope and/or extent of the operation across the airport, or the compliance history of the operation.

Using the information on hand, the Authority has determined that all the activities listed above should be considered high priority threats to water quality. As such, 29 of the 32 industrial/commercial sites/sources at SAN are considered high threat to water quality. The 3 remaining commercial operations, which could be significant sources of pollutants to the storm drain system (namely, the airport paid/non-paid parking lot operator, the master-lease concessionaire/food service provider, and the airport janitorial services provider), have been determined to be high priority threats to water quality based on the types of activities each conducts, as well as the location of the operation, the exposure of the operation to stormwater or precipitation, the materials used by each, the wastes generated by each, the pollutant discharge potential, the history of non-stormwater discharges by each, and past performance as reflected in site visits and annual airport-wide inspections. In short, all 32 entities conducting industrial or commercial activities that could contribute a significant pollutant load to the storm drain system have been determined by the Authority to be high priority threats to water quality, as noted in Table 4.

The Municipal Permit requires the Authority to maintain an inventory of industrial and commercial sites/sources and to develop the prioritization of these sites/sources annually. The results of the current prioritization for industrial and commercial activities are included in Tables 4 and 5. Some of the entities conduct multiple industrial activities and, therefore, may be listed more than once in Table 4. Table 5 provides the more detailed minimum information required by the Municipal Permit for each industrial and commercial site/source, specifically: name; address; pollutants potentially generated by the site/source (and identification of whether the site/source is tributary to a Clean Water Act section 303(d) water body segment and generates pollutants for which the water body segment is impaired); and a narrative description including SIC codes which best reflects the principal products or services provided by each site/source/facility.

Significant Materials as Potential Pollutant Sources

A variety of industrial activities conducted at SAN by both the Authority and tenants have the potential to impact water quality. Information gathered as part of site visits, annual inspections, and stormwater monitoring, indicates that the significant materials associated with these industrial activities which could be potential pollutants consist primarily of petroleum products, solvents, soap/cleaning fluids, and trash. Lesser amounts of other potential pollutants also present at the airport include, from generally most to least prevalent: lavatory chemicals and waste, paints, used batteries and battery acid, anti-freeze, hazardous wastes, metals, deicing chemicals, herbicides and pesticides, adhesives, rust preventers, aqueous film-forming foam (AFFF) and other fire suppression chemicals, and sealants (see list below for more details). These pollutants can be transported to the stormwater system either as direct spills, from contact with rainfall runoff, or from surface area wash downs that may mobilize residual contaminants

Commercial activities conducted at SAN, with the potential to contribute a significant pollutant load to the storm drain system, are parking lots and vehicle storage, food-service, and janitorial services. The significant materials associated with these commercial activities which could be potential pollutants consist primarily of vehicle maintenance fluids, food preparation oils, and various maintenance and cleaning chemicals. In general, the significant materials that at SAN include the following:

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

Industrial/Commercial Activities as Potential Pollutant Sources

The industrial activities, in and of themselves, conducted by both the Authority and tenants have the potential to impact water quality. Information gathered as part of site visits, annual inspections, and stormwater monitoring, indicates that the potential pollutant generating activities/operations consist primarily of specific airport-industry processes, material handling and storage, and spills and leaks. To a lesser extent, pollutants may also potential result from dust and particulate generating activities, soil erosion, non-stormwater discharges, as well as the commercial activities of parking lots management and vehicle storage, food-service, and janitorial service.

Aircraft Deicing/Anti-icing

Deicing and anti-icing chemicals are generally used on aircraft to eliminate or minimize the ice buildup on the wings and fuselage of aircraft. Although these activities are fairly uncommon at SAN, they can occur anytime of year. Deicing can be performed using deicing chemicals (typically, ethylene glycol and/or propylene glycol), water, or air. The deicing chemicals are typically stored in drums or large plastic containers. Deicing fluid is generally applied by spraying the aircraft with a mixture of (hot) water and a glycol-based fluid. The spray drains from the aircraft onto the ramp area and could have the potential to result in an illicit discharge or transport other surface contaminants and thereby impact stormwater quality. Airlines typically use scrubbers, vacuums, or absorbents to cleanup and properly dispose of residual chemicals.

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

Aircraft, Vehicle, and Equipment Fueling Areas

Fueling activities occur on a daily basis. Aircraft fueling activities are conducted on paved surfaces such as concrete ramps or at the gates. Approximately 450,000 gallons of jet fuel is brought to the Terminals 1 and 2 ramp areas daily by tanker and loaded by positive lock hose into aircraft. Vehicle and GSE fueling is conducted at the gates or in maintenance areas. For the Authority, fueling activities also occur at all generators, light towers, and at the truck

bays in the ARFF facility. The significant materials or potential pollutants involved in these activities are jet fuel, diesel, and gasoline. Fuel trucks are refilled at the RFF or FSF. There is a sloped spill containment area leading to a 12,000-gallon wastewater sump at the RFF and a 12,000-gallon oil water separator plus an 8,000-gallon holding tank at the FSF. The FBO refueling trucks take on fuel at the filling station area next to Hangar 4. Most tenants vehicles or equipment are fueled onsite, although some perform vehicle or equipment fueling offsite. Fuel spills are contained by absorbent materials, inflatable pools, or facility-specific spill containment areas/oil water separators/tanks (for the RFF and FSF). The concrete pad at the loading islands in the RFF is steam cleaned periodically and the discharge enters the wastewater holding tank.

Aircraft, Vehicle, and Equipment Maintenance

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

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

Aircraft, Vehicle, and Equipment Washing Areas

Several tenants at SAN conduct aircraft, vehicle, and equipment washing, with some using dry methods for cleaning the aircraft and others using water. In all but one instance, all aircraft, vehicles, and equipment washing activity conducted at SAN must be authorized in writing by the Authority Environmental Affairs Department. To obtain approval, the Environmental Affairs Department requires the submittal of a wash plan that identifies: the tenant contact details; where washing is performed; location of storm drains; equipment to be used and where it will be stored; quantity of wastewater to be generated; frequency of washing activities; water collection/retrieval/reclamation processes; water disposal/elimination processes; chemicals to be used, if any, and the relevant MSDSs; washing methods employed; and BMPs used to control potential pollutants related to the activity.

Upon satisfactory review of the wash plan, the Authority will provide written approval to conduct washing activities in the manner described in the plan. In general, the approved wash plans indicate that the washing is performed as far away from storm drains as possible and temporary berms are used to block off nearby storm drains to prevent runoff to the storm drain system. Wash water is then vacuumed up and properly disposed through the Authority's dewatering bin (where solids are removed) into the sanitary sewer connection at the main waste disposal site in Drainage Basin 8 (see Figure F-1). Due to the remote location used by the parking lot management service to wash the fleet of courtesy shuttle buses, the wash water generated at this location is collected and properly disposed to the sanitary sewer at an off-airport location. Any equipment degreasing is conducted indoors and washing activities are prohibited in areas that do not provide a wash rack, oil water separator, or area to deploy proper containment. The lone exception to obtaining this approval involves the use of properly designed wash rack connected to a dead end sump and/or the sanitary sewer. There are two wash racks at SAN are leased to tenants. One is an open-air facility designed for vehicles and the other is an open-air facility designed specifically for washing aircraft. Both wash racks collect the wash water runoff and then discharge it to the sanitary sewer system. Both wash racks are used to wash equipment other than vehicles and aircraft.

Fuel, GSE, and Chemical Storage Areas

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

Fueling Facilities - The FSF and RFF contain several aboveground and underground tanks, as outlined in the description of Drainage Basin 6 in Section 1. Jet fuel is delivered to the two 1,000,000-gallon ASTs within a valved secondary containment area at the FSF via underground pipelines from the 10th Avenue Marine Terminal storage tanks. The facility can also receive jet fuel from commercial transport trucks at approximately 8,200 gallons per load. The fuel is off-loaded at the three dual-position unloading islands. The jet fuel tanks at the FSF and RFF are connected via an underground hydrant fueling system. Fueling is generally performed at SAN from fuel transfer trucks which load at the RFF. Loading of gasoline and diesel into cars and trucks takes place at various locations around the airport. The FBO fueling facility has a 15,000-gallon jet fuel UST that is filled by an off-site vendor. The aircraft refueling trucks at the FBO are stored outdoors on the concrete ramp area at the FBO and used to fuel general aviation aircraft and ground support equipment at the FBO.

The emergency power generators at the airport are operated by the Authority and feature ASTs with fuel storage capacities ranging up to 500 gallons. Currently at the airport, other UST fuel storage capacities range from 3,000 to 15,000 gallons, aircraft refueling trucks range in storage capacity from 1,200 to 15,000 gallons, and vehicle refueling trucks range from 300 to 2,200 gallons. ASTs and USTs are fitted with a combination of overfill protection, leak detection, and alarm systems to prevent spills, leaks, and discharges. All fuel delivery trucks or fueling areas must be equipped with spill kits. The loading/unloading areas are inspected on a regular basis to identify any leaks from fuel transfers. At the FSF, leaks from fuel transfers are directed to bermed, sloped, spill containment areas that are linked to the 12,000-gallon oil water separator. At the RFF, the four loading islands are sloped and bermed to direct any discharges to a 12,000-gallon underground wastewater holding tank. Fuel spills that occur in any other area of the airport must be cleaned immediately using dry methods to reduce the potential to impact stormwater.

Ground Support Equipment - Areas designated for the storage and maintenance of GSE are primarily located in Drainage Basin 7, however, they do occur throughout the other ramp areas. During rain events, any residues (fuel, oil, grease) on the GSE under repair or leaks from the GSE are potential pollutant sources in stormwater discharges and must be controlled by proper BMP implementation.

Chemical/Materials Storage - Chemicals and other materials are stored in the GSE maintenance areas, around the gate areas, in the boneyard area, at the fixed base operation, at the FSF, in the cargo areas north of the North Ramp, and near the runway generator area. The materials stored include hydraulic fluids, lubricants, oils and greases, antifreeze, paints, rust preventers, solvents, batteries, metals, lavatory chemicals, cleaning solutions, deicing chemicals, pesticides, and herbicides. During rain events, any residues on chemical storage containers, or residuals from chemical spills or leaks in uncovered outdoor storage areas are potential pollutant sources in stormwater discharges. Facilities that include chemical and materials storage must have secondary containment and overhead coverage. Generally, only small quantities of these significant materials are stored at SAN. They are generally contained within flammable materials storage lockers or outdoor sheds, or on spill pallets. The lockers are completely enclosed, provide containment for small spills, and do not appear to be a source of significant quantities of pollutants to the storm drain system. Average daily amounts stored outdoors may range from a few 5-gallon cans to 110 gallons of hydraulic fluid in 5-gallon cans, a few 1-quart cans to 120 gallons of engine oils, a few small containers to 300 gallons in 55-gallon drums of lavatory chemicals, and various small containers of other chemicals such as paints, pesticides, rust preventers, antifreeze and solvents in the flammable materials storage lockers. Large volumes of materials in 55-gallon drums tend to be stored indoors and associated with various tenant maintenance areas.

Figure 3 and the figure attached to the Outdoor Material Storage (SC-07) in Appendix B outline the main chemical and materials storage locations and the types of chemicals and materials stored. The figure attached to the Outdoor Loading/Unloading of Materials BMP (SC-06) in Appendix B outlines areas where materials are shipped, received, loaded, or unloaded.

Outdoor Washdown/Sweeping

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

Ramp Sweeping - The Authority conducts a sweeping program designed to reduce pollutant discharges to its storm drain system from ramp and airfield industrial and commercial areas. The ramp sweeping program conducted by the Authority is further described in Section 7.2.3 below. This program differs from the Authority's road and parking facility sweeping programs described in Section 6. Potential pollutant sources that can be mitigated by sweeping practices in ramp areas are trash and debris (FOD), sediment, particulates, and other associated pollutants such as metals. Loading and unloading of trash, cargo, and catering supplies from aircraft can lead to trash and debris on the ramp areas. Any uncovered dumpsters or trash cans can be potential sources of trash and debris, as well as littering by staff, tenants, or the public. All Authority staff and tenants are very much aware of the potential hazards of FOD at the airport, and conduct daily FOD walks to check for any trash, so the source from tenants and staff should be very minimal. Everyone working on the ramp is trained to immediately remove FOD when it is observed and place it in covered FOD bins located in each tenant gate area and throughout the airport. Some tenants also perform manual sweeping of their operational areas.

Power Washing/Ramp Scrubbing/Runway Rubber Removal

In addition to ramp sweeping activities discussed above, the Authority also performs power washing, ramp scrubbing, and runway rubber removal activities. These activities, and the power washing activities of the airport janitorial services provider, are described here.

Power washing - Both the Authority and the airport janitorial services provider conduct power washing, the Authority on an as-needed basis and the janitorial services provider on a routine basis. Portions of the sidewalk areas in front of the terminals and the pedestrian bridges leading from the parking lots to the terminals are power washed by the janitorial services provider almost daily using high pressure water only. Wastewater from power washing may contain and transport contaminants on the surface to the storm drain system. The primary pollutants associated with power washing at the airport are particulates, trash, and debris. Both the Authority and the janitorial services provider use power washing equipment designed to minimize the amount of water used and to capture all the wastewater. To address the potential release or transport of pollutants during power washing activities, the Authority requires the use of several BMP found in Appendix B,

including the Non-stormwater Management BMP (SC01), the Employee Training BMP (SC10), and the Housekeeping BMP (SC18).

Ramp Scrubbing - CASQA guidance states that, "no currently available conventional sweeper is effective at removing oil and grease." As such, the Authority conducts an outdoor ramp scrubbing program in the gate areas (and in the north ramp area when requested by Authority staff or tenants) designed to remove oil and grease, debris, and particulate matter (to which heavy metals may be adsorbed, or which may contain metals). Oil and grease, fuels, hydraulic fluids, and other substances may leak onto the ramp from parked aircraft, vehicles, and equipment. An effective outdoor ramp scrubbing program, in conjunction with the ramp sweeping program discussed above, can help to reduce the levels of these pollutants in stormwater runoff from the airport.

Runway Rubber Removal - On the runway, materials such as tire rubber, oil and grease, paint chips, jet fuel, and vehicle exhaust products can build up on a runway surface over time, causing a reduction in the pavement's surface friction. When the friction value falls below a specific level, safety may be compromised and maintenance must be performed. The buildup is generally removed using high-pressure water or specialized detergents within a containment/recovery system. To address the potential release or transport of pollutants during runway rubber removal activities, the Authority requires the use of the Runway Rubber Removal BMP (SC15) in Appendix B.

Pesticide/Herbicide Use

Currently, only two tenants and the Authority use pesticides and/or herbicides. The food service provider contracts a company to perform pesticide applications and none of these products are stored at the food service facilities. The company managing the FSF uses herbicides to control weeds. They store small quantities in small containers within secondary containment outdoors at the FSF. The Authority also stores a small amount outdoors within secondary containment at the runway generator area. The use of pesticides and herbicides at the airport does not result in significant discharges to the ground. During rainfall events, pesticide and herbicide residuals that accumulate at the application sites can be washed into the storm drain system. However, based on the small quantities used at the airport, this activity appears to present a low potential for impacting stormwater discharge.

Shipping/Receiving Areas

The main shipping/receiving areas are in Drainage Basins 7, 8, and 12, first described in Section 1.0 and depicted on Figure 3. The fronts of the main cargo buildings are located in the southeast portion of Drainage Basin 8, where cargo and supplies are loaded and unloaded for the Authority, the various airlines, and cargo carriers. The airport food service provider uses a loading/unloading dock at Terminal 2 West and at the connection between the east and west halves of Terminal 2, where food, drink, and other catering supplies for the airport restaurants are delivered by truck. A fork lift is typically used for loading and unloading at the docks. Loading and unloading of aircraft occurs in Drainage Basins 1, 5, 6, 8 and 12 using hydraulic lifting equipment. To address the potential release or transport of pollutants during loading and unloading activities, the Authority requires the use of the Outdoor

Loading/Unloading of Materials BMP (SC06) in Appendix B. The main loading and unloading areas are shown in the figure attached to the Material Loading/Unloading BMP description in Appendix B.

Waste Treatment, Storage, and Disposal

Lavatory Waste - Lavatory waste is pumped daily from aircraft on the ramp or apron areas and transported to a specially designed waste disposal facility, an enclosed facility referred to as the triturator. The triturator is located at the southeastern-most corner of the airport, behind the blast fence. To prevent sewage spills during the transfer of lavatory waste through the triturator into the sanitary sewer, the transfer is performed in a drive-up facility that has overhead cover. During aircraft lavatory servicing operations, chemical odorizers and/or sanitizers may be used. Airline tenants generally store these chemicals indoors at the gate areas, or occasionally outdoors on wooden pallets under overhangs or tarps. The design of the disposal facility generally limits potential spills and leaks to the ramp areas during transfer from the aircraft to a small tanker truck.

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

- The Authority's boneyard area in Drainage Basin 6;
- The FSF in Drainage Basin 6;
- The gate areas in Drainage Basins 8 and 12, the GSE maintenance areas in Drainage Basin 7, the FBO in Drainage Basin 1, and the North Ramp in Drainage Basins 5 and 6.

The only locations at the airport at which more than 6,000 kg (13,200 lbs) of hazardous waste might be stored at any time are the underground storage tanks for waste fuels at both the FSF and the RFF. Currently, no facility at the airport generates more than 100 kg (220 lbs) of hazardous waste in any one month. To address the potential release or transport of pollutants during hazardous waste storage activities, the Authority requires the use of both the Outdoor Material Storage BMP (SC07) and the Waste Handling and Disposal BMP (SC08) in Appendix B. The areas at which hazardous waste storage occurs at the airport are also shown in the figure attached to these two BMP descriptions in Appendix B.

Waste Disposal - The main waste disposal area at SAN is the trash compactor/recycling bin/dewatering bin area, as outlined in the description for Drainage Basin 8 in Section 1 and depicted in Figure 3. There are also dumpsters and recycling bins at various locations throughout the airport. To address the potential release or transport of pollutants during waste disposal activities, the Authority requires the use of the Waste Handling and Disposal BMP (SC08). The areas at which waste disposal occurs at the airport are also shown in the figure attached to the Waste Disposal and Handling BMP description in Appendix B.

Dust and Particulate Generating Activities

Construction/demolition, aircraft and vehicle use and emissions, and airport operations can generate dust and particulates at SAN. In addition, airline off-loading of trash and debris from aircraft generates a significant source of gross pollutants, that require proper handling and disposal. The main industrial areas generating dust and particulates are the runway/taxiway area, terminal gate areas, the FBO, and the gate areas for cargo operators on the North ramp. The pollutants and particulates generated can include trash and debris, metals, and hydrocarbons. The main commercial area generating dust and particulates is the large vehicle storage area, north of the runway, outside the airfield perimeter fence, and southwest of Pacific Highway (see Figure 3).

Significant Spills and Leaks

Fueling and equipment maintenance activities generally involve the use or handling of jet fuel, aviation gas, hydraulic oils, oil, deicing fluids, degreasers, and other solvents. Considering that approximately 400,000 gallons of jet fuel are handled and transferred from truck to aircraft every day at the airport, it is highly likely that a the history of significant spills (as defined by the General Industrial Permit) would involve the handling of jet fuel. The refueler trucks operate nearly every corner of the airport, from the ramp areas of the terminals and at the FBO, to the air cargo/air freight operations area and overnight aircraft parking areas. Areas where the largest spills have occurred are the main Terminal gate areas, the Fuel Storage Facility, and the north cargo ramp area. In the last 5 years, all of these spills have been less than 350 gallons; were contained within SAN; and were immediately cleaned up; and none of these spill reached San Diego Bay. Since the airport was first brought under the coverage of the General Industrial Permit in 1992, only one spill has reached San Diego Bay. This one incident occurred in June 1998 when a fueling truck traveling on the vehicle service road hit the protector posts at a vehicle gate near the far eastern end of the runway, releasing approximately 400 gallons of jet fuel (see Figure 3 for the exact location of the spill). Fuel was observed moving towards the runway and entered the storm drain system. The runway was closed temporarily to takeoffs, but landings were not affected. The appropriate agencies were notified. The fuel from the damaged truck was pumped to another truck. A commercial hazmat response company was called and began containment of the spill. Spill containment booms were deployed at the storm drain outfall to San Diego Bay and the fuel was skimmed off the bay. Since then, spill prevention and control procedures have been enhanced to help prevent and respond to future spills, and no other spills have ever reached the bay. Spill procedures are described in Section 9 and the BMP required by the Authority to address spills is the Spill Prevention, Control, and Clean-up BMP (SR-01) in Appendix B.

Potential Non-storm Water Discharges

Potential unauthorized non-stormwater discharges could include: aircraft, vehicle, and equipment washing; power washing, ramp scrubbing, and runway rubber removal; non-emergency fire fighting activities; improper materials and waste handling, storage, and disposal; and spills and leaks. However, as discussed in Section 7.2.3 below, BMPs are in place to eliminate potential discharges from the majority of these sources. Authorized non-stormwater discharges and non-emergency fire fighting flows are described in Section 3 of

this SWMP, including the BMPs to control these discharges. The Authority's illicit discharge detection and elimination program is discussed in Section 9. With nearly every drainage basins susceptible to tidal intrusion, the drainage areas where the majority of the remaining potential authorized non-stormwater discharges occur are: Drainage Basins 1, 8 and 12 for potable water flushing; Drainage Basins 1, 5, 6, 7, 8, 9, 10, 11, 12 and 14 for air conditioning condensation; Drainage Basins 1, 2, 8, 9, 10, 11 and 14 for landscape watering; and Drainage Basin 6 for emergency firefighting activities (See Figure 3).

Soil Erosion

SAN is 85% to 95% impervious and either covered by structures or concrete/asphalt surfaces. Unpaved areas are the least tern nesting ovals in the southwest corner of SAN (south of the runway), landscaped areas, the NTC Inactive Landfill, and any active construction projects that may involve the removal of the impervious surface. The least tern nesting oval surfaces are generally very coarse gravel with little exposed soil. Landscaped areas are well-maintained and vegetated to prevent soil erosion. Where erosion does occur, sand bags or other storm drain inlet protection methods are employed and maintenance is performed to repair or revegetate the eroded areas. Since the closure of the NTC Inactive Landfill in 1971, the landfill cover been maintained to control surface water ponding and to prevent erosion. Active construction projects contain specific contract requirements for erosion and sediment control.

Parking Lots and Vehicle Storage

Parking lots and vehicle storage sites are one of the commercial activities conducted at SAN with the potential to contribute a significant pollutant load to the storm drain system. Information gathered as part of site visits, annual inspections, and stormwater monitoring, indicates that the significant materials associated with these commercial activities which could be potential pollutants consist primarily of fluid leaks from vehicles, as well as trash and debris.

Food Service

Food services represent another commercial activity conducted at SAN with the potential to contribute a significant pollutant load to the storm drain system. Information gathered as part of site visits, annual inspections, and stormwater monitoring, indicates that the significant materials associated with food service commercial activities which could be potential pollutants consist primarily of spills and leaks from grease handling, as well as trash and debris.

Janitorial Service

Janitorial services are also a commercial activities conducted at SAN with the potential to contribute a significant pollutant load to the storm drain system. Information gathered as part of site visits, annual inspections, and stormwater monitoring, indicates that the significant materials associated with janitorial service commercial activities which could be potential pollutants consist primarily of cleaning chemical spills, trash and debris, and wastewaters generated by cleaning activities.

Summary of Industrial/Commercial Sites and Sources

The above-described industrial and commercial activities occurring at SAN are summarized in Table 6. For each drainage basin at the airport (initially described in Section 1 and depicted in Figure 3), Table 6 presents: the stormwater runoff sampling location identification number for any sampling locations within the basin; the name of the industrial/commercial entity located or operating in that particular basin; the types of industrial and commercial activities occurring in the basin; and the potential pollutants associated with those activities. Similar and additional information is provided for individual industrial/commercial entity on the Tenant Summary Sheets found in Appendix E.

The potential pollutants listed in Table 6 are either stored or handled in the particular drainage basin identified. The main shipping and receiving area for most materials at the airport, aside from restaurant and catering food service supplies, occurs at the cargo buildings located between Terminal 1 and the Commuter Terminal. The fronts of the cargo buildings are located in the southeastern portion of Drainage Basin 8, and the backs in the western portion of Drainage Basin 7. All shipping and receiving areas, including aircraft loading/unloading areas, are shown on the figure attached to the Outdoor Loading/Unloading of Materials BMP (SC06) in Appendix B. Pollutant sources stored, handled, shipped, or received by each individual industrial/commercial entity are itemized in the Tenant Summary Sheets in Appendix E. The Tenant Summary Sheets also include maps which depict the location or operating areas of each entity. The locations for storage of particular types of materials and waste are indicated on Figure 3, and Figures 5 through 8, as well as the figures attached to the Outdoor Material Storage BMP (SC07) and the Waste Handling and Disposal BMP (SC08) in Appendix B. The BMP descriptions in Appendix B also include maps of where particular activities occur at SAN, as well as a list of the pollutants associated with those activities.

7.2.3 BEST MANAGEMENT PRACTICE REQUIREMENTS

A "stormwater BMP" is broadly defined as any program, technology, process, siting criteria, operating method, measure, or device that controls, removes, or reduces pollution in stormwater runoff. The Authority has identified BMPs that are required to control industrial/commercial pollutant sources at SAN, in accordance with Sections D.3.b.(2) and J.1.a.(1)(f)(ii) of the Municipal Permit and Section A.8 of the General Industrial Permit. The required BMPs were first presented in the SWMP prepared under the previous Municipal Permit (RWQCB Order No. 2001-01).

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

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

The BMPs required by the Authority may consist of a single measure or activity, a set of BMPs, or a pollution prevention program. This section discusses BMPs that pertain to specific industrial/commercial activities and areas. Also discussed are four specific pollution prevention programs implemented at SAN. One of these is the regularly scheduled power washing conducted by several tenants and by the airport janitorial services provider. The other 3 pollution prevention programs are conducted by the Authority and entitled, ramp sweeping, ramp scrubbing, and runway rubber removal. Structural treatment control BMPs implemented at SAN are discussed in Section 6.2 above and in the Treatment Controls BMP (TC-01) presented in Appendix B.

Additional operational BMPs are discussed in other sections of this document, such as the Non-Stormwater Discharges section, Illicit Discharge Detection and Elimination Component section, and the Education Component section.

Updated BMP Requirements

The BMPs required by the Authority to address industrial/commercial pollutant sources at SAN were first summarized into 19 BMP titles in Appendix B of the August 2003 Storm Water Management Plan and last presented in the same appendix of the SWMP January 2005-Revision. These 19 BMP titles are updated and revised as described below. The updates and revisions are based on information gathered during recent site visits and annual inspections, the 2005 and 2007 Site Audits (MACTEC, 2005a and MACTEC, 2007b), the 2006 BMP Recommendations Report (MACTEC, 2006a), as well as other information regarding current industry and technical standards. The updates and revisions include enhancements to existing BMPs currently being implemented at SAN and the addition of new BMPs where necessary.

One significant change has been the identification of individual elements for each BMP title. For example, BMP SC01- Non-stormwater management has 4 individual elements designated as SC01-01 through SC01-04, with SC01-01 described as "Notify Airport

Operations and the Airport Environmental Affairs Department if there is any evidence of illicit connections or illegal discharges." The nature of each update is briefly noted here:

- SC01 - Non-Stormwater Management; name changed.
- SC02A - Outdoor Equipment Operations and Maintenance Areas; added.
- SC02B - Aircraft, Ground Vehicle, and Equipment Maintenance; ID changed and BMP description enhanced to include 2 new elements.
- SC03 - Aircraft, Ground Vehicle, and Equipment Fueling; no changes.
- SC04 - Aircraft, Ground Vehicle, and Equipment Cleaning; BMP description enhanced to include 1 new element.
- SC05 - Aircraft De/Anti-Icing; BMP description enhanced to include 1 new element.
- SC06 - Outdoor Loading/Unloading of Materials; no changes.
- SC07 - Outdoor Material Storage; name changed and BMP description enhanced to include 7 new elements.
- SC08 - Waste Handling/Disposal; name changed and BMP description enhanced to include 3 new elements.
- SC09 - Building and Grounds Maintenance; BMP description enhanced to include 1 new element.
- SC10 - Employee Training; name changed and BMP description enhanced to include 1 new element.
- SC11 - Lavatory Service Operations; BMP description enhanced to include 1 new element.
- SC12 - Outdoor Washdown/Sweeping (Apron Washing, Ramp Scrubbing); name changed and BMP description enhanced to include 4 new elements.
- SC13 - Fire Fighting Foam Discharge; no change and additional details included in SWMP Section 3;
- SC14 - Potable Water System Flushing; no change and additional details included in SWMP Section 3 (Non-stormwater Discharges);
- SC15 - Runway Rubber Removal; BMP description enhanced to include 1 new element.

- SC16 - Parking Lots; BMP description enhanced to include 4 new elements and additional details included in SWMP Section 6 (Municipal Component);
- SC17 - Storm Drain Maintenance; name changed and BMP description enhanced to include 2 new elements.
- SC18 - Housekeeping; added.
- SC19 - Safer/Alternative Products; added.
- SR01 - Spill Prevention, Control, and Clean-up; name changed and BMP description enhanced to include 4 new elements.
- TC01 - Treatment Controls; name changed and BMP description enhanced to include 1 new element.

All Authority staff and tenant personnel are required to implement the updated BMPs as appropriate. Table 7 presents an assessment of pollutant sources that are likely to be found in stormwater discharges at SAN and identifies the BMPs, in terms of individual BMP element, required to address those sources Table 7 associates the pollutant sources with issues/areas identified by the BMP title listed above. A list and description of all 21 BMPs title required by the Authority can be found in Appendix B.

The particular BMPs, listed by individual element applicable to each tenant and to the Authority, are presented in Table 8, which also indicates whether the activity is being performed indoors or outdoors. The particular BMPs listed by individual element are presented in the Tenant Summary Sheets in Appendix E.

Pollution Prevention Programs

Regular Power Washing

Outdoor tenant operational areas that are regularly cleaned by power washing include the concrete pad at the RFF and several cargo ramp areas. The airport janitorial services provider also regularly power washes the sidewalks in front of the terminals, the trash compactor areas near the terminals, the loading/unloading dock at the west end of Terminal 2 West, and the grease trap areas operated by the food service provider. The concrete pad at the RFF is steam cleaned, and the discharge enters the 12,000-gallon underground wastewater tank, which is serviced as needed or annually. Those tenants power washing the cargo ramp areas either perform the work themselves or contract for the service. All power washing is conducted in accordance with the BMPs described in Section 7.2.2 above.

Ramp Sweeping

The Authority Facilities Maintenance Department sweeps the aircraft gate and ramp (apron) areas twice a week. Using mechanical sweeping equipment, the program is directed mainly

at removing FOD, but it also removes sediment, particulate matter, and other pollutants. Sweeping of each gate area occurs approximately twice each month. The debris/sweepings are vacuumed up into the unit and are disposed of in the regular trash dumpster near the maintenance shop in Terminal 2.

Ramp Scrubbing

The Facilities Maintenance Department performs ramp scrubbing 4 times a week using automatic scrubbers. A biodegradable waxy soap, specifically made for oil removal, is used during the procedure. The soap is stored in 2 x 100-gallon plastic containers on wooden pallets, under cover, at Terminal 2 West. The scrubber is used for 6 - 6 1/2 hours each time and approximately 3 to 4 gates are completed each day. The wash water is vacuumed up and reused within the unit. Water is replaced once per shift. Wastewater is disposed of in the dewatering bin at the trash compactor area and discharged to the sanitary sewer system. The North ramp/cargo areas near the control tower are scrubbed when tenants request it or as needed. The Facilities Maintenance Department also contracts for a professional concrete cleaning company to conduct large-scale ramp scrubbing operations to thoroughly clean ramp and apron areas once-a-year or as-needed.

Runway Rubber Removal

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

7.2.4 PROGRAM IMPLEMENTATION

The Authority has identified those updated BMPs applicable to industrial/commercial activities at SAN (Table 7 and Appendix B) and has also identified those BMPs applicable to individual tenants and to the Authority (Table 8 and Appendix E). Tenants and Authority departments are required to adopt applicable BMPs, when necessary, as new activities are added or existing activities change. BMPs or elements of BMPs requiring major operational and/or structural modifications must be implemented in a timely manner.

New BMP requirements will be incorporated in the annual SWMP update, as required by both the General Industrial Permit and Municipal Permit.

All tenants and Authority departments (with stormwater management responsibilities) are provided and maintain up-to-date copies of the SWMP in either hard-copy or electronic copy, or have immediate access to the SWMP via the internet. The Tenant Summary Sheets in Appendix E list the contact information for each tenant. Tenants are required to notify the Authority Environmental Affairs Department at least annually regarding any needs to update or modify the SWMP. All industrial/commercial tenants should be knowledgeable of the BMPs required for use by the Authority to address their individual operations and activities (see Tables 7 and 8, and Appendix B and E, respectively).

The specific elements of the Authority's industrial/commercial stormwater management activities are presented below.

Education and Outreach

Details on education and outreach programs for Authority staff, tenants, and the general public related to industrial/commercial activities are provided in Sections 10.0 and 11.0.

Staff Training

All Authority staff are provided annual SWMP implementation training regarding topics such as prohibited discharges, BMPs requirements, good housekeeping, inspections, spill response, and record keeping procedures. Authority staff training is mandatory. For more details on staff training, see Section 10.0.

Facility Inspections

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

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

Municipal Permit Requirements

The Authority is required to conduct inspections of industrial and commercial activity/operations/facilities to monitor compliance with the Municipal Permit, as well as the Authority's ordinances, permits, and approvals. The Municipal Permit (Sections D.3.b.(3)(b) and D.3.b.(3)(c)) outlines procedures for determining the number of high priority industrial or commercial sites that must be inspected in any given year of program implementation under the renewed Municipal Permit. Nevertheless, suffice to say that the Authority has determined that all industrial/commercial entities at SAN are considered high priority (as noted in Section 7.2.2 above) and each one will be inspected at least annually. These inspections will be coordinated with inspections for the General Industrial Permit (described below).

General Industrial Permit Inspection Requirements

The General Industrial Permit requires the Authority to conduct an inspection program to: ensure that the BMPs being implemented are evaluated and revised to meet changing conditions; aid in the implementation and revision of the SWMP; and measure the effectiveness of BMPs to prevent or reduce pollutants in stormwater discharges and authorized non-stormwater discharges. The inspection program must be a written, site-specific document that is revised whenever appropriate and be readily available for review by Authority staff and tenants. The General Industrial Permit inspection requirements include the following:

- Quarterly non-stormwater discharge visual observations, and
- Monthly stormwater discharge visual observations, and
- Annual Comprehensive Site Compliance Evaluation.

Quarterly Non-stormwater Discharge Visual Observations - The Authority conducts quarterly inspections of the airport to observe authorized non-stormwater discharges and their sources to verify that BMPs required to control those authorized discharges are being properly implemented and are effective. The Authority also conducts quarterly visual observations of all drainage areas to identify any unauthorized non-stormwater discharges. Authority staff evaluate non-stormwater discharges to ensure: 1) compliance with the General Industrial Permit and the Municipal Permit; 2) that required BMPs are effective at preventing or reducing the contact of non-stormwater discharges with significant materials or equipment and minimize the flow or volume of discharges, to the MEP; and 3) that non-stormwater discharges do not contain or transport significant quantities of pollutants. The quarterly inspections also verify the list of potential pollutants at the industrial/commercial sites/sources, and identify any necessary modifications to the SWMP.

The quarterly observations are conducted during daylight hours, on days with no stormwater discharges, and within each of the following periods: January-March, April-June, July-September, and October-December. The observations are conducted within 6 to 18 weeks of each other. At least one of the quarterly inspections is incorporated into the annual comprehensive site compliance evaluation discussed below. The observations document the presence of any uncharacteristic volumes, discolorations, stains, odors, floating material, etc., as well as the source of any discharge. Records of the observations, including date, location, description of observations, and response taken to eliminate unauthorized non-stormwater discharges and to reduce or prevent pollutants from contacting non-stormwater discharges, are maintained by the Authority Environmental Affairs Department.

Monthly Stormwater Discharge Visual Observations - The Authority conducts visual observations of stormwater discharges at all stormwater monitoring locations during the first hour of discharge from one storm event per month during the wet season (October 1 through May 30). History and experience have led the Authority to develop a program that conducts the stormwater discharge visual observations only during daylight hours when preceded by at least three days (72 hours) without measurable precipitation of more than 0.1 inches (as

measured by the National Weather Service at Lindbergh Field). Visual observations are not required during dangerous weather conditions, such as electrical storms or flooding. During observations, the Authority documents the presence of any floating and suspended material, oil and grease, discolorations, turbidity, odor, and the source of any pollutant observed (if a source can be determined). If the presence of pollutants is observed, efforts will be made to identify the source of the pollutants. The investigation will begin at the sampling location and continue through the drainage basin until the pollutant source is located, if possible. Once located, the Authority will direct that corrective actions to reduce or prevent pollutants from contacting stormwater discharge be taken by the responsible party. Visual observations of stored or contained stormwater, such as at the FSF, are conducted at the time of release.

Annual Comprehensive Site Compliance Evaluation - The Authority conducts one annual comprehensive site compliance evaluation (ACSCE), which the Authority also refers to as an Annual Comprehensive Site Inspection (ACSI), during the General Industrial Permit reporting period of July 1st through June 30th (which also matches the fiscal year of the Authority). The ACSIs are conducted within 8 to 16 months of each other. The ACSI process includes: a review of all visual observations records, inspection records, and sampling and analysis results; a review and evaluation of all BMPs to determine whether the BMPs are adequate, properly implemented and maintained, or whether additional BMPs are needed; a visual inspection of all potential pollutant sources for evidence of, or the potential for, pollutants entering the drainage system; and a visual inspection of equipment needed to implement the SWMP, such as spill response equipment. Any incidents of non-compliance are noted and the responsible party is directed by the Authority to take corrective action. The ACSI process includes timely follow-up inspections whenever BMP deficiencies are found at any particular site. The process also produces a report that identifies any necessary revisions to the SWMP, to the Authority's BMP requirements, or to the descriptions of the BMPs, and outlines a schedule for implementing any necessary revisions. Any revisions necessary must be implemented within 90 days of the ACSI. The ACSI report allows the Authority to certify that SAN is in compliance with the General Industrial Permit or if not in compliance, the reasons why not.

Formal Inspection Procedures for Industrial/Commercial Sites and Sources

Formal inspections of industrial/commercial sites and sources by the Authority Environmental Affairs Department staff generally include a review of the following information, to the extent the information exists: 1) SWPPPs or BMP implementation plans; 2) any relevant monitoring data; 3) any self-inspection records; and 6) any previous inspection reports, including the ACSIs, as appropriate. The inspection generally involves an assessment of: 1) compliance with the SWMP and the Authority's ordinances and permits related to urban runoff; 2) existing BMP requirements and the adequacy of BMP implementation, BMP maintenance and effectiveness, and the site supervisor/manager's efforts to make appropriate adjustment when ineffective BMPs have been identified; and 3) visual observations for non-stormwater discharges, potential illicit connections, and potential discharge of pollutants in stormwater runoff. The inspection also presents an opportunity to provide education and training regarding stormwater pollution prevention.

There are 4 basic steps to the Authority's facility/site inspection procedures described below, namely: initiation, preparation, the site visit, and the post-inspection activities.

Step 1: Initiation - The inspection is typically initiated in response to a schedule, a public report or complaint, an illicit discharge investigation, or as follow-up to a previous inspection, violation, or other enforcement action. The inspector typically conducts a complete inspection of the entire facility/site, regardless of the initiating circumstances. However, the inspectors may choose to focus on specific issues that were previously identified or that were the reason for the initiation of the inspection

Step 2: Pre-Inspection Preparation - Prior to visiting a facility/site, the inspector reviews any of the available information noted above and organizes the appropriate inspection form (found in Appendix G). Using maps and other sources, the inspector familiarizes themselves with the general site location and vicinity, including proximity to storm drain inlets.

Step 3: The Site Visit - The inspector begins assessing site conditions upon approach to the facility/site. Depending upon circumstances and availability, the inspector may begin by interviewing the facility/site operator or other responsible individual. The inspector then verifies/clarifies observations made upon approaching the facility/site, identifies and evaluates the BMP requirement applicable to the site/activity, as well as the effectiveness of the BMPs being implemented. If responsible individuals are available, the inspector will ensure the contact information and BMP requirements on record are accurate and discuss how various BMP requirements are being met (especially if requisite BMPs have been incorporated into the operations and activities in a manner that may not be obvious). The inspector typically asks to see any existing pollution prevention plans, records, or environmental management system documentation. While conducting a walkthrough of the facility/site, the inspector notes those industrial/commercial areas and activities that are exposed to precipitation (thereby increases the risk of pollutants entering the storm drain system. Areas of stormwater run-on and runoff are also noted. The inspector uses the walkthrough to assess: the accuracy of site maps, descriptions of the areas and activities, and lists of materials on site; the effectiveness of the BMPs being implemented; and any evidence of potential or existing illegal discharges. The inspection is documented on the appropriate form(s) as outlined below. The inspection form should bear the signatures of both the inspector and the responsible individual (or designee) for the facility/site.

Step 4: Post-Inspection Activities - After the inspection, the inspector ensures actions are taken to address any immediate concerns; updates the Authority's records, as necessary; files copies of the inspection form (and ensures a copy is issued to the responsible party); issues corrective action or enforcement orders to the responsible party, as necessary; schedules follow-up inspections, as needed; and makes reports or referrals, as needed, to the appropriate departments or agencies.

Inspection Forms

The Authority Environmental Affairs Department conducts various inspections at SAN to maintain and ensure compliance with both the General Industrial Permit and the Municipal

Permit. The various inspection programs were outlined above. The inspections are documented in field activity reports. Inspection reports and/or summaries, as appropriate, are included in the Annual Reports required by the General Industrial Permit and Municipal Permit. The inspection forms used for each of the various inspection programs are presented in Appendix G.

The General Industrial Permit requires the use of the following inspection forms developed by the SWRCB:

- **Form 2** - Quarterly Visual Observations of Authorized Non-Stormwater Discharges,
- **Form 3** - Quarterly Visual Observations of Unauthorized Non-Stormwater Discharges,
- **Form 4** - Monthly Visual Observations of Stormwater Discharges,
- **Form 5** - Annual Comprehensive Site Compliance Evaluation Potential Pollutant Source/Industrial Activity BMP Status.

Details regarding the authorized and unauthorized non-stormwater discharges, the subjects of Forms 2 and 3, are included in Section 3. Form 4 is used to record observations, the dates of observation, the locations observed, and the responses taken to reduce or prevent pollutants in stormwater discharges. Examples of the SWMP-compliance facility/site inspection forms are also provided in Appendix G.

[Note - Appendix G also includes General Industrial Permit - Form 1 - Sampling & Analysis Results - is used to present the results of wet weather sampling and analysis. The wet weather sampling and analysis performed by the Authority in compliance with the General Industrial Permit is discussed in Section 9 and Appendix D2 of this SWMP.]

Owner Operator Notifications

One objective of the SAN SWMP is to notify all industrial/commercial sites/sources at SAN, whether operated by tenants or the Authority, of the BMP requirements deemed applicable to each site/source by the Authority. As noted above, all tenants and Authority departments (with stormwater management responsibilities) are provided and maintain current, up-to-date copies of the SWMP in either hard-copy or electronic copy, or have immediate access to the SWMP via the internet. As such, the Authority complies with the notification requirements of Section D.3.b.(2)(c) of the Municipal Permit.

Enforcement Measures

Any BMP violations have not been addressed by the industrial/commercial site/source tenant or Authority department will be discussed with responsible party. The inspector will require the submittal of a written explanation and description of the actions that will be taken to correct the problem. A corrective action form may be used to document the problem and its resolution. The responsible party should be given a Corrective Action Form for each

violation documented during the inspection. The responsible party must provide documentation describing the actions taken to the Environmental Affairs Department within 30 days of the notice to correct the violation.

If violations discovered during an inspection are not resolved voluntarily by the responsible party, the Authority will pursue appropriate enforcement actions as detailed in Article 8.7 of the Authority Code and described in Section 2.4 of this SWMP.

Reporting of Industrial Non-Filers and Incidents of Non-Compliance

Reporting of Industrial Non-Filers

As noted in the Introduction of this SWMP, the industrial operations at SAN have been subject to the General Industrial Permit since 1992. At that time, the Port of San Diego filed a Notice of Intent to Comply (NOI) with the permit that included all the industrial entities at the airport. Since then, ownership and operation of SAN was transferred from the Port of San Diego to the Authority, and the Port of San Diego filed a Notice of Termination from permit compliance and listed the Authority as the new facility operator for SAN. In March of 2003, the Authority filed a NOI to comply with the General Industrial Permit and listed the primary SIC code for the site as 4500 Air Transportation. In response, the SWRCB issued WDID #937I018035 to SAN. In August of 2003, the Authority prepared the SAN SWMP to comply, in part, with the General Industrial Permit. As was true at the time that the Port of San Diego operated the airport, all airport tenants operate under lease or license agreement with the airport owner/operator, which is currently the Authority. As such, since the NOI included all industrial operations at SAN, there cannot be any General Industrial Permit non-filers at SAN.

Incidents of Non-compliance

The Authority may issue a written enforcement notice for incidents of repeat or serious non-compliance. If an incident or practice of non-compliance occurs, Authority Environmental Affairs Department staff will then determine if the incident endangers human health or the environment by considering the following criteria:

- Characteristics, quantity, and toxicity of substances/materials involved;
- Proximity of site to a sensitive water body (San Diego Bay);
- Proximity of site to an impaired water body (San Diego Bay);
- Proximity of site to a sensitive habitat/endangered species;
- Estimated volume of actual and/or potential discharge;
- Whether the incident involves a discharge to the storm drain;
- Condition of the storm drain system (clog, etc.).

If the Authority determines that the incident does endanger human health or the environment, then the Authority will provide verbal notification to the RWQCB within 24 hours from the time the Authority becomes aware of the circumstances. Within 5 days of the time the Authority becomes aware of the circumstances, the Authority will provide the RWQCB with a written submission containing a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

In addition, under the General Industrial Permit, incidents of non-compliance are grounds for enforcement actions, Permit termination, revocation and re-issuance, or modification or denial of a permit renewal application. If any stormwater or non-stormwater discharges exceed the discharge prohibitions, effluent limitations, or receiving water limitations specified in the General Industrial Permit, or exceed any applicable water quality standards in the Statewide or Regional Water Boards' Basin Plans, the facility is not in compliance. Should such a situation arise, the Authority will submit a report to the RWQCB within 60 days describing BMPs currently being implemented and additional BMPs that will be implemented, with a schedule of implementation, to prevent or reduce any pollutants that are causing or contributing to the exceedance of water quality standards. Following approval of the report by the RWQCB, the Authority will revise and implement this SWMP and monitoring program, as necessary, within 90 days to incorporate any additional BMPs that may have been and/or will be implemented (including a schedule for implementation) and any additional monitoring requirements. Any anticipated non-compliance, such as a planned change at the airport facility that will change the nature or increase the amount of pollutants discharged, will be reported to the RWQCB. Any non-compliances will be reported in the monitoring report discussed below, and will include a description of the non-compliance and its cause, the date and time of the non-compliance and if it has been corrected, as well as the steps taken or planned to reduce and prevent a recurrence of the non-compliance.

Reporting

Both the Municipal Permit and the General Industrial Permit require the Authority submit Annual Reports to the RWQCB. The Municipal Permit requires submission of an annual report by September 30th of each year, which includes the information listed in Section J.3.a.(3) of the permit for the preceding 12-month period of July 1st to June 30th. The General Industrial Permit requires submission of an annual report by July 1st of each year, which includes the information listed in Section B.14 of the permit for the preceding 12-month period of July 1st to June 30th. The Annual Reports are signed and certified by the Director of Environmental Affairs.

Records

Records of all stormwater monitoring information, copies of all reports (including Annual Reports) required by the Municipal Permit and the General Industrial Permit, and records of all data used to complete the NOI for the General Industrial Permit, and all other data and information required by either permit will be retained by the Authority for a period of at least five years.

7.3 MOBILE SOURCES ELEMENT

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

7.4 INDUSTRIAL AND COMMERCIAL COMPONENT EFFECTIVENESS ASSESSMENT

The Authority has developed internal and external effectiveness assessment programs to evaluate the Authority staff, Authority boards, and tenant compliance with water quality issues. The Authority's Effectiveness Assessment component is described in Section 13.0 of this document.

7.5 INDUSTRIAL AND COMMERCIAL COMPONENT PROGRAM REVIEW AND MODIFICATION

The Authority has reserved this section to identify and document future changes to the Industrial and Commercial Component of the SWMP. Section 14.0 of this SWMP details the program modifications made to the *SWMP January 2005-Revision* to bring this document into compliance with the renewed Municipal Permit.

8.0 RESIDENTIAL COMPONENT

As noted in the Introduction of this SWMP, there are no residential land uses or activity areas within the Authority's jurisdiction. For this reason, the SWMP contains no discussion of activities conducted by the Authority relative to the Residential Component of the Municipal Permit.

9.0 ILLICIT DISCHARGE DETECTION AND ELIMINATION COMPONENT

9.1 INTRODUCTION

The programs described in this section were developed, pursuant to Section D.4.a of the Municipal Permit, to meet the requirements specified in Section J.1.(h) of the Municipal Permit and Section B of the General Industrial Permit.

The Municipal Permit requires that the Authority establish an Illicit Discharge Detection and Elimination (IDDE) program to actively seek and eliminate illegal discharges and connections to the storm drain system. This program provides a framework for the detection, investigation and follow-up, and elimination of reported violations. The program is designed to be adaptive and allow the Authority to periodically assess collected data, re-evaluate areas of concern, and concentrate control methods and corrective actions as necessary in those areas.

The General Industrial Permit requires each tenant to identify and eliminate potential sources of pollution at their site, which also supports the primary goal of the IDDE Program. Section B.3 of the General Industrial Permit requires the Authority to perform non-stormwater discharge visual observations and Section B.4 of the General Industrial Permit requires the Authority to perform stormwater discharge visual observations. Section 7.2.4 of this SWMP addresses both these requirements. These quarterly visual observations and facility inspections actively seek to detect and eliminate illegal discharges. High priority industrial/commercial entities at SAN are required to implement BMPs to prevent spills and illicit discharges from entering the storm drain system (see Section 7 of this SWMP).

An illegal discharge is any discharge of pollutants to the storm drain system that is not comprised entirely of stormwater and not authorized by a NPDES permit. Washwater, sediment, spilled chemicals, and other pollutants allowed to enter the storm drain system, either intentionally or unintentionally, contribute to the degradation of the local water quality. Releases from the sanitary sewer or private laterals can allow pathogens, ammonia, detergents, and other contaminants to enter the storm drain system.

Illicit connections are any conveyances that have illegally been connected to the storm drain system and that are currently discharging or have the potential to contribute an illegal 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.

The IDDE program incorporates several elements of the Authority's stormwater 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 affects a receiving water. Authority regulations prohibit illicit

discharges. The Authority code can require a responsible party to conduct abatement activities to eliminate an illicit discharge, or for the Authority to conduct those activities itself at the cost of the responsible party. Enforcement programs are discussed in Section 2.

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 stormwater pollution prevention, including the detection and elimination of illicit discharges. Education programs for the Authority staff are provided in Section 10.

The Authority conducts or participates in the urban runoff monitoring programs to meet requirements of both the General Industrial Permit and the Municipal Permit. Several of these programs help to identify non-stormwater 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. The General Industrial Permit requires quarterly observations and facility inspections, as well as a wet weather monitoring program, to identify potential sources of pollution. The Municipal program requires observations and water quality analysis of dry weather flows between June and September as a part of the Dry Weather Monitoring program. General Industrial Permit Section B.5 also requires the Authority to conduct appropriate stormwater sampling and analysis and Section B.7 requires the Authority to visually observe and collect samples of stormwater discharge from all drainage areas that represent the quality and quantity of the facility's storm discharges from the storm event. General Industrial Permit Section B.10 requires the Authority's stormwater monitoring program to meet the Permit objectives of ensuring that facility discharges are in compliance with the Permit, that monitoring data is used to validate and revise the stormwater management program, as necessary, and that monitoring data is used to evaluate the effectiveness of the BMPs being implemented at the facility. Section 9.4.4, Section 13, and Appendix D of this SWMP have been prepared to address these requirements. Appendix D presents both the Dry Weather Monitoring program required by the Municipal Permit (see Appendix D-1) and the wet weather monitoring program required by the General Industrial Permit (see Appendix D-2).

Various elements of the Authority stormwater management program which comprise the IDDE Component are described elsewhere within this SWMP. The following section discusses those IDDE programs elements that are not described in other sections of this document.

9.2 PUBLIC REPORTING OF ILLICIT DISCHARGES AND CONNECTIONS

Public reporting mechanisms are an effective way to promote the reporting of illegal discharges. To meet the Municipal Permit requirement of Section D.4.h, the Authority promotes three primary mechanisms for reporting complaints or concerns regarding unauthorized non-stormwater discharges: 1) the Authority Environmental Affairs Department main telephone line (619-400-2782) and webpage (www.san.org/airport_authority/environmental_affairs/index.asp); 2) the Project Clean Water regional hotline (888-846-0800) and webpage (www.projectcleanwater.org) operated by the County of

San Diego on behalf of the Municipal Permit Copermittees; and 3) the THINK BLUE Hotline at (888-844-6525) and webpage (www.sandiego.gov/thinkblue) operated by the City of San Diego. Both regional hotlines are available Monday through Friday, 8:00 a.m. to 5:00 pm, and provide a voice mail message for 24-hour access in both English and Spanish. The hotline operators forward complaint information, as appropriate, to the Authority Environmental Affairs Department for investigation and follow-up.

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

Each call that is forwarded to the Authority through these public reporting mechanisms is handled as an incoming complaint and entered into the database as a unique incoming record. 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.

9.3 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 Section D.4.g of the Municipal Permit. Many of the same programs and procedures are implemented as a requirement of the General Industrial Permit.

9.3.1 SPILL PREVENTION

Sanitary Sewers

As discussed in Section 6.5 of this SWMP, the Authority's preventive and corrective sanitary sewer maintenance programs focus heavily on those areas of known problems or concerns. Known problem areas typically consist of the lines immediately downstream of food services, which have a tendency to be impacted by grease. For all locations, the Authority provides for or requires the food service provider (as a requirement of the lease) to conduct the minimum of annual routine monitoring, inspection, and cleaning. 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 (described in Section 12 of this SWMP).

Other Spills

Refueling and equipment maintenance activities utilize jet fuel, aviation gas, hydraulic oils, oil, deicing fluids, degreasers, and other solvents. Due to the intensity of use, there is a higher possibility of significant spills of jet fuel. Jet fuel is stored in aboveground tanks at the FSF and distributed via pipeline to a RFF. Aircraft fueling is performed by a fleet of fuel trucks (containing several hundred gallons of fuel) operated by three refueling operations. The fuel trucks operate on the ramp areas of the main terminals, the FBO, the air cargo, and overnight aircraft parking areas. The Authority requires the implementation of spill response BMPs, secondary containment, and other mechanisms to prevent and avoid spills. 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.

9.3.2 SPILL REPORTING

In the event of a spill, the responsible party (Authority staff or airport tenant) is required to contact Airport Operations (619-400-2710) and Harbor Police (619-686-8000). 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 the Authority becomes aware of the circumstances. Within 5 days of the time the Authority becomes aware of the circumstances, the Authority will provide the RWQCB with a written submission containing a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

9.3.3 SPILL RESPONSE

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

Each facility/operation that utilizes, stores, and/or generates hazardous materials is responsible for creating spill response procedures and ensuring that their employees are properly trained in those procedures. The General Industrial Permit requires the preparation of spill response procedures, and those procedures are described in Sections 7.2.2 and 7.2.3 of this SWMP and the "Spill Prevention, Control, and Clean-up" BMP (SR01) provided in Appendix B. Each airline tenant is responsible for maintaining spill response equipment in their 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, 3 spill response trailers with an adequate inventory of spill response equipment to respond any spills, including a worst-case incident. Authority

staff and airport tenant education and outreach efforts highlight the existence and intended use of these spill response trailers.

Small Spill Cleanup Procedures

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

Large Spill Cleanup Procedures

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

- Stop the source:
 - Shut off valves on aircraft or refueler trucks;
 - Install plugs in ruptured tanks or valve fittings;
 - Relocate leaking vehicle to nearby area of secondary containment;
 - Transfer fuel into other vessels, tanker trucks, etc.
- Perform notifications:
 - Tenants Contact Airport Operations (619-400-2710) and Harbor Police (619-686-8000).
- Airport Operations and Harbor Police Contact:
 - Airport Rescue and Fire Fighting Facility (619-231-5204);
 - Authority Environmental Services (619-400-2782);
- California Department of Fish and Game/Office of Spill Prevention and Response 24-hr hotline (916-445-0045) or CalTip line 1 (888-334-2258), as necessary or required by law;
- U.S. Coast Guard (619-683-6495), as necessary or required by law;
- Regional Water Quality Control Board (858-467-2952), as necessary or required by law;
- EPA Office of Emergency Services (8000-852-7750), as necessary or required by law;

- National Response Center (800-424-8802), as necessary or required by law.
- Contain and absorb the spill:
 - Prevent the spill from reaching the storm drain;
 - 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;
- Remove materials from the storm drain system by installing an absorbent pad/plug up and down gradient of the inlet by which the spill entered the storm drain. A plug is needed up gradient to prevent rising tidal action from dispersing oil throughout the storm drain system. Use a weir skimmer and/or pumps to remove materials from the storm drain system for proper disposal.
- 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.
- Make follow-up notifications and submit reports, as necessary, to agencies necessary or required by law.

Incident Command System Implementation

Several Authority staff 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, 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.

9.4 URBAN RUNOFF MONITORING

The following urban runoff monitoring programs were developed to meet the requirements of: 1) Sections D.4.c and J.1.(h)iii of the Municipal Permit, as more fully described in Section II.B of the Receiving Waters Monitoring and Reporting Program requirements of the Municipal Permit; and 2) Section B of the General Industrial Permit. The monitoring programs implemented at SAN by the Authority are described in SWMP Appendix D.

9.4.1 MS4 OUTFALL MONITORING

As required by Section II.B.1 of the Receiving Waters Monitoring and Reporting Program 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 Watershed Copermittees) to develop a MS4 Outfall Monitoring Program and characterize pollutant discharges from MS4 outfalls in the San Diego Bay watershed during wet and dry weather.

Selection of Outfalls to be Monitored

The storm drain system outfall monitoring locations will coincide with the existing dry weather monitoring locations described in more detail in Appendix D. 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 provide adequate coverage of the storm drain system.

Pollutants of Concern

SAN lies within the San Diego Bay Watershed. The San Diego Bay Watershed is 303(d) listed for the following segments and associated constituents: Chollas Creek - copper, lead, zinc, cadmium, coliform bacteria, stormwater toxicity; San Diego Bay - bacteria indicators, metals, diazinon, chlordane, benthic community effects, copper, and sediment toxicity. Discharges from several source basins throughout the watershed contribute to these impairments.

9.4.2 SOURCE IDENTIFICATION MONITORING

In accordance with Section II.B.1 of the Receiving Waters Monitoring and Reporting Program of the Municipal Permit, the Authority will work with the San Diego Bay Watershed Copermittees to develop a source identification monitoring program that will identify sources of discharges of pollutants causing the priority water quality problems within their watershed. The monitoring program will include focused monitoring that moves upstream into each watershed and will utilize source inventories and "Threat to Water Quality" analysis to guide monitoring efforts. The Municipal Permit requires that the program be implemented in each watershed by the 2008-2009 monitoring year. The Authority will continue efforts to identify sources within its jurisdiction through the implementation of existing monitoring, inspection, and BMP programs as described in Appendix D2.

9.4.3 DRY WEATHER FIELD SCREENING AND ANALYTICAL METHODS

The Authority has developed a Dry Weather Analytical Monitoring Program that contains 10 sites for field and analytical monitoring. This monitoring program is described in more detail in Appendix D1. A Trash Assessment Program has been developed in accordance with the Municipal Permit requirements and will be implemented at SAN in conjunction with the Dry Weather Monitoring Program. This monitoring program is described in detail in Attachment D1-A to Appendix D1.

Dry weather monitoring locations were selected to provide adequate coverage of the entire storm drain system. Monitoring locations were established to isolate particular land uses, drainage areas, and areas of concern based on historical data. A storm drain system map was created in GIS 9.0 to depict the storm drain system, the 14 drainage basins, and the monitoring locations. The storm drain system map is used in source investigations and satisfies the requirements of Section D.4.b of the Municipal Permit. During the dry weather monitoring, the storm drain system map is checked for accuracy and any necessary corrections and/or changes are made accordingly.

Dry weather monitoring consists of annual and other routine inspections of monitoring locations. The program implements observations, field screening water quality analysis, and laboratory analytical water quality analysis of various constituents in order to detect possible illicit discharges during dry weather.

Qualitative observations will be recorded at all sample locations. The inspector will complete a field data sheet for each monitoring location noting observations such as color, clarity, odor, biological characteristics, and an assessment of trash. The trash assessment includes an evaluation of spatial extent, relative amount of trash, and the nature of the trash present.

Dry weather analytical monitoring and trash assessments are required to be conducted, at a minimum, at least once between May 1 and September 30. Field screening water quality analysis is conducted at all monitoring locations that contain flowing or ponded water. Analytical laboratory analysis is conducted for a number of specifically selected sites (typically approximately 25 percent of the number of sites at which field screening is conducted). Appendix D1 of this document describes the field monitoring and laboratory analysis procedures including a list of constituents, equipment required, and quality assurance measures.

9.4.4 GENERAL INDUSTRIAL PERMIT WET WEATHER MONITORING

Section B of the General Industrial Permit requires development and implementation of a monitoring program. The Authority Environmental Affairs Department conducts the wet weather monitoring program at SAN. While the wet weather monitoring program is structured around General Industrial Permit compliance, it also addresses the source identification monitoring requirements of the Municipal Permit.

The General Industrial Permit (Section B.2) lists the following objectives for the stormwater monitoring program:

- Ensure that stormwater discharges are in compliance with the Discharge Prohibitions, Effluent Limitations, and Receiving Water Limitations specified in the General Industrial Permit.
- Ensure practices at the facility to reduce or prevent pollutants in stormwater discharges and authorized non-stormwater discharges are evaluated and revised to meet changing conditions.
- Aid in the implementation and revision of the Storm Water Pollution Prevention Plan (SWPPP) required by Section A of the General Industrial Permit.

- Measure the effectiveness of BMPs to prevent or reduce pollutants in stormwater discharges and authorized non-stormwater discharges.

Under the General Industrial Permit, all facility operators are required to:

- Perform visual observations of stormwater discharges and authorized stormwater discharges;
- Collect and analyze samples of stormwater discharges. Analysis must include pH, total suspended solids (TSS), total organic carbon (TOC) (oil and grease (O&G) may be substituted for TOC), specific conductance (SC), toxic chemicals, and other pollutants which are likely to be present in stormwater discharges in significant quantities. Analysis is also required for those parameters listed in Table D of the Industrial Storm Water Permit. Applicable parameters listed in Table D are biological oxygen demand (BOD), chemical oxygen demand (COD), ammonium (NH₃), and pH.

Facility operators are not required to collect samples or perform visual observations during adverse climatic conditions. Sample collection and visual observations are required only during scheduled facility operating hours. Visual observations are required only during daylight hours. Facility operators that are unable to collect any of the required samples or visual observations because of the above circumstances must provide documentation to the RWQCB in the annual report required under the General Industrial Permit.

The Authority is required to collect stormwater samples during the first hour of discharge from 1) the first storm event of the wet season, and 2) at least one other storm event in the wet season. The stormwater sampling locations at SAN are identified on the site map (Figure 3) and outlined below. Stormwater is not typically stored or contained at SAN, but if it were, the water would have to be sampled at the time the stored or contained stormwater is released. If samples are not collected from the first storm event of the wet season, the Authority must still collect samples from two other storm events of the wet season and it must explain in the annual report, required by the General Industrial Permit, why the first storm event was not sampled.

The Authority is required to be prepared to collect samples and conduct visual observations at the beginning of the wet season (October 1) and throughout the wet season until the minimum requirements of the General Industrial Permit are completed. Sample collection is only required of stormwater discharges that occur during scheduled facility operating hours (which the Authority has determined are 6:30 a.m. to 11:30 p.m. for SAN) and that are preceded by at least 3 days (72 hours) without stormwater discharge. Visual observations and sample collection should be conducted within the first hour of discharge. The Authority may conduct visual observations and sample collection more than one hour after discharge begins if the Authority determines that the objectives of the permits will be better satisfied. The Authority must include an explanation in the annual report, required by the General

Industrial Permit, whenever the visual observations and sample collection are not conducted during the first hour of discharge.

The details of the wet weather sampling program are described in Appendix D. The sampling program covers three types of sampling:

- 1 Compliance sampling - performed to comply with the General Industrial Permit;
- 2 Source identification sampling - performed to identify and rate sources of pollutants of concern (POCs) at SAN in terms of annual mass loading in stormwater, identify the potential for reduction of POC concentrations through BMP implementation, and identify that combination of sources best addressed through BMP implementation to achieve pollutant load reduction objectives; and
- 3 BMP Effectiveness sampling - performed to monitor the performance and effectiveness of BMPs. Although this is also stated as a requirement and objective of the General Industrial Permit, this objective is identified separately to allow more flexibility in monitoring the performance of BMPs beyond the requirements identified in the General Permit. Structural and non-structural BMP performance will be evaluated at locations that receive runoff from both industrial and non-industrial drainage basins to assess whether the BMPs are reducing pollutant concentrations (for both primary and secondary POCs) below benchmark values and whether BMPs are achieving the short-term and long-term pollutant load reduction objectives for the primary POCs at SAN (specifically, copper and zinc).

The Authority's Sampling Plan (MACTEC, 2005b) includes a quality assurance/quality control program to ensure monitoring is adequately conducted and that test procedures are in accordance with 40 CFR Part 136. See Appendix D2 for details on sampling locations and analytes being monitored.

9.5 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 source investigations is to locate the source of an illicit discharge so that all necessary measures required to eliminate the illicit discharge can be implemented. This section has been prepared to meet the requirements in Sections D.4.d, D.4.e, and D.4.f. of the Municipal Permit.

9.5.1 SOURCE INVESTIGATION PROCEDURE

Source investigations will typically be conducted by the Authority's Environmental Affairs Department monitoring personnel. In some cases other onsite Authority personnel may conduct a source investigation. When conducting a source investigation, the personnel should be equipped with the set of equipment listed for the dry weather analytical monitoring program (Appendix D).

Source investigations are initiated when observations, field screening results, laboratory analytical results, or a reported complaint suggest a reasonable potential for the existence of an illicit discharge. The investigation action criteria for dry weather monitoring results were developed by the Municipal Permit Copermittees and are provided in Table D1-2 of Appendix D1. Within two business days of receiving dry weather field screening or laboratory results that exceed the action levels, the Authority will conduct an investigation to identify the source or provide a rationale for why the discharge does not pose a threat to water quality and does not need further investigation. The trash assessment process may also provide the Authority with useful information in regards to problem areas or activities.

In some cases, just the 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 based on site specific observations. The following steps are taken to identify and eliminate an illicit discharge (and are further described in Appendix D1).

- Step 1: Location of Initial Observation - If flow exists, confirmation samples should be collected and if it poses a threat to human health then actions will be taken immediately to contain and prevent continual discharge.
- Step 2: Source Tracking Determination - If the discharge has ceased, it may be difficult to track the source. The investigator will survey the tributary area to locate evidence in order to initiate a source investigation.
- Step 3: Source Tracking - The investigator will utilize all resources including storm drain system maps, monitoring results, and observations to track and identify the source.
- Step 4: Discharge Elimination - Once the source is identified, the responsible Authority staff or airport tenant personnel will be notified to terminate and clean up the discharge.
- Step 5: Damage Assessment - The Authority will assess the damage to resources downstream and require the appropriate remediation.
- Step 6: Reporting - Based on the type of discharge and damage assessment, the Authority will notify the RWQCB immediately and/or the incident will be documented in the Annual Report submitted to the RWQCB as required by the Municipal Permit.

9.5.2 DOCUMENTATION AND SAMPLING

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

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

All documentation and other information relevant to source investigations should be collected by or be turned over to the Authority Environmental Affairs Department. The department will handle, retain, and track files pertaining to the various illicit discharge investigations, whether or not a responsible party has been identified.

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

- The discharge ceased prior to arriving at the point of observation or during a source investigation , and without the discharge, the source could not be traced at that time;
- Source investigations did not produce enough information to locate the source or provide enough evidence to identify a responsible party;
- An order was issued by the Authority to a responsible party and a follow-up investigation is necessary to ensure that the responsible party has complied with the required abatement actions;
- An area or activity is identified as having a high potential for the occurrence of an illicit discharge and, therefore, periodic follow-up visits will ensure that future discharges are rapidly identified and eliminated.

9.5.3 ENFORCEMENT

The Authority employs several enforcement mechanisms and penalties to ensure compliance with its ordinances. Enforcement procedures are described in Section 2.0.

9.6 ILLICIT DISCHARGE DETECTION AND ELIMINATION COMPONENT EFFECTIVENESS ASSESSMENT

The Authority has developed internal and external effectiveness assessment programs to evaluate the Authority staff, Authority boards, and tenant compliance with water quality issues. The Authority's Effectiveness Assessment component is described in Section 13.0 of this document.

9.7 ILLICIT DISCHARGE DETECTION AND ELIMINATION COMPONENT PROGRAM REVIEW AND MODIFICATION

The Authority has reserved this section to identify and document future changes to the Illicit Discharge Detection And Elimination Component of the SWMP. Section 14.0 of this SWMP details the program modifications made to the *SWMP January 2005-Revision* to bring this document into compliance with the renewed Municipal Permit.

10.0 EDUCATION COMPONENT

The Authority has instituted an education and outreach program designed to satisfy the requirements of both the Municipal Permit and the General Industrial Permit. Authority staff and airport tenant training is focused on the components of the SWMP, including development planning, construction activities, municipal activities, industrial/commercial activities, and all the other aspects of the program. This section provides a general description of the content, form, and frequency of training developed for Authority staff and airport tenants, as applicable. Recently, the Authority began to investigate community-based social marketing strategies to design effective public outreach and education for the general public and school children regarding stormwater pollution and stormwater pollution prevention.

10.1 INTRODUCTION

Under Section D.5 of the Municipal Permit and Section A.8.a.v of the General Industrial Permit, the Authority is required to implement comprehensive education programs that will measurably increase the awareness of target populations with respect to the storm drain system, the impacts of urban runoff on receiving waters, and the BMPs (both structural and non-structural) that may be potential solutions to stormwater quality problems. The education efforts outlined in the SWMP are intended to increase understanding of stormwater management issues and to help promote behavioral changes that will reduce stormwater pollution, and thereby lead to a reduction in pollution draining to the storm drain system and San Diego Bay.

10.1.1 TARGET AUDIENCES

The Authority stormwater education program is designed to reach all of the target audiences required by the Municipal Permit. As such, the audiences addressed by the education component of the SWMP include: Authority departments and personnel, the airport industrial and commercial tenants, the traveling public using the airport, the general public and school children, and construction site project managers/developers/contractors. While the Authority has no residential land use within our jurisdiction, as one of the Municipal Copermittees, we support and participate, where reasonable, in the Copermittee's regional outreach efforts to residential communities.

10.1.2 GENERAL STORMWATER TOPICS

Stormwater training presented or required by the Authority is designed to provide information appropriate to the duties and activities of the particular audience. In brief, the training addresses: 1) laws, regulations, and permit requirements; 2) urban runoff concepts; 3) BMPs and requirements for use; 4) illicit discharges, inspections, and reporting; and 5) other water conservation and pollution prevention concepts.

10.2 STAFF TRAINING ELEMENT

Authority staff involved in the implementation of the SWMP receive training on a continual basis related to their job duties. The General Industrial Permit also requires that the Authority train personnel who are responsible for: 1) implementing activities identified in this SWMP; 2) conducting inspections, sampling, and visual observations; and 3) for managing stormwater runoff. These Authority staff receive more intensive training geared to their specific responsibilities on a more frequent basis. Much of the training is provided in-house, on-the-job training, and through attendance at meetings, seminars, and conventions. The majority of staff in the Facilities Maintenance Department, staff involved in development planning and approval, as well as construction project management and oversight, receive more frequent training, refreshers, and reminders during staff meetings. Education mechanisms initially used to train those Authority staff more intensively involved in SWMP implementation include classroom seminars and workshops, as well as specific printed and audio/visual guidance on BMPs and stormwater management procedures.

The training program for those responsible for implementation of various components or elements of the SWMP will address the following:

- Basic urban runoff concepts training for all personnel, such as distinction between the storm drain system and sanitary sewers, and the impacts of urban runoff on receiving waters;
- California's Statewide National Pollutant Discharge Elimination System (NPDES) Permit requirements and federal, state, and local water quality regulations;
- Water quality impacts associated with land development and control measures to address them;
- The Authority SWMP;
- The Authority's IDDE Program;
- Stormwater inspections and self-audits;
- Prohibited discharges to the storm drain system;
- Spill response, containment, and recovery;
- Preventative maintenance;
- Water quality awareness for Emergency/First Responders;
- Integrated pest management.

Those Authority staff not directly involved in SWMP implementation receive basic training on an annual basis to increase their general awareness of stormwater issues at work and at home. This training generally emphasizes pollution prevention methods. General stormwater pollution prevention information is also made part of safety trainings, incoming new employee orientation, and other training opportunities, as appropriate. Training methods also include the Authority intranet, email, announcements, posters, displays, and company events.

10.3 EDUCATION OUTREACH ELEMENT

Specific training for airport tenants involved in industrial and commercial activities at SAN is generally accomplished through meetings and inspections. Both the Tenant Safety Committee and the Lindbergh Airline Managers Council meet monthly to discuss a variety of operational issues, and the Authority Environmental Affairs Department makes use of these meetings to provide training and information about stormwater management. The annual site inspection also allows Environmental Affairs Department staff to provide educational materials to tenants. Topics of education include stormwater laws, regulations, permits, BMPs, general urban runoff concepts, and stormwater pollution prevention. Tenant training also focuses on proper BMP implementation for high-risk behaviors, which are currently considered to be fueling and lavatory waste handling activities. Training also focuses on the allowable non-stormwater discharges described in Section 3 of this SWMP.

Training for development and construction generally takes place during meetings held by Authority staff involved in project design, review, and approval and typically occurs during pre-bid solicitation meetings, pre-construction meetings, and regular project progress meetings (which are generally held weekly).

The Authority uses the airport itself as a venue to highlight and/or emphasize the education and outreach efforts developed by others which are directed at school children and the general public. Billboards, banners, display cases, and the Terminal 2 Children's Art Wall are used to highlight the existing efforts, like the Caltrans "Don't Trash California" message. The Authority also provides support to the Municipal Permit Copermittees' Regional Residential Education Plan.

The Authority uses several mechanisms on a daily basis year-round to educate both tenants and the general public. These mechanisms include: 1) the Authority webpage, 2) storm drain stenciling, 3) posters/banners/signage in the terminals and parking lots, 4) brochures, 5) public service announcements (PSAs) in terminals, 6) collaborative efforts, and 7) special presentations. Each of these mechanisms is briefly described below:

- 1 **The Authority Webpage** - The Environmental Affairs Department has a webpage (www.san.org/environmental) that features several environmental issues at SAN, including stormwater management. The webpage is accessible by the general public and presents the SAN SWMP in its entirety. The webpage provides contact information for the Environmental Affairs

Department, allowing the general public another opportunity to review and comment on the SWMP and the BMPS described therein.

- 2 **Storm Drain Stenciling** - There are warning stencils in and around storm drain inlets throughout the airport ("No Dumping" warning signs). These warnings notify staff, tenants, and the general public of the need to protect storm drain inlets.
- 3 **Posters/Banners/Signage/Displays in Terminals and Parking Lots** - The Authority participates in billboard campaigns and displays that illustrate anti-litter campaigns and encourage habitat restoration. These billboards are placed strategically to reach a broad audience.
- 4 **Brochures** - Outreach materials, like the Airport Recycling Brochure, are also made available to the general public. These materials provide information that individuals can use to help prevent stormwater pollution within SAN.
- 5 **Public Service Announcements (PSAs)** - THINK BLUE PSAs have aired in the Terminal 2-West baggage claim area. The PSAs raise public awareness about the impacts of stormwater pollution and how it can be prevented.
- 6 **Collaborative Efforts** - The Authority collaborates with community groups, organizations, other agencies, and other jurisdictions to provide outreach to the general public regarding stormwater pollution prevention. The Authority is applying the concepts of community-based social marketing to public education efforts, and seeks to collaborate with other organization to leverage methods of public outreach. To date, the Authority has collaborated with local environmental groups (non-governmental organizations or NGOs) that share concern for proper stormwater management at SAN and protection of San Diego Bay. The Authority has collaborated with NGOs on environmental campaigns aimed at local school children and on bilingual natural resource conservation campaigns aimed at the general public and school children. Several of these collaborative efforts have resulted displays at the SAN Children's Art Wall in Terminal 2. The Authority has also collaborated with NGOs on efforts aimed at educating the public and children about litter, cigarette butts, plastics, and other stormwater pollutants.
- 7 **Special Presentations/Events** - The Authority presents stormwater management information to grade school and high school students regarding environmental issues at the Airport. Presentations are given at forums open to the public. Information booths at community events, such as local Earth Day celebrations, allow Authority staff to conduct public outreach. Authority staff will also be presenting at seminars about their stormwater programs.

The Authority intends to use community-based social marketing as the backbone of designing and implementing effective public outreach and education programs. The Authority continues to look for opportunities to partner with other the Copermittees, other governmental agencies (federal, state, and local), non-profit organizations, and NGOs. Each year, the Authority's Municipal Permit Annual Report provides a description of the actual outreach and education mechanisms put to use, as well as a general indication of the audience.

10.4 OUTREACH COMPONENT EFFECTIVENESS ASSESSMENT

The Authority has developed internal and external effectiveness assessment programs to evaluate the effectiveness of the SWMP outreach component. The Authority's Effectiveness Assessment component is described in Section 13.0 of this document.

10.5 OUTREACH COMPONENT PROGRAM REVIEW AND MODIFICATION

The Authority has reserved this section to identify and document future changes to the Outreach Component of the SWMP. Section 14.0 of this SWMP details the program modifications made to the *SWMP January 2005-Revision* to bring this document into compliance with the renewed Municipal Permit.

11.0 PUBLIC PARTICIPATION COMPONENT

This section will describe the mechanisms put in place to promote and allow for public participation in the development and implementation of the Authority's SWMP, as required by Section D.6 of the Municipal Permit.

11.1 INTRODUCTION

The goals of the SWMP Public Participation Component are to facilitate public participation in the implementation of the SWMP and to gain community participation in sustaining and improving the Authority's stormwater management efforts. An educated public generally makes for a more effective partner in preventing stormwater pollution. As such, there is some overlap between the Authority's public education efforts described previously and those described here. Public participation is garnered in two primary ways: participation in implementation of SWMP programs, and public feedback on SMWP programs. Feedback is used to improve the SWMP itself and to improve the implementation of the SWMP.

The Authority's public participation program is directed primarily at Authority staff and the airport tenants, but also addresses the general public to the maximum extent possible.

11.2 PUBLIC PARTICIPATION OPPORTUNITIES

In addition to daily interactions between the tenants, Authority staff, and the public, several mechanisms will be used to provide airport tenants, staff, and the public the opportunity to participate in the implementation and ongoing development of the Authority's SWMP. These mechanisms are described below in two categories, namely, those available to all and those additional mechanisms available to Authority staff and airport tenants. Public participation mechanisms available to all include: 1) regular meetings of the Authority Board and subcommittees; 2) regular meetings of the various Municipal Permit Copermittee committees and workgroups; 3) the Authority webpage, 4) the Copermittee Project Clean Water webpage; 5) the Copermittees' Public Hotlines; 6) outreach events; and 7) collaborative efforts with the community. Those additional public participation mechanisms available to Authority staff and airport tenants include: 1) the Authority's 24-hour telephone line/public hotline; 2) the Tenant Safety Committee; and 3) the Lindbergh Airline Managers Council.

11.2.1 PUBLIC PARTICIPATION OPPORTUNITIES AVAILABLE TO ALL

San Diego Regional Airport Authority Board Meetings

The Authority Board is committed to ensuring that SAN operates in a manner that complies with all environmental laws. The tenants, Authority staff, and the public are encouraged to review and comment on the SAN SWMP and to thereby help to continually improve both the plan and its implementation. Tenants and staff are encouraged to speak directly to the Board during public meetings.

Municipal Permit Copermittee Meetings

The Municipal Permit Copermittees meet regularly to discuss various aspects of the stormwater management programs being implemented throughout the county. In addition to the regular meetings of the Copermittee Management Committee, the Copermittees have established a number of subcommittees and workgroups. All meetings of the Committee, the subcommittees, and workgroups are open to the general public. These meetings provide numerous opportunities for public participation in stormwater management activities both throughout the region and at SAN. Attendees include a wide variety of experts, including representatives of federal, state and local agencies, industry representatives, environmental groups, consulting firms, product vendors, and academic and research institutions, as well as the general public.

Authority Webpage

The Authority webpage features several sections regarding the environmental issues at SAN (www.san.org/environmental), including stormwater management. The webpage is accessible by Authority staff, tenants, and the general public and presents the SAN SWMP in its entirety. The webpage provides contact information for the Environmental Affairs Department, allowing Authority staff, tenants and the general public another opportunity to review and comment on the SWMP and the various components of the program described therein.

Project Clean Water Webpage

Partly in response to its duties as the Principal Copermittee to the Municipal Permit, the County of San Diego established the Project Clean Water webpage (www.projectcleanwater.org) that features both general and specific information on regional water issues and local stormwater management programs. The webpage features contact information and direct web-links to the Authority. The webpage is intended to represent a major portal for public participation in stormwater management regionally and at the individual jurisdictional level.

Copermittees' Public Hotlines

The Municipal Permit Copermittees have established two regional hotlines: the Regional Stormwater Hotline and the THINK BLUE Hotline. Both are toll-free 800-numbers that allow the general public to obtain contact information for any of the individual Jurisdictional Urban Runoff Management Programs, including the Authority's. The hotlines also provide another mechanism for the general public to report unauthorized non-stormwater discharges and/or other stormwater concerns, which are then referred to the appropriate jurisdiction. The hotlines provide services in English and Spanish and are available 24-hours a day.

The Regional Stormwater Hotline is: 888-846-0800.

The THINK BLUE Hotline is: 888-THINK-BLUE (or 888- 844-6525).

Outreach Events

Outreach events for the Authority staff, tenants, and the general public allow the Environmental Affairs Department the opportunity to exchange information, ideas, and opinions about stormwater management issues and those issues specific to the airport. Outreach events have both an education component and a public participation component. Such events promote public participation and further environmental stewardship by tenants, staff, and the general public. These events include meetings, employee open houses, cleanup events, participation in community events, and presentations to various groups, clubs, and organizations.

Collaboration with the Community

To date, the Authority has collaborated with local environmental NGOs that share concern for proper stormwater management at SAN and protection of San Diego Bay. The Authority has collaborated with NGOs on environmental campaigns aimed at local schoolchildren and on bilingual natural resource conservation campaigns aimed at the general public and schoolchildren. Several of these collaborative efforts have resulted in displays at the SAN Children's Art Wall in Terminal 2. The Authority has also collaborated with NGOs on efforts aimed at educating the public and children about litter, cigarette butts, plastics, and other stormwater pollutants. The Authority continues to seek and support such collaborations to promote environmental stewardship among the public and school children. These collaborative efforts provide another opportunity for the public to share their ideas and concerns regarding stormwater pollution prevention with the Authority.

11.2.2 ADDITIONAL PUBLIC PARTICIPATION OPPORTUNITIES AVAILABLE TO AUTHORITY STAFF AND AIRPORT TENANTS

Authority's 24-Hour Telephone Line/Public Hotline

Authority staff, tenants, and the general public can always address immediate stormwater concerns directly to the Authority using the Airside Operations Department 24-hour telephone line/public hotline. In addition to providing Authority staff, tenants, and the general public with another link to the Environmental Affairs Department, the telephone line enables them to report unauthorized non-stormwater discharges and other stormwater concerns. Tenants and staff can also direct questions via the Hotline to the Environmental Affairs Department regarding appropriate implementation of BMPs and the SWMP as a whole.

Tenant Safety Committee

The Tenant Safety Committee also encourages participation by tenants and Authority staff and to take ownership of the SWMP and help ensure effective implementation of the plan. During these monthly committee meetings stormwater management concerns are presented by the Environmental Affairs Department and discussed with tenants and staff. At the same time, tenants and staff are welcome to submit comments on the SWMP and its implementation during the meetings

Lindbergh Airline Managers Council

Tenants and Authority staff meet monthly to discuss and improve the operational aspects of SAN. During these meetings, tenants and staff are encouraged to become involved in the SWMP, take ownership of the SWMP, and help ensure SWMP implementation. The meetings allow for frank exchange of information and opinions regarding stormwater management concerns at SAN.

11.3 PUBIC PARTICIPATION COMPONENT EFFECTIVENESS ASSESSMENT

The Authority has developed internal and external effectiveness assessment programs to evaluate the effectiveness of the SWMP public participation component. The Authority's Effectiveness Assessment component is described in Section 13.0 of this document.

11.4 PUBLIC PARTICIPATION COMPONENT PROGRAM REVIEW AND MODIFICATION

The Authority has reserved this section to identify and document future changes to the Public Participation Component of the SWMP. Section 14.0 of this SWMP details the program modifications made to the *SWMP January 2005-Revision* to bring this document into compliance with the renewed Municipal Permit.

12.0 FISCAL ANALYSIS COMPONENT

12.1 INTRODUCTION

The San Diego County Regional Airport Authority Act, the Authority's enabling legislation, frames the financial parameters of the Authority. As a financially self-sufficient agency, the Airport Authority does not rely on taxpayer dollars or any city or County funds to operate. As of June 2007, the Authority held total assets of over \$572 million. The Municipal Permit requires that the Authority shall secure the resources necessary to meet the requirements of Order No. R9-2007-0001. The Authority will annually conduct and report the results of a fiscal analysis of its urban runoff management programs in their entirety (including jurisdictional, watershed, and regional activities).

12.2 FISCAL ANALYSIS METHODS

The fiscal analysis identifies the various categories of expenditures attributable to the urban runoff management programs and outlines the program budget for the current year, including a description of the source(s) of the funds that are proposed for use.

12.2.1 AUTHORITY BUDGET PROCESS

The Authority operates on a July 1 through June 30 fiscal year. The budget process begins in November with senior management updating, reviewing and formulating the Authority's long-term goals and strategies. At the same time, division managers and staff develop programs, plans and objectives for the next fiscal year. In January, the Financial Planning and Budget staff review the first six months of the then-current fiscal year and departments submit budget requests reflecting operating needs and programs to achieve the Authority's goals and objectives. Personnel, contractual services, utilities, maintenance, supplies and materials, business development, employee support, fixed assets (property, plant and equipment), and capital projects are proposed and reviewed. The Financial Planning, Human Resources, Purchasing and Facility Development departments analyze the requests and determine the cost impact where appropriate. Meetings are held with each division to review their budget requests. To ensure that the budget is adequately funded and to maintain the Authority's strong financial condition, the Finance Division prepares a revenue budget that incorporates budget expenditure requests into the rate-setting formula to determine projected rates, fees and charges to the airlines and other tenants. Budget workshops are held with the Board to review the budget and receive further direction. The Board adopts the budget as a whole. It may be amended as required, pending Board approval, at any time during the year.

The Authority has four sources of revenue: (1) airline revenue; (2) non-airline revenue; (3) non-operating revenues; and (4) investment earnings. Airline revenue is primarily from landing fees, terminal rents, and security related fees. Non-airline revenue is comprised of public parking fees, terminal and other concessions, rental car fees, and ground rents.

Non-operating revenue is primarily passenger facility charges (PFCs) and federal grant receipts collected to fund capital improvement projects.

The Divisional and Departmental budgets, addressing the Authority's overall goals, objectives and mandated obligations, contribute to an expense budget. The expense budget is comprised of costs for salaries, wages, benefits, operating equipment and systems, safety and security, maintenance, utilities, contractual services, business development costs (including advertising and promotional activities), various property lease payments, debt service, and capital improvements. The Capital Improvement Program is a rolling 3 to 5 year program that provides for critical improvements and asset preservation. The program includes projects that address federal security requirements, airfield safety and capacity, terminal building improvements, electrical upgrades, and environmental pollution prevention/remediation needs. Funding sources for the projects include Airport Improvement Program (AIP) grants, PFCs, airport operating revenues, airport revenue bonds, and short-term borrowing using commercial paper.

12.2.2 BUDGET FOR STORMWATER MANAGEMENT PROGRAMS

Currently, the Authority's fiscal analysis of the stormwater management program examines previously adopted budgets and expenditures against program needs to develop adequate budgets for future years. The methodology incorporates costs for program administration, planning, monitoring, necessary infrastructure and other capital improvements. The fiscal analysis includes an assessment of personnel time and expenditures related to implementation of the SWMP and a description of funding sources and any legal restrictions on the use of the funds.

Environmental Affairs summarizes the expenditures required each year to execute the programs outlined in the SMWP. The bulk of expenditures related to the implementation of the SWMP pass through the Environmental Affairs Department and the Facilities Maintenance Department. The Environmental Affairs Department is responsible for administrative functions within the Stormwater Management Program, including budget management and planning. The Environmental Affairs Department staff carries out the administrative activities for the program, including: 1) budgetary management and planning; 2) enforcement and inspection; 3) monitoring and reporting; 4) coordination and involvement with the Municipal Permit Copermittees and agencies; 5) assistance to other groups outside the department; 6) internal and external training, workshops, and public events; and 7) helping to secure the materials and equipment necessary to perform required tasks. The Facilities Maintenance Department is generally responsible for the operation and maintenance (O&M) aspects of the program, including: 1) inspection and maintenance of the storm drain system; 2) maintenance of facilities and grounds; 3) securing the materials, equipment, and vehicles necessary to perform required tasks; and 4) supporting the management of the Authority's wastes.

The various expenditures attributable to the urban runoff management programs include:

- Personnel Expenses:

- Environmental Affairs Department,
- Facilities Maintenance Department;
- Non-Personnel Expenses:
 - NPDES Permit Fees,
 - Professional Services:
 - o Legal,
 - o Consulting;
 - Routine Maintenance,
 - Ramp Cleaning/Runway Rubber Removal,
 - Landscape Maintenance,
 - Storm drain system/BMP Cleaning/Maintenance,
 - Parking Lot and Street Sweeping,
 - Hazardous Waste Disposal,
 - Equipment Purchases,
 - Education, Training, and Public Outreach;
- Capital Improvement Program Expenses, to the extent they exist.

12.3 UPDATE TO FISCAL ANALYSIS METHODS

Each year, the Authority shall conduct an annual fiscal analysis of the stormwater management program, as outlined above, in the Annual Report. No later than January 31, 2010, the Authority will conduct the annual fiscal analysis using methods yet to be collectively developed by the Municipal Permit Copermittees, but outlined in the "Standardized Method and Format for Annually Conducting and Reporting Fiscal Analyses (Fiscal Analysis Method)." The Fiscal Analysis Method, which was collectively developed by the Copermittees as a report format, was submitted to the RWQCB on July 20, 2007, in accordance with Sections J.6 and M.6 of the Municipal Permit. The standard will describe the general content and organizational principles to be incorporated into the Authority's annual fiscal analysis. The standardized fiscal analysis method will present expenditures in four general categories: jurisdictional, regional shared, watershed shared, and total program expenditures. The method will present minimum standards for tracking and reporting

expenditures related to these four categories in accordance with Municipal Permit requirements, including the establishment of specific metrics to be used to report urban management program expenditures in their entirety. The Fiscal Analysis Method noted that standards will not be developed for identifying and/or reporting the sources of funds proposed for use in meeting necessary expenditures, since this issue is unique to each jurisdiction.

12.4 FISCAL ANALYSIS COMPONENT PROGRAM REVIEW AND MODIFICATION

The Authority has reserved this section to identify and document future changes to the Fiscal Analysis Component of the SWMP. Section 14.0 of this SWMP details the program modifications made to the *SWMP January 2005-Revision* to bring this document into compliance with the renewed Municipal Permit.

13.0 EFFECTIVENESS ASSESSMENT COMPONENT

In accordance with Municipal Permit Sections I.1 and J.1.a.(1)(l), the Authority annually assesses the effectiveness of SWMP implementation, and specifically: the effectiveness of each major component of the Authority's urban runoff management program as described in this SWMP; the effectiveness of each significant type of jurisdictional activity/BMP implemented; and the effectiveness of the Authority's urban runoff management program as a whole. The Authority's approach to the annual effectiveness assessment is described below.

13.1 INTRODUCTION

Since 2004, the Authority has been evaluating the effectiveness of the SAN SWMP to varying degrees under both the General Industrial Permit and the Municipal Permit. While both the detail and utility of the annual assessment is expected to increase over time, the Authority shares the concern of local, state, and national stormwater management practitioners regarding the state-of-the-art for the means and methods used to assess the effectiveness of stormwater management programs. The Municipal Permit Copermittees have developed, and continue to refine, criteria that allow for an assessment of the effectiveness of stormwater management efforts implemented in accordance with the Municipal Permit. The Authority continues to collaborate with the Copermittees to outline standardized methods and procedures for assessing the effectiveness of local urban runoff management programs.

13.2 EFFECTIVENESS ASSESSMENT APPROACH

In 2003, the Copermittees produced a guidance document entitled "*A Framework for Assessing the Effectiveness of Jurisdictional Urban Runoff Management Programs*" (Framework). The Framework is a document that provides an overall outline and guidance for refining and improving urban runoff program effectiveness assessment strategies for all Copermittees. The concepts originally developed in the Framework have since been incorporated into guidance offered by the CASQA and even the renewed Municipal Permit. The Framework is designed to allow for assessment of: 1) SAN SWMP implementation, 2) program effectiveness at improving stormwater discharge and receiving water quality, 3) identification of management measures proven to be ineffective in reducing urban runoff pollutants and flow, and 4) identification of any changes necessary to ensure the effectiveness of the program.

The Framework outlines effectiveness assessment into three broad categories of activity: 1) program assessment; 2) water quality assessment; and 3) integrated assessment.

Program assessment includes activities and measures that provide feedback on the effectiveness of practices and programs conducted to fulfill Permit mandates. This not only includes an accounting of implementation activities (for example, the number of inspections conducted, miles of road swept, amount of debris collected from the storm drain system), but more sophisticated techniques, such as assessing the spatial distribution of

implementation activities, which may provide useful information as to whether priority areas and problems are being adequately addressed.

Water quality assessment is the use of sampling data and related information to draw conclusions regarding the condition of, or changes to the condition of, receiving water or discharges to those waters. Water quality assessments serve a number of important purposes including: discharge and receiving water characterization (baseline and trends); identification and characterization of water quality problems and the constituents/stressors of concern causing them; and ongoing feedback for incremental program refinement and revisions of program priorities.

The integrated assessment of a stormwater management program uses the results of the Framework's water quality assessment and program assessment to draw general conclusions about overall effectiveness.

In order to assess the Authority's SWMP programs, the Authority follows the Framework guidance and establishes desired measurable outcomes. The Framework uses direct and indirect measurements of program effectiveness, employs methods to estimate pollutant loads, and incorporates discharge and receiving water quality monitoring, to the extent feasible. The Framework presents a six-tier hierarchy of targeted program outcomes that can be used independently or in combination to evaluate effectiveness. The six levels of assessment outcomes are listed below:

- Level 1 - Compliance with Activity-based Permit Requirements
- Level 2 - Changes in Knowledge/Awareness
- Level 3 - Behavioral Changes and BMP Implementation
- Level 4 - Load Reductions
- Level 5 - Changes in Discharge Quality
- Level 6 - Changes in Receiving Water Quality

The Municipal Permit requires the establishment of specific urban runoff management program components, activities, and frequencies. The degree to which the activities required by the Municipal Permit are implemented constitutes the first level and foundation of the Framework program assessment hierarchy (Framework Level 1). Table 9 presents the Municipal Permit required activities that the Authority has tracked and will continue to track over time to verify implementation of these requirements and facilitate the assessment of program improvements.

In previous years, the Authority used illicit discharge reporting information and knowledge/awareness surveys to assess changes in the knowledge and awareness of staff

and tenants (Framework Level 2 outcomes). The data suggested that the expanded education and outreach efforts of the Authority were being effective, although the statistical significance of the data had never been evaluated. Surveys are only one method of assessing changes in knowledge and awareness. According to community-based social marketing principals, surveys may be more effective at determining the motivation or lack of motivation on the part of an audience to actually effect a behavioral change. Other community-based social marketing mechanisms for effecting real change in a target audience include gaining more direct involvement from the audience in which change is desired. The Authority is now using community-based social marketing concepts develop methods of effecting and assessing changes in knowledge and awareness. Exact mechanisms used to evaluate changes in knowledge and awareness will be presented in future Annual Reports submitted in accordance with the Municipal Permit.

The Authority has developed a site audit process to evaluate behavior changes and BMP implementation (Framework Level 4 outcomes). First conducted in 2005, the airport-wide site audit was again conducted in 2007 (MACTEC, 2005a and MACTEC, 2007b). In terms of the Framework's Program Assessment, the site audit provides an accounting of BMP implementation activities, as well as an assessment of the spatial distribution of implementation activities. The site audit process may provide useful information as to whether priority areas and problems are being adequately addressed. The site audit process helps to identify potential pollutant sources and assessed the level of implementation of SWMP-required BMPs by Authority staff and airport tenants and service providers. The site audits developed standardized methods for documenting potential pollutant sources and proper BMP implementation. The site audits have established a solid baseline for assessing future changes in behavior and BMP implementation. Future audits will be used to track trends in improved BMP implementation.

The Authority is required to conduct dry weather monitoring and to participate in the regional wet weather monitoring program under the Municipal Permit. In addition, the General Industrial Permit requires the Authority to develop a stormwater monitoring program that 1) ensure practices at SAN to reduce or prevent pollutants in stormwater discharges and authorized non-stormwater discharges are evaluated and revised to meet changing conditions and 2) measure the effectiveness of BMPs to prevent or reduce pollutants in stormwater discharges and authorized non-stormwater discharges. The two NPDES permits applicable to SAN require that the quality of stormwater runoff from SAN not cause or contribute to the violation of applicable water quality standards. Information of this type may allow the Authority to draw conclusions about pollutant loads (a Framework Level 4 outcome).

In many respects, changes in discharge quality should be the direct result of successful program implementation. Establishing relationships between discharge quality and specific program components, however, can still be difficult. The Authority recently began implementation of a Stormwater Sampling Plan (MACTEC, 2005b) that has been designed to allow for a statistically valid assessment of the Authority's ability to improve stormwater discharge quality. Over time, data collected in accordance with this Sampling Plan may

allow the Authority to evaluate changes in discharge water quality (a Framework Level 5 outcome) in response to improvements in the SWMP.

The ultimate objective of the Authority's Storm Water Management Program is to protect the water quality of the water bodies receiving discharges from the Authority's storm drain system, namely, San Diego Bay. The only receiving water quality monitoring in which the Authority participates are the Copermittees' Receiving Water Monitoring Programs. Currently, this is the only information available to the Authority and the remaining Copermittees to evaluate Framework Level 6 outcomes and attempt to establish relationships, if possible, between receiving water quality and specific program components of the Authority's stormwater management efforts.

Integrated assessment is a long-term process by which the Authority, in conjunction with the San Diego Bay Watershed Copermittees and the Municipal Permit Copermittees, as a whole, will attempt to establish causal relationships between program implementation activities and changes to water quality. These relationships may be established either hypothetically or empirically. Integrated assessment is necessarily the most difficult and uncertain step in the overall assessment process. Early years will initially focus on better understanding likely program outcomes and qualitatively establishing potential relationships to high priority water quality impacts. Over time, quantitative "cause and effect" relationships will become the goal. However, because of the sheer number and variety of BMPs and control programs being concurrently implemented at any given time, establishing such relationships will be a considerable challenge.

The Authority recognizes the importance of evaluating the effectiveness of program components and the program as a whole. To that end, the Authority has adopted the Framework planning and implementation processes to conduct pollutant source characterization, select appropriate BMPs, target the outcomes of BMP implementation, and identify adequate measures of program effectiveness. The Authority will continue to apply the Framework to assess the effectiveness of the Authority's stormwater management program.

13.3 PROGRAM REVIEW AND MODIFICATION

The Municipal Permit requires an Annual Report that includes an assessment of SWMP effectiveness. The annual report will provide documentation of the SWMP elements and data needed to make decisions regarding refinement of the SWMP. As a result, each element of the SWMP will have performance standards that relate to the overall program objectives. The assessment will document specific actions implemented each year, the status of actions, comparison to the performance standards, the effectiveness of the actions, the need for further action or modification, and recommendations. This process will be used to track the effectiveness of the Authority's urban runoff management program on an annual basis.

The Municipal Permit Copermittees are currently developing regional standards for the reporting and assessment of urban runoff management programs, with particular emphasis

on data management. While these regional standards are not required by the Municipal Permit, the Copermittees believe they are necessary to ensure regional consistency between programs and to promote effective watershed management. The Copermittees are working towards the development of general standards that can be utilized in jurisdictional urban runoff management programs in the 2008-2009 Municipal Permit reporting period. The development of additional more detailed standards is also ongoing. As these regional standards are completed and annually updated, the Authority will incorporate them into the Framework Assessment Process, as applicable and feasible.

The Authority has reserved this section to identify and document future changes to the Effectiveness Assessment Component of the SWMP. Section 14.0 of this SWMP details the program modifications made to the *SWMP January 2005-Revision* to bring this document into compliance with the renewed Municipal Permit.

14.0 MODIFICATIONS TO THE SWMP

The SWMP was updated to comply with the new requirements of the Municipal Permit, Order No. R9-2007-0001, which renewed previous Order No. 2001-01, and to incorporate the results of the SAN Storm Drainage System BMP Program conducted in 2005 and 2006. This program included the following elements: Hydrology Assessment, Hydraulic Analysis, Tidal Surge Study, a Site Audit (MACTEC, 2005a and MACTEC, 2007b), a Chemical Emergency Response Evaluation, a Catastrophic Fuel Release Evaluation (MACTEC, 2006b), development of a new Stormwater Sampling Plan (MACTEC, 2005b) for SAN (which includes additional urban runoff monitoring programs developed to ensure compliance with the requirements of the Municipal Permit), and a BMP Recommendations Report (MACTEC, 2006a). Many of the documents produced from these parts of the program have been mentioned, discussed, or incorporated into this SWMP.

The organization of this SWMP was based around the Municipal Permit Copermittees' Standard Format. Since the SWMP is also the Authority's SWPPP, requirements for the General Industrial Permit were incorporated into the Signed Certified Statement Section and Sections 1.0, 2.0, 3.0, 6.0, 7.0, 9.0, and 10.0, plus Appendices A, B, D, E, and G. Copies of the permits can be found in Appendices H and I.

Modifications made to the overall structure of the *SWMP January 2005-Revision* to bring this document into conformance with the renewed Municipal Permit and the above-mentioned format include the following:

- Transfer of Authority department roles and responsibilities for stormwater management from Section 1.0 to the newly created Section 2.0 "Administrative and Legal Procedures";
- Dividing the old Sections 2.0 and 3.0 into the new sections 3.0 "Non-Stormwater Discharges," 6.0 "Municipal Component," and 7.0 "Industrial and Commercial Component";
- Incorporating the activities described in the old Section 6.0 "Inspection and Enforcement" into each component (i.e., Municipal Component, Industrial and Commercial Component, etc.) as required by the Standard Format;
- A change to the Illicit Discharge, Detection, and Elimination section from Section 7.0 in the old SWMP to Section 9.0 in the new SWMP;
- A change to the Education section from Section 8.0 in the old SWMP to Section 10.0 in the new SWMP;
- A change to the Public Participation section from Section 9.0 in the old SWMP to Section 11.0 in the new SWMP;

- A change to the Fiscal Analysis section from Section 11.0 in the old SWMP to Section 12.0 in the new SWMP;
- A change to the Effectiveness Assessment section from Section 10.0 in the old SWMP to Section 13.0 in the new SWMP;
- A change to the Conclusions and Recommendations section from Section 12.0 in the old SWMP to Section 15.0 in the new SWMP.

15.0 CONCLUSIONS AND RECOMMENDATIONS

The SAN SWMP describes the procedures and activities intended to manage and reduce urban runoff pollution to the storm drain system, and ultimately San Diego Bay, from the operations and activities at SAN. This document was prepared by the Authority consistent with the Municipal Permit and the General Industrial Permit to provide a written account of the actions undertaken to comply with the requirements of these two permits. This SWMP contains the information required by the Municipal Permit for each component of the Authority's stormwater management program, specifically: land-use planning for new development and redevelopment, construction activities, existing development, illicit discharge detection and elimination activities, education activities, and public participation activities.

Any recommendations for future actions and/or program additions and/or revisions will be presented in the Annual Reports required by both the General Industrial Permit and the Municipal Permit.

16.0 REFERENCES

California Regional Water Quality Control Board, San Diego Region, Order No. R9-2007-0001, NPDES No. CAS0108758, Waste Discharge Requirements for Discharges of Urban Runoff from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds of the County of San Diego, the Incorporated Cities of San Diego County, the San Diego Unified Port District, and the San Diego County Regional Airport Authority, January 2007.

MACTEC, Engineering and Consulting, Inc., Final Site Audit Report for SDCRAA Storm Drainage System BMP Program, 2005a.

MACTEC, Engineering and Consulting, Inc., Final Stormwater Sampling Plan for SDCRAA Storm Drainage System BMP Program, 2005b.

MACTEC, Engineering and Consulting, Inc., BMP Recommendations Report for SDCRAA Storm Drainage System BMP Program, 2006a.

MACTEC, Engineering and Consulting, Inc., Catastrophic Fuel Release Evaluation and Recommended Control and Response Measures Letter Report, 2006b.

MACTEC, Engineering & Consulting, Inc., San Diego International Airport Stormwater Sampling Report, 2007a.

MACTEC, Engineering and Consulting, Inc., Final Site Audit Report for SDCRAA Storm Drainage System BMP Program, 2007b.

San Diego Copermittees Model Standard Urban Storm Water Mitigation Plan For San Diego County, Port Of San Diego, and Cities In San Diego County, November 2007.

San Diego County Regional Airport Authority, 2005, Storm Water Management Plan, January 2005 Revision.

San Diego County Regional Airport Authority, 2007, Fiscal Year 2005-2006 Municipal Storm Water Permit Annual Report, January 2007.

Municipal Permit Copermittees, 2003, A Framework for Assessing the Effectiveness of Jurisdictional Urban Runoff Management Programs, October 16, 2003.

State Water Resources Control Board, Water Quality Order 97-03-DWQ, NPDES General Permit No. CAS000001, Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities, April 17, 1997.

TABLES

Table 1 - Authority Departmental Roles and Responsibilities for SWMP Implementation

Table 2 - Authority Key Personnel Responsible for SWMP Implementation

Table 3 - Monthly Inventory of Active Construction Sites - March 2008

Table 4 - Overview of Inventory of Industrial/Commercial Sites/Sources

Table 5 - Inventory of Industrial/Commercial Sites/Sources

Table 6 - SAN Entities (Industrial/Commercial Sites/Sources) by Drainage Basin

Table 7 - Summary Assessment of Pollutant Sources and Corresponding BMPs

Table 8 - BMPs Applicable to Individual Industrial/Commercial Sites/Sources

Table 9 - Activity Tracking for Program Effectiveness Assessment

Tables



Table 1 - Authority Departmental Roles and Responsibilities for SWMP Implementation

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

P - primary responsibility

S - supporting responsibility

Tables



Table 2 - Authority Key Personnel Responsible for SWMP Implementation

Department	Title	Staff
Environmental Affairs	Director	Paul Manasjan
	Manager	Richard Gilb
Facilities Maintenance	Director	Wayne Harvey
	Maintenance Supervisor	Hillary Gish
		John Mayes
		Mark Rogers
Airside Operations	Director	George Condon
	Airport Operations Specialist	David Billings
		Mario Caldera
		Mark Chewiwie
		Steve DuBoce
		Mark Handler
		Dan Richardson
		Dean Robbins
		Wayne Thomas
		David Van Bibber
Landside Operations	Director	Murray Bauer
	Terminal Operations Coordinator	Elsie Gonzalez
		Amiel Porta
Facilities Development	Director	Iraj Ghaemi
	Program Manager	Rick Meade
		Rick Trummer
Airport Planning	Director	Keith Wilschetz
	Manager	Ted Anasis
Real Estate Management	Director	Troy Ann Leech
	Manager	Traci Kuchta
		Nyle Marmion
		Bhavesht Patel
		Eric Podnieks
		Richard Strickland
Aviation Security & Public Safety	Director	Mark Denari
	Manager	Clint Welch

Tables



Table 3 - Monthly Inventory of Active Constrcution Sites - March 2008

#	Sponsor	Project Name	Project Description	Start Date	Priority
1	Authority	CIP # 4006 Upgrade and Expand Restrooms in T1E	Interior remodeling to expand and upgrade the restrooms in the T1E rotunda area.	October 2007	Low
2	Authority	CIP # 4051 Misc. Interior Improvements	Interior remodeling at various locations throughout the Terminals.	October 2007	Low
3	Authority	CIP # 3044 NTC Landfill Remediation	Excavate solid waste and burn ash from closed landfill and properly dispose of waste in an active Class III Landfill.	January 2008	High
4	Authority	CIP # 4050 SkyChefs Building Conversion	Interior remodeling of the former SkyChefs Building.	February 2008	Low

* All Construction Projects at SAN are located within the Pueblo San Diego Hydrologic Unit, San Diego Mesa Hydrologic Area, Lindbergh Hydrologic Sub-area (908.21)

Tables



Table 4 - Overview of SAN Industrial/Commercial Sites/Sources

Land Use and Activity	Water Quality Threat Priority	Entity
Passenger Carrier	High	Aerovias De Mexico (AeroMexico) Alaska Airlines Aloha Airlines American Airlines American Eagle Airlines Continental Airlines Delta Airlines Express Jet Frontier Airlines Hawaiian Airlines JetBlue Airways Midwest Airlines Northwest Airlines SkyWest Airlines Southwest Airlines United Airlines US Airways
Cargo Carrier	High	Bax Global DHL Airways Federal Express Corporation United Parcel Service Co.
Fixed Base Operation	High	Jimsair Aviation Services
Fuel Vendor	High	Allied Aviation Services Jimsair Aviation Services
Aircraft Fueler	High	Aircraft Service International Group, Inc (ASIG) American Airlines Jimsair Aviation Services
Aircraft & Airport Equipment Services & Maintenance*	High	Elite Line Services Exec Air Jet Wash, Inc.
Food Services	High	HMS Host and all food-service subtenants
Janitorial Services	High	SPC Airport Services, Inc.
Parking Lots/Vehicle Washing	High	LPi
Fire Fighting	High	ARFF
Airport	High	SDCRAA (Authority)

Notes:

* These service providers have been identified as individual sites/sources due to the nature of their work and varying location of their work at the airport.

Tables



Table 5 - Inventory of Industrial/Commerical Sites/Sources

Agency	Facility Name	Address Number	Suite Number	Street Name	City	State	Zip Code	Hydrologic Area	SIC Code	BLTEA Category Number	Principal Products / Services	Potential Pollutants								Tributary to 303(d) Listed	Pollutant of Concern*	Threat to water quality	Threat Confirmed	
												Bacteria	Gross Pollutants	Metals	Nutrients	Oil & Grease	Organics	Pesticides	Sediment	Trash				
SDCRAA	AeroMexico	3707		North Harbor Drive	San Diego	CA	92101	908.0-908.21	4512, 4522	2	Passenger Carrier	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes	bacteria	Yes	Yes
SDCRAA	Alaska	3665		North Harbor Drive	San Diego	CA	92101	908.0-908.21	4512, 4522	2	Passenger Carrier	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes	bacteria	Yes	Yes
SDCRAA	Allied Aviation	3698		Pacific Highway	San Diego	CA	92101	908.0-908.21	4581	2	Fuel Storage	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	metals	Yes	Yes
SDCRAA	Aloha	3707	#102	North Harbor Drive	San Diego	CA	92101	908.0-908.21	4512, 4522	2	Passenger Carrier	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes	bacteria	Yes	Yes
SDCRAA	American Airlines	3707	#103	North Harbor Drive	San Diego	CA	92101	908.0-908.21	4512, 4522	2	Passenger Carrier	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes	bacteria	Yes	Yes
SDCRAA	American Eagle	3225	#109	North Harbor Drive	San Diego	CA	92101	908.0-908.21	4512, 4522	2	Passenger Carrier	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes	bacteria	Yes	Yes
SDCRAA	ARFF	3698		Pacific Highway	San Diego	CA	92101	908.0-908.21	4581	2	Airport rescue and fire fighting	No	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes	metals	Yes	Yes
SDCRAA	ASIG	2340		Stillwater Road	San Diego	CA	92101	908.0-908.21	4581	2	Fueling services	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	Yes	sediment	Yes	Yes
SDCRAA	BAX Global	3602		Kurtz Street	San Diego	CA	92110	908.0-908.21	4581	2	Air and ground freight	No	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes	metals	Yes	Yes
SDCRAA	Continental	3707	#115	North Harbor Drive	San Diego	CA	92101	908.0-908.21	4512, 4522	2	Passenger Carrier	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes	bacteria	Yes	Yes
SDCRAA	Delta	3707	#107	North Harbor Drive	San Diego	CA	92101	908.0-908.21	4512, 4522	2	Passenger Carrier	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes	bacteria	Yes	Yes
SDCRAA	DHL	2904		Pacific Highway	San Diego	CA	92101	908.0-908.21	4513	2	Cargo handling	No	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes	metals	Yes	Yes
SDCRAA	Elite Line Services	3707	#121	North Harbor Drive	San Diego	CA	92101	908.0-908.21	4581	2	Maintenance (Passenger boarding bridges&baggage conveyor)	No	Yes	Yes	No	Yes	Yes	No	No	No	Yes	metals	Yes	Yes
SDCRAA	Exec Air	3225		North Harbor Drive	San Diego	CA	92101	908.0-908.21	4581	2	Aircraft Maintenance	Yes	Yes	Yes	No	Yes	Yes	No	No	No	Yes	metals, bacteria	Yes	Yes
SDCRAA	Express Jet	3225		North Harbor Drive	San Diego	CA	92101	908.0-908.21	4512, 4522	2	Passenger Carrier	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes	bacteria	Yes	Yes
SDCRAA	FedEx	2221		West Washington Street	San Diego	CA	92110	908.0-908.21	4513	2	Cargo Handling	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes	bacteria	Yes	Yes
SDCRAA	Frontier	3707	#107	North Harbor Drive	San Diego	CA	92101	908.0-908.21	4512, 4522	2	Passenger Carrier	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes	bacteria	Yes	Yes
SDCRAA	Hawaiian	3835		North Harbor Drive	San Diego	CA	92101	908.0-908.21	4512, 4522	2	Passenger Carrier	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes	bacteria	Yes	Yes
SDCRAA	HMS Host	3665		North Harbor Drive	San Diego	CA	92101	908.0-908.21	4581	2	Food & beverage	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes	bacteria	Yes	Yes
SDCRAA	Jet Blue	3835	#108	North Harbor Drive	San Diego	CA	92101	908.0-908.21	4512, 4522	2	Passenger Carrier	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes	bacteria	Yes	Yes
SDCRAA	Jet Wash	2904		Pacific Highway	San Diego	CA	92101	908.0-908.21	4581	2	Aircraft Washing	No	Yes	No	No	Yes	Yes	No	No	No	No	NA	No	NA
SDCRAA	Jimsair	2904		Pacific Highway	San Diego	CA	92101	908.0-908.21	4512, 4522	2	Corporate General Aviation	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes	bacteria	Yes	Yes
SDCRAA	LPI	3705		North Harbor Drive	San Diego	CA	92101	908.0-908.21	7521	7	Parking lot management	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes	bacteria	Yes	Yes
SDCRAA	Midwest	3707	#112	North Harbor Drive	San Diego	CA	92101	908.0-908.21	4512, 4522	2	Passenger Carrier	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes	bacteria	Yes	Yes
SDCRAA	Northwest	3707	#116	North Harbor Drive	San Diego	CA	92101	908.0-908.21	4512, 4522	2	Passenger Carrier	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes	bacteria	Yes	Yes
SDCRAA	SDCRAA	3835		North Harbor Drive	San Diego	CA	92101	908.0-908.21	4581	2	Facility maintenance	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	bacteria,	Yes	Yes
SDCRAA	Sky West	3225	#104	North Harbor Drive	San Diego	CA	92101	908.0-908.21	4512, 4522	2	Passenger Carrier	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes	bacteria	Yes	Yes
SDCRAA	Southwest	3665	1	North Harbor Drive	San Diego	CA	92101	908.0-908.21	4512, 4522	2	Passenger Carrier	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	bacteria	Yes	Yes
SDCRAA	SPC Airport Services	3707	2 West	North Harbor Drive	San Diego	CA	92101	908.0-908.21	4581	2	Janitorial	No	Yes	No	No	Yes	Yes	No	No	Yes	No	NA	No	NA
SDCRAA	United	3665	# 223	North Harbor Drive	San Diego	CA	92101	908.0-908.21	4512, 4522	2	Passenger carrier	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes	bacteria	Yes	Yes
SDCRAA	UPS	2412		Winship Lane	San Diego	CA	92101	908.0-908.21	4513	2	Cargo Handling	No	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	metals	Yes	Yes
SDCRAA	US Airways	3701	#28	North Harbor Drive	San Diego	CA	92101	908.0-908.21	4512, 4522	2	Passenger Carrier	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes	bacteria	Yes	Yes

Note:

* = potential pollutant for metals is copper



TABLE 6 SAN ENTITIES (INDUSTRIAL/COMMERCIAL SITES/SOURCES) BY DRAINAGE BASIN

Drainage Basin/ Sampling Location ID	Facilities Located or Operating in Drainage Basin	Activities Conducted, Source Areas, or Potential Sources within the Drainage Basin		Potential Pollutants
		Industrial	Commercial	
1 (C-B01-1)	ASIG Jimsair DHL SDCRAA	Aircraft fueling Aircraft maintenance Aircraft sanitary services Bldg/grounds maintenance Cargo handling Chemical storage Equipment degreasing Equipment fueling Equipment maintenance Equipment storage Fluid leaks from aircraft Fuel spills Fuel storage Outdoor loading/unloading Outdoor waste storage Potable water flushing Vehicle fueling Vehicle maintenance Vehicle parking	None	Antifreeze Asphalt debris Battery acid Brake fluid Cleaning solutions Dumpster wastes Fuel Hydraulic fluid Lubricants Lavatory chemicals Lavatory wastes Lubricants Metals Oil and grease Paints Sediment Solvents Trash
2	Jimsair SDCRAA	Outdoor aircraft waste disposal	Vehicle parking	Antifreeze Battery acid Fuel Lavatory chemicals Lavatory wastes Lubricants Metals Oil and grease Paints Trash

TABLE 6 SAN ENTITIES (INDUSTRIAL/COMMERCIAL SITES/SOURCES) BY DRAINAGE BASIN (continued)

Drainage Basin/ Sampling Location ID	Facilities Located or Operating in Drainage Basin	Activities Conducted, Source Areas, or Potential Sources within the Drainage Basin		Potential Pollutants
		Industrial	Commercial	
3 (C-B03-2)	Jimsair LPi DHL JetWash SDCRAA	Chemical storage Fuel storage Fuel spills Outdoor waste storage Vehicle parking	None	Antifreeze Battery acid Brake fluid Cleaning solutions Fuel Hydraulic fluid Lavatory chemicals Lavatory wastes Lubricants Metals Oil and grease Paints Rubber particulates Solvents Trash
4	SDCRAA	None	None	Antifreeze Brake fluid Fuel Metals Oil and grease Trash

TABLE 6 SAN ENTITIES BY DRAINAGE BASIN (continued)

Drainage Basin/ Sampling Location ID	Facilities Located or Operating in Drainage Basin	Activities Conducted, Source Areas, or Potential Sources within the Drainage Basin		Potential Pollutants
		Industrial	Commercial	
5 (C-B05-4)	ASIG LPI FedEx BAX Global SDCRAA Rental car storage area	Aircraft fueling Aircraft maintenance Cargo handling Chemical storage Equipment degreasing Equipment fueling Equipment maintenance Equipment storage Fluid leaks from aircraft Fuel spills Fuel storage Metals storage Outdoor apron wash Outdoor waste storage Vehicle fueling Vehicle maintenance Vehicle parking	Vehicle storage	Antifreeze Asphalt debris Battery acid Brake fluid Cleaning solutions Dumpster wastes Fuel Hydraulic fluids Lavatory chemicals Lavatory wastes Lubricants Metals Oil and grease Paints Pesticides/herbicides / fertilizers Rubber particulates Sediment Solvents Trash

TABLE 6 SAN ENTITIES BY DRAINAGE BASIN (continued)

Drainage Basin/ Sampling Location ID	Facilities Located or Operating in Drainage Basin	Activities Conducted, Source Areas, or Potential Sources within the Drainage Basin		Potential Pollutants
		Industrial	Commercial	
6 (C-B06-5)	ASIG	Aircraft fueling	None	Acetone
	LPi	Aircraft maintenance		Adhesives
	American Airlines	Aircraft sanitary services		Antifreeze
	SDCRAA	Bldg/grounds maintenance		Battery acid
	FedEx	Cargo handling		Brake fluid
	Allied Aviation	Chemical storage		Carburetor cleaner
	US Airways	Equipment fueling		Cleaning solutions
	ARFF	Equipment maintenance		Deicing/anti-icing fluids
	UPS	Equipment painting		Dumpster wastes
	SkyWest	Equipment storage		Fire fighting foam (AFFF)
	American Eagle	Fire fighting equipment testing		Fuel
	Express Jet	Fluid leaks from aircraft		Hydraulic fluids
		Fuel spills		Lavatory chemicals
		Fuel storage		Lavatory wastes
		Loading/unloading of gasoline, diesel and jet fuel		Lubricants
		Metals storage		Metals
		Offloading of water/ fuel mixture from a 3,000-gallon UST		Oil and grease
		Outdoor apron wash		Paints
		Outdoor steam cleaning		Pesticides/herbicides
		Outdoor waste storage		Propylene glycol
		Pesticide/herbicide usage		Purple K
		Potable water flushing		Radioactive goods
		Ramp/taxiway scrubbing		Recyclable paper/cardboard
		Runway rubber removal		Rubber particulates
		Vehicle fueling		Sealants
		Vehicle maintenance		Sediment
		Vehicle parking		Solvents
				Sump fuel
				Trash
				Transmission fluid

TABLE 6 SAN ENTITIES BY DRAINAGE BASIN (continued)

Drainage Basin/ Sampling Location ID	Facilities Located or Operating in Drainage Basin	Activities Conducted, Source Areas, or Potential Sources within the Drainage Basin		Potential Pollutants
		Industrial	Commercial	
7 (C-B07-6, C-B07-7)	ASIG	Aircraft maintenance	None	Acetic acid
	LPi	Aircraft washing		Acetone
	American Airlines	Bldg/grounds maintenance		Adhesives
	SDCRAA	Cargo handling		Antifreeze
	United	Chemical storage		Battery acid
	Delta	Equipment degreasing		Brake fluid
	Allied Aviation	Equipment fueling		Coolant
	Exec Air	Equipment maintenance		Cleaning solutions
	SPC	Equipment storage		Diesel
		Equipment washing		Dumpster wastes
		Fuel spills		Gasoline
		Fuel storage		Hydraulic fluids
		Loading/unloading of gasoline, diesel, and jet fuel		Jet fuel
		Metals storage		Landscape wastes
		Oils storage		Lubricants
		Outdoor steam cleaning		Metals
		Outdoor waste storage		Oil and grease
		Power washing		Paints
		Vehicle fueling		Propylene glycol
		Vehicle maintenance		Rust preventer
		Vehicle parking		Sealants
		Vehicle washing		Solvents
				Sump fuel
				Trash

TABLE 6 SAN ENTITIES BY DRAINAGE BASIN (continued)

Drainage Basin/ Sampling Location ID	Facilities Located or Operating in Drainage Basin	Activities Conducted, Source Areas, or Potential Sources within the Drainage Basin		Potential Pollutants
		Industrial	Commercial	
8 (C-B08-8)	ASIG	Aircraft deicing	Restaurant grease disposal	Acetone
	Elite Line Services	Aircraft fueling		Antifreeze
	LPI	Aircraft maintenance		Battery acid
	Exec Air	Aircraft sanitary services		Brake fluid
	Southwest	Aircraft washing		Caulking
	SDCRAA	Bldg/grounds maintenance		Cleaning solutions
	United	Cargo handling		Coolant
	Alaska	Chemical storage		Degreasers
	Delta	Equipment fueling		Dumpster wastes
	SPC	Equipment maintenance		Fuel
	HMS Host	Equipment storage		Galvanizing compound
	Jet Wash	Equipment washing		Hydraulic fluids
		Fluid leaks from aircraft		Landscape wastes
		Fuel spills		Lavatory chemicals
		Fuel storage		Lavatory wastes
		Metals storage		Lubricants
		Oils storage		Metals
		Outdoor apron wash		Oil and grease
		Outdoor loading/unloading		Paints
		Outdoor waste storage		Pesticides/herbicides / fertilizers
		Power washing		Propylene glycol
		Pesticide/herbicide usage		Rubber particulates
		Potable water flushing		Sealant
		Ramp/taxiway scrubbing		Solvents
		Runway rubber removal		Trash
		Vehicle fueling		Transmission fluid
		Vehicle maintenance		Turpentine
		Vehicle parking		
		Restaurant		

TABLE 6 SAN ENTITIES BY DRAINAGE BASIN (continued)

Drainage Basin/ Sampling Location ID	Facilities Located or Operating in Drainage Basin	Activities Conducted, Source Areas, or Potential Sources within the Drainage Basin		Potential Pollutants
		Industrial	Commercial	
9 (C-B09-10)	LPi SDCRAA SPC	Bldg/grounds maintenance Chemical storage Equipment fueling Equipment maintenance Equipment storage Fuel spills Fuel storage Outdoor waste storage Pesticide/herbicide usage Power washing Vehicle fueling Vehicle parking	None	Antifreeze Battery acid Brake fluid Dumpster wastes Fuel Landscape wastes Lubricants Metals Oil and grease Paints Pesticides/herbicides / fertilizers Solvents Trash
10	LPi SDCRAA SPC	Bldg/grounds maintenance Outdoor waste storage Pesticide/herbicide usage Power washing Vehicle parking	None	Antifreeze Battery acid Brake fluid Dumpster wastes Fuel Grease Landscape wastes Lubricants Metals Oil and grease Paints Pesticides/herbicides / fertilizers Trash

TABLE 6 SAN ENTITIES BY DRAINAGE BASIN (continued)

Drainage Basin/ Sampling Location ID	Facilities Located or Operating in Drainage Basin	Activities Conducted, Source Areas, or Potential Sources within the Drainage Basin		Potential Pollutants
		Industrial	Commercial	
11	LPi SDCRAA SPC	Bldg/grounds maintenance Pesticide/herbicide usage Power washing Vehicle parking	None	Antifreeze Battery acid Brake fluid Fuel Grease Landscape wastes Lubricants Metals Oil and grease Paints Pesticides/herbicides/ fertilizers Trash

TABLE 6 SAN ENTITIES BY DRAINAGE BASIN (continued)

Drainage Basin/ Sampling Location ID	Facilities Located or Operating in Drainage Basin	Activities Conducted, Source Areas, or Potential Sources within the Drainage Basin		Potential Pollutants
		Industrial	Commercial	
12 (C-B12-09)	ASIG	Aircraft deicing	Restaurant grease disposal	Acetone
	Elite Line Services	Aircraft fueling		Antifreeze
	LPI	Aircraft maintenance		Battery acid
	ExecAir	Aircraft sanitary services		Brake fluid
	American Airlines	Aircraft washing		Caulking
	Northwest	Building/grounds maintenance		Cleaning solutions
	Delta	Cargo handling		Coolant
	US Airways	Chemical storage		Degreasers
	Continental	Equipment fueling		Dumpster wastes
	SPC	Equipment maintenance		Fuel
	HMS Host	Equipment storage		Galvanizing compound
	AeroMexico	Fluid leaks from aircraft		Hydraulic fluids
	Hawaiian	Fuel spills		Landscape wastes
	Frontier	Fuel storage		Lavatory chemicals
	Aloha	Metals storage		Lavatory wastes
	Jet Wash	Oils storage		Lubricants
	JetBlue	Outdoor apron wash		Metals
	Midwest	Outdoor loading/unloading		Oil and grease
	SDCRAA	Outdoor waste storage		Paints
		Pesticide/herbicide usage		Pesticides/herbicides
		Potable water flushing		Propylene glycol
		Power washing		Rubber particulates
		Ramp/taxiway scrubbing		Sealant
		Vehicle fueling		Solvents
		Vehicle maintenance		Trash
		Vehicle parking		Transmission fluid
				Turpentine
13	SDCRAA	None	None	Antifreeze
				Brake fluid
				Fuel
				Metals
				Oil and grease
				Trash

TABLE 6 SAN ENTITIES BY DRAINAGE BASIN (continued)

Drainage Basin/ Sampling Location ID	Facilities Located or Operating in Drainage Basin	Activities Conducted, Source Areas, or Potential Sources within the Drainage Basin		Potential Pollutants
		Industrial	Commercial	
14	LPi SDCRAA	Outdoor waste storage Pesticide/herbicide usage Vehicle parking	None	Antifreeze Battery acid Brake fluid Dumpster wastes Fuel Landscape wastes Lubricants Metals Oil and grease Paints Pesticides/herbicides / fertilizers Trash

Table 7 - Summary Assessment of Pollutant Sources and Corresponding BMPs

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Non-Storm Water Management throughout SAN	Prevention of non-storm water discharges	Misinformation (improper/lack of signs)	Metals, particulates, sediment, solid waste	<p>SC01-01 Notify Airport Operations (619-400-2710) and the Airport Authority Environmental Affairs Department (619-400-2784) if there is any evidence of illicit connections or illegal discharges.</p> <p>SC01-02 Employees, tenants, and the public have been educated about non-storm water discharges, i.e., spill response and prevention, non-storm water pollution prevention, and hazardous materials management.</p> <p>SC01-03 Outdoor water supplies (hose bibs) are limited and posted with appropriate use signs to discourage uses that may pollute the storm drain system/receiving water.</p> <p>SC01-04 The site is free of evidence of illicit connections and illegal discharges.</p>
		Litter improperly disposed of, including bottles and cans, paper and plastic bags, fast-food wrappers, cigarette butts, etc.	Solid waste	
		Improper hosing, power washing or washing down of vehicles or equipment	Fuel oil, particulates/sediment	
		Spills or leaks	Fuel, oils, sewage, trash	
Outdoor Equipment Operations and Maintenance Areas	Equipment operations and maintenance	Vehicle and aircraft use and emissions	Metals, fuels, lubricants, antifreeze	<p>SC02A-01 Equipment operations and maintenance areas are not located directly in the path of storm drains.</p> <p>SC02A-02 There is a designated equipment operations and maintenance area with overhead cover for pollutant sources and/or activity areas.</p>
		Industrial and commercial spills and releases	Metals, oils and greases, fuels, battery acids, antifreeze	
		Dirt or fluids from equipment and vehicles	Particulates/sediment, oils, lubricants, antifreeze, fuel, battery acid	
		Maintenance activities	Oil and grease, lubricants, hydraulic fluids, antifreeze	

Table 7 - Summary Assessment of Pollutant Sources and Corresponding BMPs (continued)

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

Table 7 - Summary Assessment of Pollutant Sources and Corresponding BMPs (continued)

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Aircraft, Ground Vehicle, and Equipment Fueling	Fueling	Fuel spills and improper storage of fuel	Jet fuel, gasoline, diesel	SC03-01 There is a designated fueling area that is covered, bermed, enclosed, or sloped/positioned away from the MS4.
		Leaking storage tanks	Jet fuel, gasoline, diesel	SC03-02 Fueling areas are not located directly in the path of storm drains.
		Aircraft, equipment, and vehicle leaks and spills	Jet fuel, gasoline, diesel	SC03-03 Tanks, piping, and valves are labeled, regularly inspected, and kept in good condition.
		Hosing or washing down fuel areas without proper containment	Jet fuel, gasoline, diesel	SC03-04 Absorbent booms, spill kits, or vacuum equipment are located in fueling areas or on fueling vehicles.
		Storm water run-on and runoff from fueling areas	Jet fuel, gasoline, diesel	SC03-05 Fueling areas are regularly inspected.
		Spills and leaks during delivery, including topping off	Jet fuel, gasoline, diesel	SC03-06 Major fueling operations are monitored.
				SC03-07 Secondary containment or cover is used when transferring fuel from a tanker truck to a fuel tank.
				SC03-08 Leak detection, overflow protection, and spill prevention devices are used for tanks and piping.
				SC03-09 Automatic shut-off mechanisms are used for fuel tankers and hose connections.
				SC03-10 Fuel tanks are not topped off.
				SC03-11 Access to tanks and fueling vehicles is restricted.

Table 7 - Summary Assessment of Pollutant Sources and Corresponding BMPs (continued)

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Aircraft, Ground Vehicle, and Equipment Cleaning	Cleaning	Aircraft, vehicle, or equipment washing	Particulates/sediment, oil and grease, metals, soaps/cleaning solutions	SC04-01 Vehicles, equipment, and washing areas are kept clean and free of waste.
		Fall out from pressure washing	Particulates/sediment, oil and grease, metals	SC04-02 Dry washing and surface preparation techniques are used where feasible. SC04-03 Wash areas are not located directly in the path of storm drains. SC04-04 Pigs and cover mats are used to cover all catch basins in the surrounding area to contain the wash water during washing activities. SC04-05 There is a designated wash area that captures or diverts all wash water to structural treatment control BMP, sanitary sewer, or dead end sump with pump. SC04-06 Visual observations and inspections of nearby storm drains are performed to detect discharges from cleaning materials. SC04-07 Wash water is filtered and recycled where possible; if not possible, collect and properly dispose of the contained wash water. SC04-08 Drippings, residue, etc., are removed using vacuum methods; properly dispose of all waste materials.

Table 7 - Summary Assessment of Pollutant Sources and Corresponding BMPs (continued)

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Aircraft Deicing/Anti-Icing	Deicing/anti-icing	Spraying deicing fluid onto aircraft	Ethylene or propylene glycol	SC05-01 There is a designated deicing/anti-icing area that is covered, bermed, enclosed, or sloped/positioned away from the MS4.
		Deicing fluids dripping from aircraft without proper clean up	Ethylene or propylene glycol	SC05-02 Deicing and anti-icing operations are regularly monitored to ensure quantities of fluids used are at a minimum while not jeopardizing aircraft safety and operation. SC05-03 All fluids are captured or diverted to a treatment plant, recycling system, sanitary sewer, or dead end sump with pump. SC05-04 Deicing/anti-icing areas are cleaned with wet-type sweepers and the fluids are recycled or disposed of properly.
Outdoor Loading and Unloading of Materials	Loading/unloading	Spills or leaks during loading/unloading	Fuel, oils, trash/debris	SC06-01 Contractors/haulers are aware of and adhere to BMP specifications. SC06-02 Loading/unloading areas are not located directly in the path of storm drains. SC06-03 Loading/unloading areas are graded, bermed, covered, or otherwise protected to prevent contact with rainfall and storm water run-on/runoff.
		Leaking of loading/unloading equipment	Fuel, hydraulic fluids	SC06-04 Loading/unloading equipment is regularly checked for leaks. SC06-05 Drip pans or other containment measures are used under hoses. SC06-06 Loading and unloading areas are kept free of spills and debris by containing and absorbing leaks during transfers and spillage from hose disconnections or cargo pallets; dispose of residue or debris properly. SC06-07 Spill kits or other measures are available in accessible locations near potential spill areas to contain spills and/or prevent tracking off-site.

Table 7 - Summary Assessment of Pollutant Sources and Corresponding BMPs (continued)

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Outdoor Material Storage	Material storage	Industrial and commercial spills and releases from storage units	Fuels, oil and grease, solvents, soap/cleaning fluids, lavatory chemicals, paints, battery acid, antifreeze, ethylene or propylene glycol, pesticides/herbicides, adhesives, rust preventers, AFFF, sealants	SC07-01 Outdoor material storage areas are not located directly in the path of storm drains.
				SC07-02 Outdoor material storage areas have areas with overhead cover and secondary containment.
				SC07-03 Outdoor material storage areas are prevented from contacting storm water run-on and runoff (e.g., by the use of berms, wood pallets, etc).
				SC07-04 Cover and contain material stockpiles or implement erosion control practices at the perimeter of the site and at any inlets or catch basins to prevent the off-site transport of eroded material.
		Lack of proper secondary containment	Fuels, oil and grease, solvents, soap/cleaning fluids, lavatory chemicals, paints, battery acid, antifreeze, ethylene or propylene glycol, pesticides/herbicides, adhesives, rust preventers, AFFF, sealants	SC07-05 Wood products treated with preservative chemicals are covered with tarps or stored indoors.
				SC07-06 Install protection guards (bollards, posts, or guardrails) around ASTs and piping to prevent damage from vehicles or forklifts and any subsequent release.
				SC07-07 Regular inspections are performed on tanks, containers, and berms to check for corrosion, structural failure, loose fittings, poor welds, leaks, etc.; repairs or replacements are performed as needed.
				SC07-08 Liquid materials in ASTs should be stored in double-walled, valved storage tanks or within concrete bermed secondary containment areas to provide the capacity to contain the entire volume of the single largest container, with sufficient freeboard to contain precipitation; the area inside the curb should slope to a drain.
		Raw material, and finished product stock piles	Metals, sediments, particulates, debris	SC07-09 Precipitation from bermed areas should be drained to the sanitary sewer if available, or inspected and tested according to applicable regulations prior to its release to a storm drain; the drain must have a positive control, such as a lock, valve, or plug, below the product level in the tank to prevent release of contaminated liquids.
		Contact between stored materials and storm water run-on/off due to lack of cover/berms, etc.	Fuels, oil and grease, solvents, soap/cleaning fluids, lavatory chemicals, paints, battery acid, antifreeze, ethylene or propylene glycol, pesticides/herbicides, adhesives, rust preventers, AFFF, sealants	SC07-10 Properly dispose of ponded storm water removed from bermed or containment areas.
		Improper storage of fuel	Fuels	SC07-11 The facility/operation has and displays a County hazardous materials permit for hazardous materials storage. SC07-12 Accurate, up-to-date inventory of the materials delivered and stored on site is maintained.

Table 7 - Summary Assessment of Pollutant Sources and Corresponding BMPs (continued)

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

Table 7 - Summary Assessment of Pollutant Sources and Corresponding BMPs (continued)

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Building and Grounds Maintenance	Maintenance	Painting	Metals	SC09-01 All areas of exposed soil have been revegetated, landscaped, or otherwise contain erosion or sediment controls.
		Pesticide application	Organic compounds	
		Wood preserving	Metals	SC09-02 Landscaped areas are irrigated regularly.
		Underground utilities (copper grounding wires in electrical vaults connected to storm drains) and lighting systems	Metals	SC09-03 Implement integrated pest management methods, minimize the use of pesticides, herbicides, and fertilizers, and use according to directions.
		Roofing	Metals, tar	SC09-04 Temporary BMPs such as portable booms and vacuum trucks are used to contain water from outdoor building or structure washdown activities; collect and properly dispose of all waste water through a permitted connection to the sanitary sewer.
		Cement in concrete pouring	pH	

Table 7 - Summary Assessment of Pollutant Sources and Corresponding BMPs (continued)

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

Table 7 - Summary Assessment of Pollutant Sources and Corresponding BMPs (continued)

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

Table 7 - Summary Assessment of Pollutant Sources and Corresponding BMPs (continued)

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Outdoor Wash Down/ Sweeping (Apron Washing Ramp Scrubbing)	Washing/ sweeping	Fallout from pressure washing operations	Particulates/sediment, rubber, debris, oil and grease, fuel	SC12-01 Sweeping and scrubbing equipment is regularly inspected and maintained to ensure effectiveness at removing pollutants and to avoid leaks.
		Improper waste disposal	Particulates/sediment, rubber, trash/debris, oil and grease, fuel, waste water, soaps	SC12-02 Roads, ramp areas, apron areas, and, if feasible, runway/taxiway areas are swept on a regular basis.
		Irregular sweeping or scrubbing	Particulates/sediments, oils and grease, fuel, trash/debris	SC12-03 Sweeping is performed during dry weather using dry sweeping techniques where feasible.
		Industrial air emissions	Particulates/sediments, metals	SC12-04 Sweepers are operated at manufacturer-recommended optimal speeds.
				SC12-05 Debris and sediment from sweeping are disposed of properly.
				SC12-06 Outdoor washdown areas are bermed to contain wash water and to prevent run-on to other areas.
				SC12-07 The amount of water used during outdoor washdown activities is minimized.
				SC12-08 Wash water is collected and discharged to the sanitary sewer system through a permitted connection at designated and approved discharge facilities (i.e., dewatering bin).
				SC12-09 Records of the sweeping or scrubbing activities including the miles swept or scrubbed and the amount of waste collected are maintained.

Table 7 - Summary Assessment of Pollutant Sources and Corresponding BMPs (continued)

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Fire Fighting Foam Discharge	Fire fighting	Ineffective containment of discharge	AFFF, wastewater	SC13-01 Fire fighting foam discharge/testing areas are not located directly in the path of storm drains.
		Improper vacuum procedure	AFFF, wastewater	SC13-02 Fire fighting equipment is regularly inspected.
		Improper waste disposal	AFFF, wastewater	SC13-03 There is a designated fire fighting foam testing area that captures or diverts all foam waste to a treatment/recycling plant, sanitary sewer, or dead end sump with pump.
				SC13-04 Sump(s) and/or oil water separator(s) are serviced regularly.
Potable Water System Flushing	Flushing	Fallout from flushing operations	Particulates/sediment, metals, oil and grease, fuels	SC13-05 Fire fighting foam testing areas are prevented from contacting storm water run-on and runoff (e.g., by the use of berms).
				SC14-01 The aircraft potable water system and water truck cleaning/flushing areas are not located directly in the path of storm drains.
				SC14-02 There is a designated cleaning/flushing area that captures or diverts all wastewater to a treatment/recycling plant, sanitary sewer, or dead end sump with pump.
				SC14-03 Cleaning/flushing areas are prevented from contacting storm water run-on and runoff (e.g., by the use of berms).

Table 7 - Summary Assessment of Pollutant Sources and Corresponding BMPs (continued)

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Runway Rubber Removal	Cleaning	Failure of equipment to adequately capture all waste water and debris	Rubber particulates/sediment/debris, metals, oil and grease, fuels	<p>SC15-01 The amount of water used during runway rubber removal activities is minimized.</p> <p>SC15-02 Waste water produced from runway rubber removal activities is prevented from entering the storm drainage system by immediately collecting and properly disposing of it.</p> <p>SC15-03 Runways and adjacent paved areas are swept, either manually or using mechanical sweepers, following runway rubber removal activities.</p> <p>SC15-04 Storm drain inlets, catch basins, and runway drainage areas are inspected following runway rubber removal activities for any resulting debris; remove and properly dispose of debris.</p>

Table 7 - Summary Assessment of Pollutant Sources and Corresponding BMPs (continued)

Parking Lots	Maintenance of parking lots	Dirt and leaking fluids from equipment and vehicles	Particulates/sediment, oil and grease, brake fluid, fuel, antifreeze, metals	<p>SC16-01 Parking lots are posted with “No Littering” signs and have regularly emptied trash receptacles.</p> <p>SC16-02 Parking lots are regularly swept.</p> <p>SC16-03 Sweepers are operated at the manufacturer-recommended optimal speeds.</p> <p>SC16-04 Sweeping is performed in parking lot areas when the number of parked vehicles is lowest to maximize areas swept.</p> <p>SC16-05 Records of the sweeping activities are maintained including the miles swept and the amount of waste collected.</p> <p>SC16-06 Oily spots are cleaned with absorbent materials.</p> <p>SC16-07 Repairs are performed during dry weather.</p> <p>SC16-08 Nearby storm drain inlets, catch basins, and manholes are covered and sealed during parking lot repairs.</p> <p>SC16-09 Drip pans are used under paving equipment.</p> <p>SC16-10 Hot bituminous materials are preheated and transferred or loaded away from storm drain inlets.</p> <p>SC16-11 Absorbent materials, debris, and drips are disposed of properly.</p> <p>SC16-12 Rooftops do not drain onto paved surfaces.</p>
		Dirt and grit from parking lots, driveways, sidewalks and landscaped areas	Particulates/sediment, metals	
		Litter improperly disposed of, including bottles and cans, paper and plastic bags, fast-food wrappers, cigarette butts, and more	Solid waste/trash	
		Galvanized metal roofs, gutters and downspouts	Metals, sediment	
		Paving and recycling operations	pH, debris, tar/hydrocarbons	

Table 7 - Summary Assessment of Pollutant Sources and Corresponding BMPs (continued)

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Storm Drain Maintenance	Maintenance	Fallout from MS4 cleaning operations	Particulates/sediments, metals, trash and debris, fuel, oil and grease, bacteria, waste water	SC17-01 Storm drains are stenciled with "No Dumping" messages. SC17-02 The facility/operation conducts routine self-inspections of the storm water conveyance system; the Authority should inspect the entire MS4 at least annually, between the dates of May 1 and September 30.
		Irregular or inadequate inspection and maintenance schedule	Particulates/sediments, metals, trash and debris, fuel, oil and grease, bacteria	SC17-03 Appropriate measures are used to prevent discharges during MS4 cleaning and maintenance. SC17-04 Storm drains, inlets, and catch basins are cleaned and maintained before the wet season and when accumulated trash and debris is greater than 33 percent of design capacity. SC17-05 Open channels are cleared of accumulated litter in a timely manner. SC17-06 Debris from cleaning activities is disposed of properly. SC17-07 Records are kept for all inspections, cleaning, and maintenance, including the quantity of waste removed.

Table 7 - Summary Assessment of Pollutant Sources and Corresponding BMPs (continued)

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Housekeeping	Cleaning/ tidying	Insufficient facility and BMP inspections	Trash/debris, oil and grease, paints, fuels, pesticides/herbicides, hydraulic fluids, antifreeze, rust preventers, sealants	SC18-01 The facility conducts routine self- inspections of BMPs. SC18-02 The facility/operation is kept clean and orderly. SC18-03 Trash receptacles are placed in appropriate locations. SC18-04 The facility/operation is swept at least once per week. SC18-05 Sweepings and sediment are disposed of properly.
		Improper trash handling/trash or FOD cans not covered	Trash and debris, bacteria	SC18-06 Potentially significant materials are stored in appropriate containers, properly sealed, and labeled. SC18-07 Secondary containment is provided for significant materials.
		Lack or failure of proper secondary containment	Oils, fuels, antifreeze, brake fluids, hydraulic fluids, lubricants, paints, deicing fluids	SC18-08 Significant materials are stored in a restricted access area. SC18-09 Material Safety Data Sheets (MSDSs) are readily available for all significant materials.
		Dirt and grit from ramp and facility areas	Particulates/sediment, metals, trash, and debris	
		Use of toxic materials	Metals, hydrocarbons, synthetic organic compounds	SC19-01 This facility/operation uses “Regionally Accepted” products identified as non- toxic, less toxic, or biodegradable. SC19-02 Whenever possible, maximize the purchase and use of products containing recycled materials.
Safer/Alternative Products	Replacement of toxic with less or non- toxic materials			

Table 7 - Summary Assessment of Pollutant Sources and Corresponding BMPs (continued)

Spill Prevention, Control & Clean-up	Spill control	Fuel spills and improper storage of fuel	Fuels	<p>SR01-01 The facility/operation has a current Spill Prevention, Control, and Countermeasure (SPCC) Plan or Spill Response Plan.</p> <p>SR01-02 A summary of the SPCC Plan, or spill response procedures, is posted at key locations, identifying the spill cleanup coordinators, location of cleanup equipment, and phone numbers of regulatory agencies to be contacted in the event of a spill.</p> <p>SR01-03 Relevant employees and contractors are trained in the implementation of the SPCC Plan, if applicable, or spill control procedures.</p> <p>SR01-04 Leak and spill prevention devices are used.</p> <p>SR01-05 The facility/operation has placed adequate spill kits in appropriate locations.</p> <p>SR01-06 Airport Operations (619-400-2710), the Airport Authority Environmental Affairs Department (619-400-2784), and any agencies or companies identified in the SPCC or facility spill prevention and response procedures, are notified in the event of a spill.</p> <p>SR01-07 Procedures identified in the SPCC or facility spill prevention and response procedures are followed in the event of a spill or release.</p> <p>SR01-08 The facility/operation uses only dry cleaning methods.</p> <p>SR01-09 Used spill control/clean-up materials are disposed of properly.</p> <p>SR01-10 Wash water is captured by vacuum and properly disposed of, or is diverted to a structural treatment control, sanitary sewer, or dead end sump with pump.</p>
		Improper waste storage and disposal	Oil and grease, fuel, hydraulic fluids, antifreeze, lubricants	
		Aircraft, equipment and vehicle fluid leaks and spills	Oil and grease, fuel, hydraulic fluids, antifreeze, lubricants, battery acid	
		Inadequate spill response or spill response materials	Oil and grease, fuel, hydraulic fluids, antifreeze, lubricants, battery acid	
		Lack or failure of proper secondary containment	Oil and grease, fuel, hydraulic fluids, antifreeze, lubricants, battery acid	

Table 7 - Summary Assessment of Pollutant Sources and Corresponding BMPs (continued)

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

Table 8 - BMPs Applicable to Individual Industrial/Commercial Sites/Sources (continued)

TENANTS	SUMMARY OF INDUSTRIAL ACTIVITY CATEGORIES (See Appendix ____ For Associated BMPs)	AIRCRAFT					VEHICLES AND EQUIPMENT					OTHER														
		Aircraft, Ground Vehicle and Equipment Maintenance	Aircraft, Ground Vehicle and Equipment Fueling	Aircraft, Ground Vehicle and Equipment Cleaning	Aircraft Deicing/Anti-Icing	Lavatory Service Operation	Outdoor Equipment Ops and Maintenance Areas	Aircraft, Ground Vehicle and Equipment Maintenance	Aircraft, Ground Vehicle and Equipment Fueling	Aircraft, Ground Vehicle and Equipment Cleaning	Non-Storm Water Management	Outdoor Loading/Unloading of Materials	Outdoor/Indoor Material Storage	Waste Handling and Disposal	Building and Grounds Maintenance	Employee Training	Outdoor Washdown/Sweeping (Apron Washing, Ramp Scrubbing)	Fire Fighting Foam Discharge	Potable Water System Flushing	Runway Rubber Removal	Parking Lots	Storm Drain Maintenance	Housekeeping	Safer/Alternative Products	Spill Prevention, Control, and Clean-up	Treatment Controls
		SC02B	SC03	SC04	SC05	SC11	SC02A	SC02B	SC03	SC04	SC01	SC06	SC07	SC08	SC09	SC10	SC12	SC13	SC14	SC15	SC16	SC17	SC18	SC19	SR01	TC01
AeroMexico	SC01, 02A, 02B, 03, 07, 08, 10, 18, 19, SR01	O	O				O	I/O	O		I/O		I	X		X							O	X	O	
Alaska	SC01, 02A, 02B, 03, 04, 05, 07, 08, 10, 11, 12, 14, 18, 19, SR01	O	O	O	O	O	O	O	O	O	I/O		I	I		X	O		X				X	X	I/O	
Allied Aviation	SC01, 02A, 02B, 03, 06, 07, 08, 09, 10, 12, 13, 16, 17, 18, 19, SR01, TC01	O	O				O	O	O		I/O	O	O	O	X	X	O	O			O	O	O	X	O	O
Aloha	SC01, 02B, 03, 04, 11, 12, 18, SR01	O	O	O		O		I	O	O	I/O						O						O		O	
American Airlines	SC01, 02A, 02B, 03, 04, 05, 07, 08, 10, 11, 12, 14, 17, 18, 19, SR01, TC01	O	O	O	O	O	O	I	O	O	I/O		I/O	I/O		X	O		O			O	I	X	O	O
American Eagle	SC01, 02A, 02B, 03, 04, 10, 11, 12, 14, 17, 18, 19, SR01	O	O	O		O	O	I	O	O	I/O					X	O		O			O	I/O	X	O	
ARFF	SC01, 02A, 02B, 03, 04, 07, 08, 10, 13, 16, 17, 18, 19, SR01						O	I	I	O	I/O		I	I/O		X		O			O	O	I/O	X	I/O	
ASIG	SC01, 02A, 02B, 03, 04, 06, 07, 08, 10, 12, 16, 17, 18, 19, SR01		O				O	I	O	O	I/O	O	I/O	I		X	O				O	O	I/O	X	I/O	
BAX Global	SC01, 02A, 02B, 03, 04, 05, 06, 07, 08, 10, 12, 18, 19, SR01	O	O		O		O	O	O	O	I/O	O	O	O		X	O						O	X	O	
Continental	SC01, 03, 10, 12, 17, 18, 19, SR01		O						O		I/O					X	O					O	O	X	O	
Delta	SC01, 02A, 02B, 03, 04, 06, 07, 08, 10, 11, 12, 17, 18, 19, SR01	O	O			O	O	I/O	O	O	I/O	O	I/O	I/O		X	O					O	I/O	X	O	
DHL	SC01, 02A, 02B, 03, 04, 06, 07, 08, 10, 12, 18, 19, SR01	O	O	X			O	O	O	X	I/O	O	I/O	I/O		X	O						I/O	X	I/O	

Table 8 - BMPs Applicable to Individual Industrial/Commercial Sites/Sources (continued)

TENANTS	SUMMARY OF INDUSTRIAL ACTIVITY CATEGORIES (See Appendix ____ For Associated BMPs)	AIRCRAFT					VEHICLES AND EQUIPMENT					OTHER														
		Aircraft, Ground Vehicle and Equipment Maintenance	Aircraft, Ground Vehicle and Equipment Fueling	Aircraft, Ground Vehicle and Equipment Cleaning	Aircraft Deicing/Anti-Icing	Lavatory Service Operation	Outdoor Equipment Ops and Maintenance Areas	Aircraft, Ground Vehicle and Equipment Maintenance	Aircraft, Ground Vehicle and Equipment Fueling	Aircraft, Ground Vehicle and Equipment Cleaning	Non-Storm Water Management	Outdoor Loading/Unloading of Materials	Outdoor/Indoor Material Storage	Waste Handling and Disposal	Building and Grounds Maintenance	Employee Training	Outdoor Washdown/Sweeping (Apron Washing, Ramp Scrubbing)	Fire Fighting Foam Discharge	Potable Water System Flushing	Runway Rubber Removal	Parking Lots	Storm Drain Maintenance	Housekeeping	Safer/Alternative Products	Spill Prevention, Control, and Clean-up	Treatment Controls
		SC02B	SC03	SC04	SC05	SC11	SC02A	SC02B	SC03	SC04	SC01	SC06	SC07	SC08	SC09	SC10	SC12	SC13	SC14	SC15	SC16	SC17	SC18	SC19	SR01	TCO1
Elite Line Services	SC01, 02A, 02B, 03, 04, 07, 08, 10, 12, 17, 18, 19, SR01						O	X	X	I/O	I/O		O	O		X	O					O	O	X	O	
Exec Air	SC01, 02A, 02B, 03, 04, 07, 08, 10, 12, 17, 18, 19, SR01	O					O	I	X	O	I/O		I	I		X	O					O	I/O	X	I/O	
Express Jet	SC01, 02A, 02B, 03, 04, 10, 11, 12, 14, 18, 19, SR01	O	O			O	O	X	O	O	I/O					X	O		O				O	X	I/O	
FedEx	SC01, 02A, 02B, 03, 06, 07, 08, 09, 10, 12, 17, 18, 19, SR01	O	O				O	O	O		I/O	O	O	I/O	O	X	O					O	O	X	O	
Frontier	SC01, 02A, 02B, 03, 07, 10, 11, 12, 13, 18, 19, SR01	O	O			O	O	I/O	X		I/O		O			X	O	O					O	X	O	
Hawaiian	SC01, 02A, 02B, 03, 10, 12, 17, 19	O	O				O	X	O		I/O					X	O					O		X		
HMS Host	SC01, 04, 06, 08, 09, 10, 12, 17, 18, 19, SR01									X	I/O	O		I/O	I/O	X	O					O	I/O	X	I/O	
Jet Blue	SC01, 03, 07, 10, 12, 17, 18, 19, SR01		O								I/O		O			X	O					O	O	X	O	
Jet Wash	SC01, 02A, 02B, 04, 07, 08, 10, 17, 18, 19, SR01			O			O	X		O	I/O		O	O		X						O	O	X	O	
Jimsair	SC01, 02A, 02B, 03, 04, 06, 07, 08, 09, 10, 11, 12, 14, 16, 18, 19, SR01	I	O				O	O	O	O	I/O	O	I/O	I/O	I/O	X	O		O		O		I/O	X	I/O	
LPI	SC01, 02A, 02B, 03, 04, 07, 08, 10, 12, 16, 17, 18, SR01						O	O	O	O	I/O		O	O		X	O				O	O	O		O	
Midwest	SC01, 02B, 03, 10	O	O					I/O	O		I/O					X										
Northwest	SC01, 02A, 02B, 03, 04, 07, 08, 10, 11, 12, 14, 18, 19, SR01	O	O	O		O	O	I	O	X	I/O		I/O	I/O		X	O		O				I/O	X	I/O	

Table 8 - BMPs Applicable to Individual Industrial/Commercial Sites/Sources (continued)

TENANTS	SUMMARY OF INDUSTRIAL ACTIVITY CATEGORIES (See Appendix ____ For Associated BMPs)	AIRCRAFT					VEHICLES AND EQUIPMENT					OTHER														
		Aircraft, Ground Vehicle and Equipment Maintenance	Aircraft, Ground Vehicle and Equipment Fueling	Aircraft, Ground Vehicle and Equipment Cleaning	Aircraft Deicing/Anti-Icing	Lavatory Service Operation	Outdoor Equipment Ops and Maintenance Areas	Aircraft, Ground Vehicle and Equipment Maintenance	Aircraft, Ground Vehicle and Equipment Fueling	Aircraft, Ground Vehicle and Equipment Cleaning	Non-Storm Water Management	Outdoor Loading/Unloading of Materials	Outdoor/Indoor Material Storage	Waste Handling and Disposal	Building and Grounds Maintenance	Employee Training	Outdoor Washdown/Sweeping (Apron Washing, Ramp Scrubbing)	Fire Fighting Foam Discharge	Potable Water System Flushing	Runway Rubber Removal	Parking Lots	Storm Drain Maintenance	Housekeeping	Safer/Alternative Products	Spill Prevention, Control, and Clean-up	Treatment Controls
		SC02B	SC03	SC04	SC05	SC11	SC02A	SC02B	SC03	SC04	SC01	SC06	SC07	SC08	SC09	SC10	SC12	SC13	SC14	SC15	SC16	SC17	SC18	SC19	SR01	TC01
SDCRAA	SC01, 02A, 02B, 03, 04, 06, 07, 08, 09, 10, 11, 12, 15, 16, 17, 18, 19, SR01, TC01						O	O	O	O	I/O	O	I/O	I/O	I/O	X	O			O	O	O	I/O	X	I/O	O
Sky West	SC01, 02A, 02B, 03, 04, 07, 08, 10, 11, 12, 14, 18, 19, SR01	O	O	X		O	O	O	O	X	I/O		O	X		X	O		O				O	X	O	
Southwest	SC01, 02A, 02B, 03, 04, 05, 06, 07, 08, 10, 11, 12, 14, 17, 18, 19, SR01	O	O		O	O	O	I/O	O	O	I/O	O	I/O	I/O		X	O		O			O	I/O	X	I/O	
SPC Airport Services	SC01, 02A, 02B, 03, 04, 07, 08, 10, 12, 17, 18, 19, SR01						O	O	O	X	I/O		I/O	I/O		X	O					O	O	X	O	
United	SC01, 02A, 02B, 03, 04, 06, 07, 08, 10, 11, 12, 18, 19, SR01	O	O	O		O	I/O	I/O	O		I/O	O	I/O	I/O		X	O						I/O	X	I/O	
UPS	SC01, 02A, 02B, 03, 04, 06, 07, 08, 10, 12, 17, 18, 19, SR01	O	O	X			O	O	O	X	I/O	O	O	O		X	O					O	O	X	O	
US Airways	SC01, 02A, 02B, 03, 04, 07, 08, 10, 11, 12, 14, 17, 18, 19, SR01	O	O			O	O	I	O	I/O	I/O		I/O	I		X	I		O			O	I/O	X	I/O	

Industrial Activity Category

- SC01 - Non-Storm Water Management
- SC02A - Outdoor Equipment Ops and Maintenance Areas
- SC02B - Aircraft, Ground Vehicle and Equipment Maintenance
- SC03 - Aircraft, Ground Vehicle and Equipment Fueling
- SC04 - Aircraft, Ground Vehicle and Equipment Cleaning
- SC05 - Aircraft Deicing/ Anti-Icing
- SC06 - Outdoor Loading/Unloading of Materials
- SC07 - Outdoor/Indoor Material Storage
- SC08 - Waste Handling and Disposal
- SC09 - Building and Grounds Maintenance
- SC10 - Employee Training

- SC11 - Lavatory Service Operation
- SC12 - Outdoor Washdown/Sweeping (Apron Washing, Ramp Scrubbing)
- SC13 - Fire Fighting Foam Discharge
- SC14 - Potable Water System Flushing
- SC15 - Runway Rubber Removal
- SC16 - Parking Lots
- SC17 - Storm Drain Maintenance
- SC18 - Housekeeping
- SC19 - Safer/ Alternative Products
- SR01 - Spill Prevention, Control, and Clean-up
- TC01 - Treatment Controls

Codes:

- BMP - Best Management Practices
- O - The industrial activity is performed by the tenant outdoors
- I - The industrial activity is performed by the tenant indoors
- I/O - The industrial is performed by the tenant both indoors and outdoors
- X - Indicates the activity applies to the tenant identified, without distinction regarding indoor/outdoor



Table 9 - Activity Tracking for Program Effectiveness Assessment

Permit Section/Topic	Activity Tracked
D.1. Development Planning	Projects subject to SUSMP requirements
D.2. Construction	High priority construction sites subject to inspection
	Medium/low priority construction sites subject to inspection
	Enforcement Actions
	Construction projects referred to RWQCB for enforcement of State General Construction Storm Water Permit
D.3.a Municipal	High priority municipal operations subject to inspection
	Quantity of debris and material removed from the MS4
	Quantity of debris and material captured by street sweeping
D.3.b Industrial and Commercial	High priority industrial/commercial operations subject to inspection
	Medium/low priority industrial/commercial operations subject to inspection
	Enforcement Actions
	Industrial operations referred to RWQCB for enforcement of State General Industrial Permit
	Program Manager
D.4 IDDE	Dry weather monitoring locations monitored
	IDDE events reported
	Enforcement Actions
D.5 Education	Stormwater-related education materials
	Stormwater education mechanisms for the general public
	Stormwater education mechanisms for Authority staff
	Stormwater education mechanisms for airport tenants/service providers
	Stormwater education mechanisms for construction project managers, developers, and contractors
D.6 Public Participation	Types of participation mechanisms for the general public
	Types of participation mechanisms for airport tenants/service providers
	Types of participation mechanisms for Authority staff

Tables



FIGURES

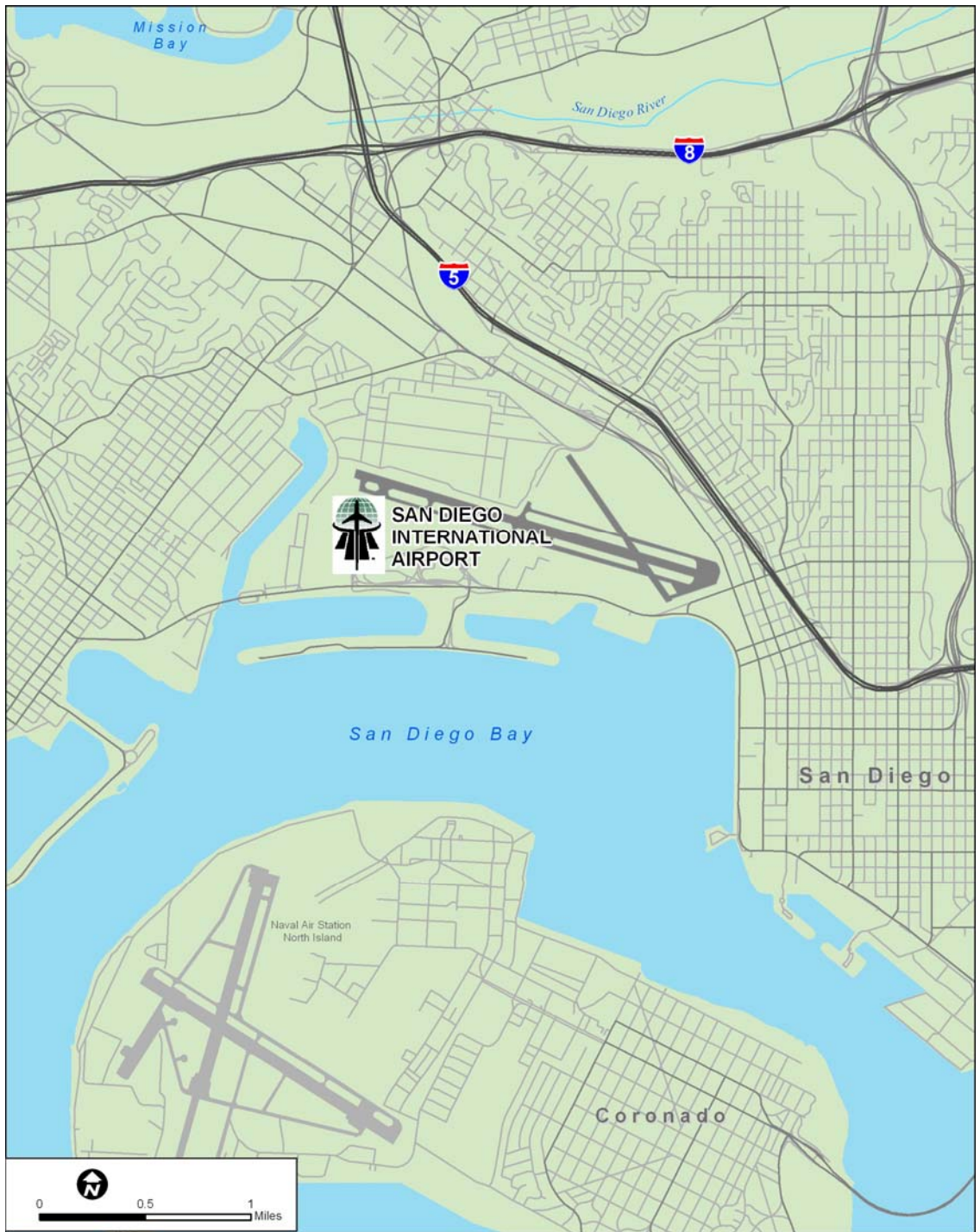
Figures





Figures





Figures



Legend

Storm Drain Line

Drainage Basin

Drainage Basin Number

Sample Location Sub-Drainage

Sample Location

Vortech Unit

Drain Inlet Insert

Oil/Water Separator

Least Tern ovals

Reportable Spill

Material Storage

UST

Oils Storage

Metals Storage

Industrial Waste

Grease Trap

Grease Receptacle

Grease Container

Fueling

Fuel Storage

Dumpsters

Deicing Fluid

AeroMexico

Alaska

Allied Aviation

Aloha

American Airlines

American Eagle

ARFF

ASIG

BAX Global

Continental

Delta

DHL

Elite Line Services

ExecAir

Express Jet

FedEx

Frontier

Hawaiian

HMS Host

Jet Wash, Inc.

Jet Blue

Jimsair

Lpi

Midwest

Northwest

Rental Car Storage Area

SDCRAA

SkyWest

Southwest

SPC

United

UPS

US Airways

Notes:

1. Areas impacted by storm water run-on from surrounding areas include the eastern portion of Drainage Basin 1 and the northern portions of Drainage Basins 5, 6, and 13.

2. Most storage areas are under cover, apart from the boneyard area (see Appendix E, figure E-26) and some equipment storage areas northwest of Terminal 2 and outside some maintenance shops.

3. All areas are paved apart from the landfill area, the Least Tern ovals, and the landscaped areas in the parking lots (see Appendix B figure SC-09).

PROJECT NO.: 5012-08-0002
DATE: February 2008
DRAWN BY: SKR
CHECKED BY:

SAN DIEGO
INTERNATIONAL AIRPORT
San Diego, California

STORM WATER
MANAGEMENT PLAN SITE MAP FOR
SAN DIEGO
INTERNATIONAL AIRPORT

FIGURE
3



Legend

Storm Drain Line

Drainage Basin

Drainage Basin Number

Sample Location Sub-Drainage

Sample Location

Vortech Unit

Drain Inlet Insert

Oil/Water Separator

Least Tern ovals

Reportable Spill

Significant Material Storage

Material Storage

UST

Oil Storage

Metals Storage

Industrial Waste

Grease Trap

Grease Receptacle

Grease Container

Fueling

Fuel Storage

Dumpsters

Deicing Fluid

Approximate Operational Areas

1 AeroMexico

2 Alaska

3 Allied Aviation

4 Aloha

5 American Airlines

6 American Eagle

7 ARFF

8 ASIG

9 BAX Global

10 Continental

11 Delta

12 DHL

13 Elite Line Services

14 ExecAir

15 Express Jet

16 FedEx

17 Frontier

18 Hawaiian

19 HMS Host

20 Jet Wash, Inc.

21 Jet Blue

22 Jimsair

24 Lpi

25 Midwest

26 Northwest

28 Rental Car Storage Area

28 SDCRAA

29 SkyWest

30 Southwest

31 SPC

32 United

33 UPS

34 US Airways

Notes:

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FIGURES

5

6

7

8

PROJECT NO.: 5012-08-0002

DATE: February 2008

DRAWN BY: RMH

CHECKED BY:

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Feet

MACTEC

MACTEC Engineering and Consulting Inc.

SAN DIEGO

INTERNATIONAL AIRPORT

San Diego, California

STORM WATER

MANAGEMENT PLAN SITE MAP FOR

SAN DIEGO INTERNATIONAL AIRPORT

FIGURE

4



Legend

- Storm Drain Line

Drainage Basin

8

Drainage Basin Number

Sample Location

Sub-Drainage

Sample Location

Vortech Unit

Drain Inlet Insert

Oil/Water Separator

Least Tern ovals

Reportable Spill
- Significant Material Storage

Material Storage

UST

Oil Storage

Metals Storage

Industrial Waste

Grease Trap

Grease Receptacle

Grease Container

Fueling

Fuel Storage

Dumpsters

Deicing Fluid
- 1

Aeromexico

2

Alaska

3

Allied Aviation

4

Aloha

5

American Airlines

6

American Eagle

7

ARFF

8

ASIG

9

BAX Global

10

Continental

11

Delta

12

DHL

13

Elite Line Services

14

ExecAir

15

Express Jet

16

FedEx

17

Frontier

18

Hawaiian

19

HMS Host

20

Jet Wash, Inc.

21

Jet Blue

22

Jimsair

24

Lpi

25

Midwest

26

Northwest

28

Rental Car Storage Area

28

SDCRAA

29

SkyWest

30

Southwest

31

SPC

32

United

33

UPS

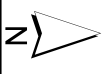
34

US Airways

- Notes:
1. Areas impacted by storm water run-on from surrounding areas include the eastern portion of Drainage Basin 1 and the northern portions of Drainage Basins 5, 6, and 13.
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PROJECT NO.: S012-08-0002
DATE: February 2008
DRAWN BY: RHH
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SAN DIEGO INTERNATIONAL AIRPORT
San Diego, California

STORM WATER MANAGEMENT PLAN SITE MAP FOR
SAN DIEGO INTERNATIONAL AIRPORT
TERMINAL 2 AND LANDFILL

FIGURE
5



Legend

Storm Drain Line

Drainage Basin

Drainage Basin Number

Sample Location Sub-Drainage

Sample Location

Vortech Unit

Drain Inlet Insert

Oil/Water Separator

Least Tern ovals

Reportable Spill

Material Storage

UST

Oils Storage

Metals Storage

Industrial Waste

Grease Trap

Grease Receptacle

Grease Container

Fueling

Fuel Storage

Dumpsters

Deicing Fluid

Approximate Operational Areas

1 AeroMexico

2 Alaska

3 Allied Aviation

4 Aloha

5 American Airlines

6 American Eagle

7 ARFF

8 ASIG

9 BAX Global

10 Continental

11 Delta

12 DHL

13 Elite Line Services

14 ExecAir

15 Express Jet

16 FedEx

17 Frontier

18 Hawaiian

19 HMS Host

20 Jet Wash, Inc.

21 Jet Blue

22 Jimsair

24 Lpi

25 Midwest

26 Northwest

28 Rental Car Storage Area

28 SDCRAA

29 SkyWest

30 Southwest

31 SPC

32 United

33 UPS

34 US Airways

Notes:

1. Areas impacted by storm water run-on from surrounding areas include the eastern portion of Drainage Basin 1 and the northern portions of Drainage Basins 5, 6, and 13.

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PROJECT NO.: 5012-08-0002
DATE: February 2008
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CHECKED BY:

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MACTEC

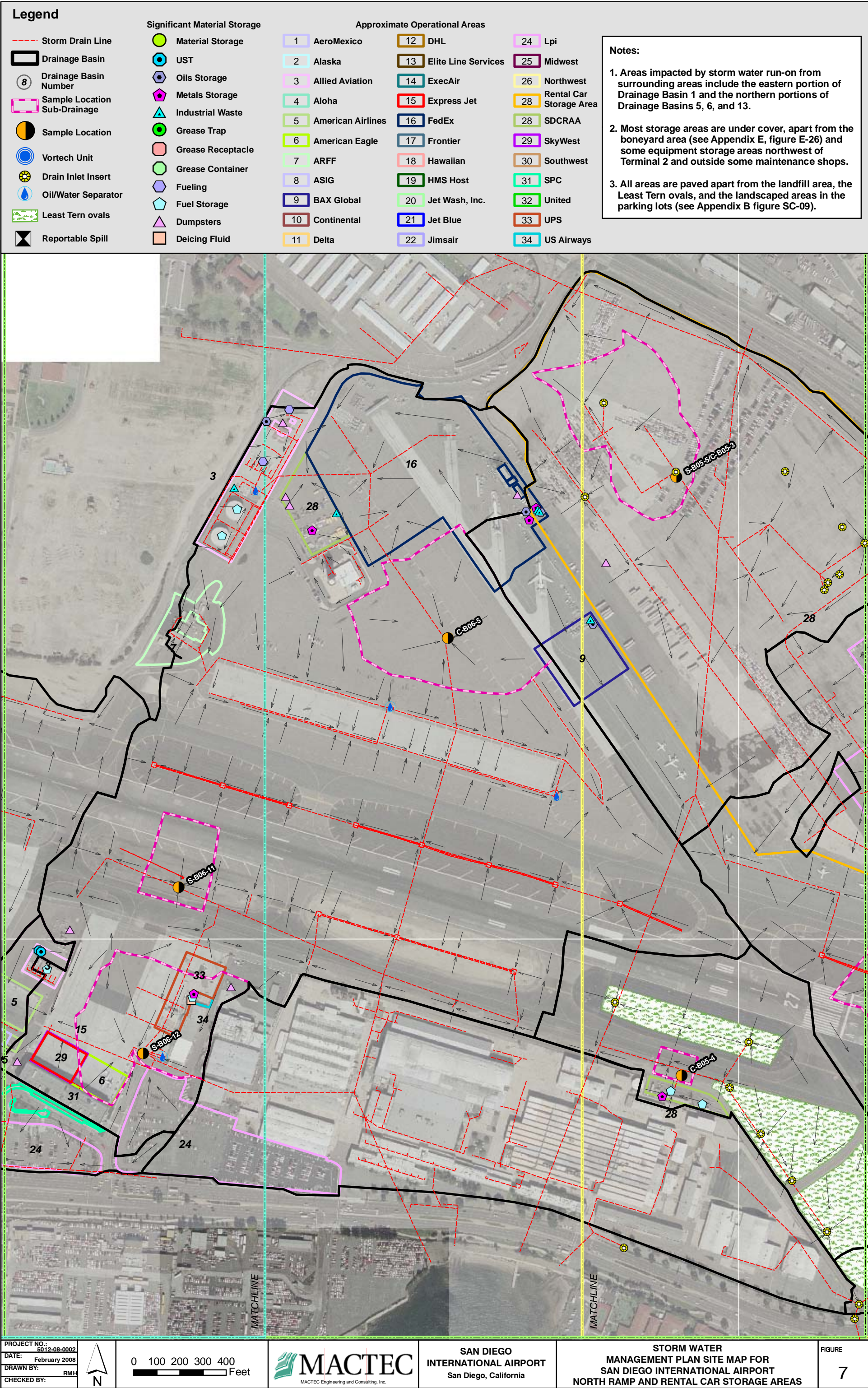
MACTEC Engineering and Consulting, Inc.

SAN DIEGO INTERNATIONAL AIRPORT
San Diego, California

STORM WATER MANAGEMENT PLAN SITE MAP FOR
SAN DIEGO INTERNATIONAL AIRPORT
TERMINAL 1, CARGO AREA AND COMMUTER TERMINAL

FIGURE
6







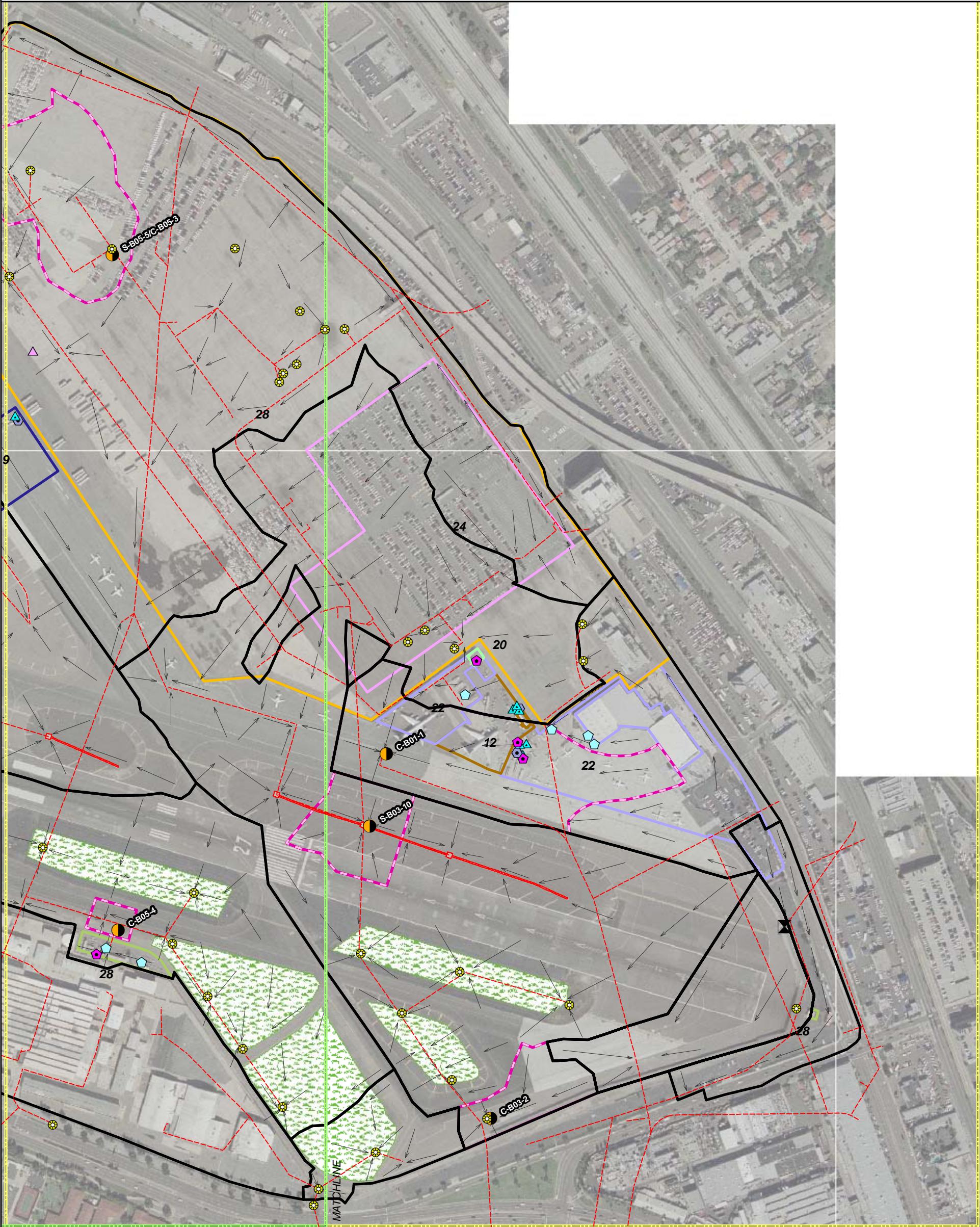
Legend

- Storm Drain Line
- Drainage Basin
- Drainage Basin Number
- Sample Location Sub-Drainage
- Sample Location
- Vortech Unit
- Drain Inlet Insert
- Oil/Water Separator
- Least Tern ovals
- Reportable Spill

- Significant Material Storage
- Material Storage
 - UST
 - Oils Storage
 - Metals Storage
 - Industrial Waste
 - Grease Trap
 - Grease Receptacle
 - Grease Container
 - Fueling
 - Fuel Storage
 - Dumpsters
 - Deicing Fluid

- Approximate Operational Areas
- | | | |
|---------------------|------------------------|----------------------------|
| 1 AeroMexico | 12 DHL | 24 Lpi |
| 2 Alaska | 13 Elite Line Services | 25 Midwest |
| 3 Allied Aviation | 14 ExecAir | 26 Northwest |
| 4 Aloha | 15 Express Jet | 28 Rental Car Storage Area |
| 5 American Airlines | 16 FedEx | 28 SDCRAA |
| 6 American Eagle | 17 Frontier | 29 SkyWest |
| 7 ARFF | 18 Hawaiian | 30 Southwest |
| 8 ASIG | 19 HMS Host | 31 SPC |
| 9 BAX Global | 20 Jet Wash, Inc. | 32 United |
| 10 Continental | 21 Jet Blue | 33 UPS |
| 11 Delta | 22 Jimsair | 34 US Airways |

- Notes:
- Areas impacted by storm water run-on from surrounding areas include the eastern portion of Drainage Basin 1 and the northern portions of Drainage Basins 5, 6, and 13.
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PROJECT NO.: 5012-08-0002
DATE: February 2008
DRAWN BY: RMH
CHECKED BY:



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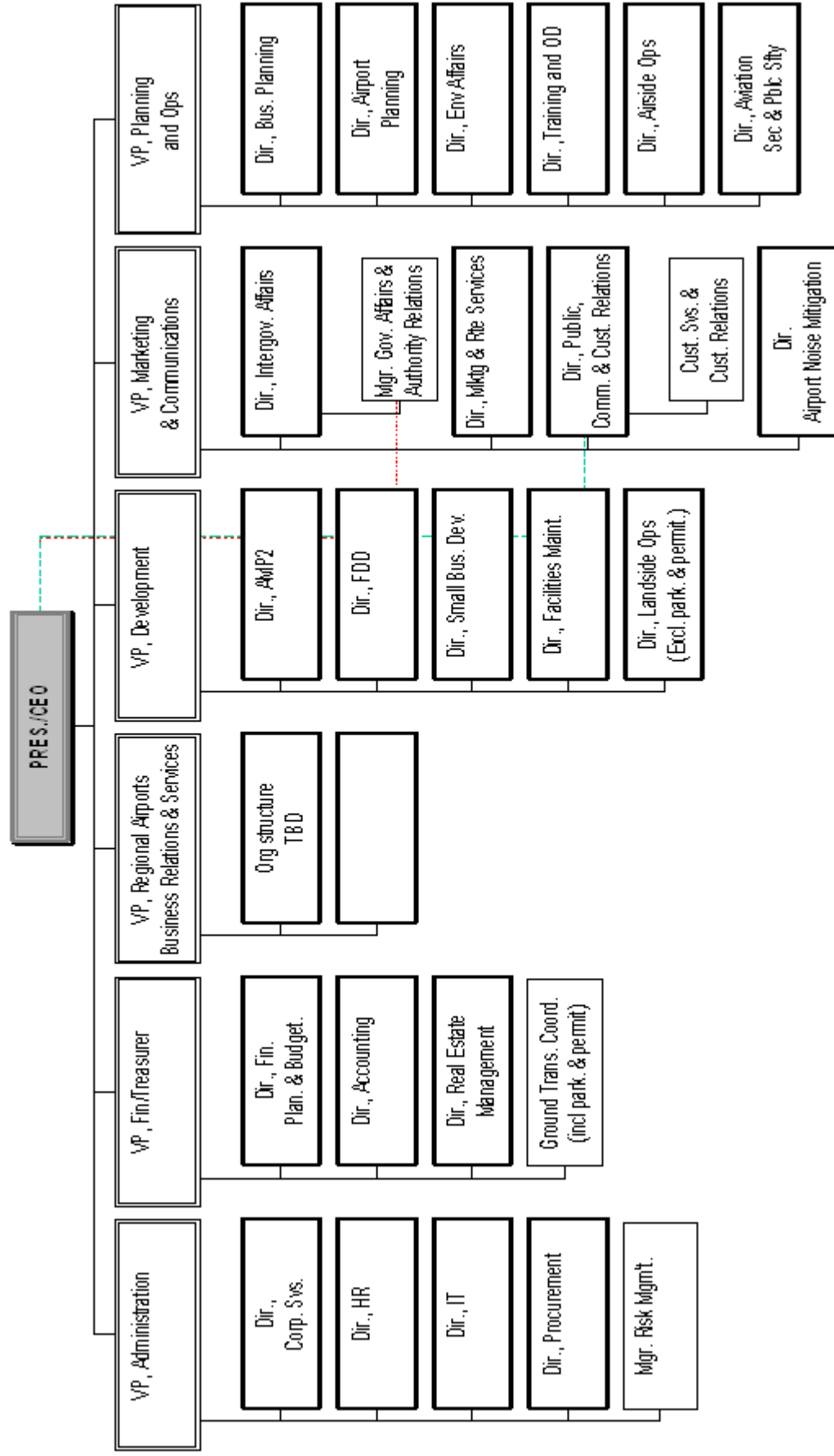


SAN DIEGO
INTERNATIONAL AIRPORT
San Diego, California

STORM WATER
MANAGEMENT PLAN SITE MAP FOR
SAN DIEGO INTERNATIONAL AIRPORT
FIXED BASE OPERATION

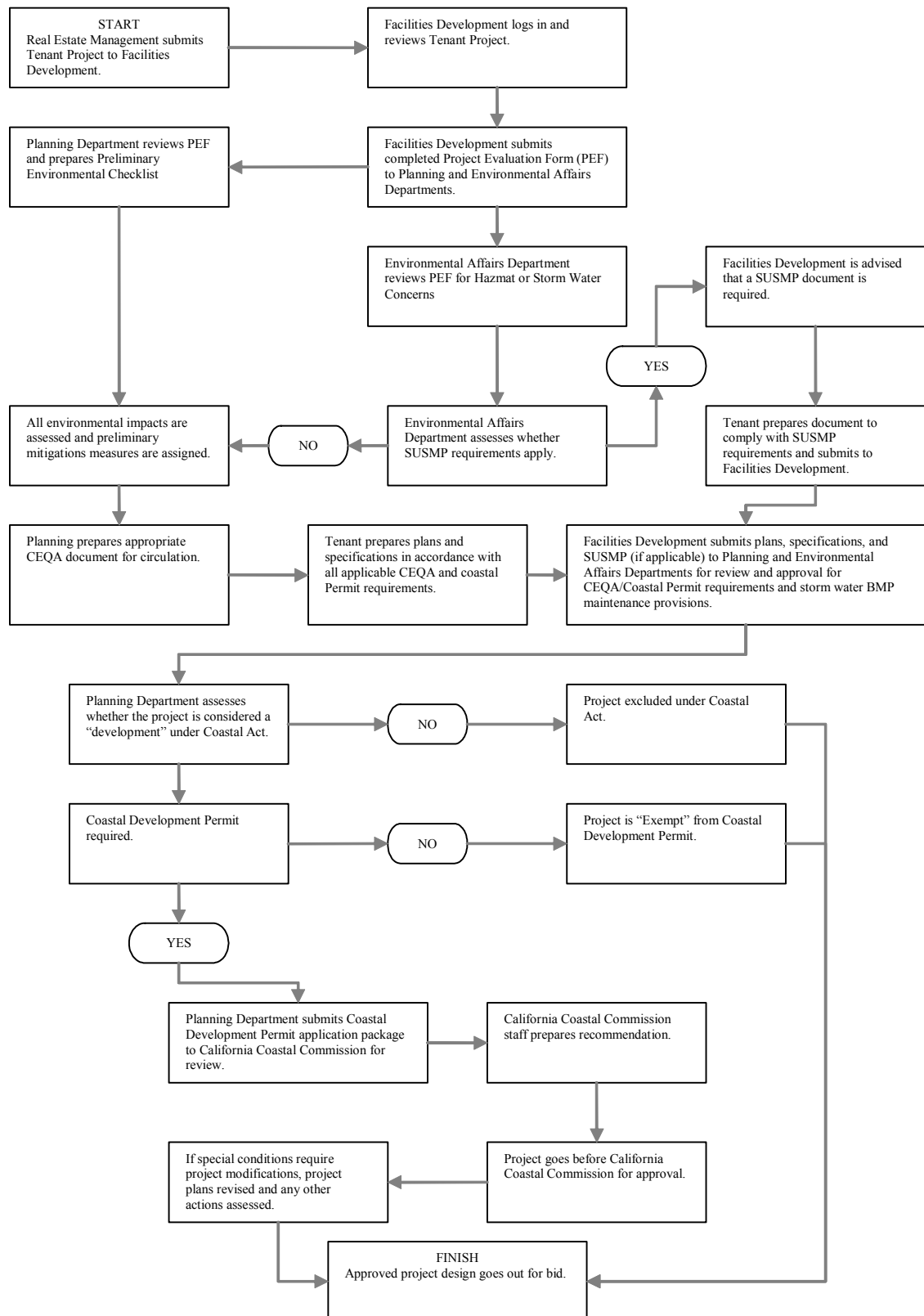
FIGURE
8





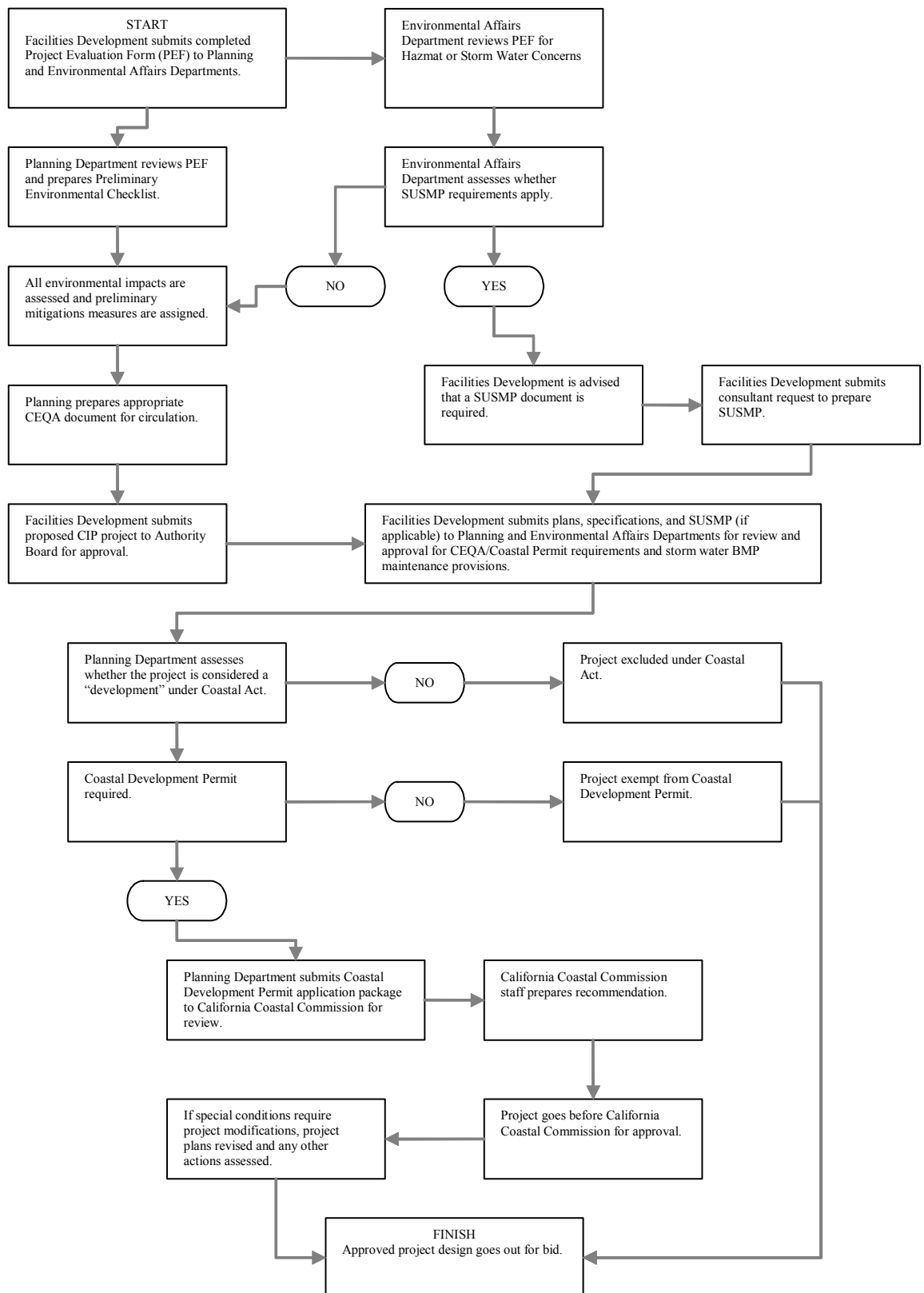
Figures





Figures





Figures



APPENDIX A
GENERAL INDUSTRIAL PERMIT
CHECKLIST AND NOTICES

Appendix A – General Industrial Permit Checklist and Notices



STORM WATER POLLUTION PREVENTION PLAN CHECKLIST

GENERAL INDUSTRIAL ACTIVITIES STORM WATER PERMIT WATER QUALITY ORDER NO. 97-03-DWQ

FACILITY NAME: San Diego International Airport

WDID#: 937118035

FACILITY CONTACT

Name Paul Manasjan
Title Director, Environmental Affairs
Organization San Diego Regional Airport Authority
Street Address P.O. Box 82776
City, State, Zip San Diego, CA 92138-2776

CONSULTANT CONTACT

Name Nathan Schaedler
Title Project Manager
Company MACTEC
Street Address 9177 Sky Park Court
City, State, Zip San Diego, CA 92123

Storm Water Pollution Prevention Plan Requirements		Not Applicable	SWMP Page # or Reference Location	Date Revised
Signed Certification	(Section E.9.b and E.10)		Executive Summary	03-03-08
Pollution Prevention Team	(A.3.a)		Section 2; Tables 1 & 2	
Existing Facility Plans	(A.3.b)		Appendix E	03-03-08
Facility Site Map(s)				
Facility boundaries	(A.4.a)		Figure 3	03-03-08
Drainage areas	(A.4.a)		Figure 3	03-03-08
Drainage areas affected by run-on	(A.4.a)		Figure 3	03-03-08
Direction of flow	(A.4.a)		Figure 3	03-03-08
On-site water bodies	(A.4.a)	X		
Areas of soil erosion	(A.4.a)		Figure 3 Figure SC-09, Appendix B	03-03-08
Nearby water bodies	(A.4.a)		Figure 3	03-03-08
Municipal storm drain inlets	(A.4.a)		Figure SC-01, Appendix B	03-03-08
Storm drain system and points of discharge	(A.4.b)		Figure 3	03-03-08
Structural control measures	(A.4.b)		Figure 3 Figure SC-01, Appendix B; Figures E-3 and E-22, Appendix E	03-03-08
Impervious areas (paved areas, buildings, covered areas, roofed areas)	(A.4.c)		Figure 3 Figure SC-09, Appendix B	03-03-08
Location of directly exposed materials	(A.4.d)		Figure 3 Figure E-26, Appendix E	03-03-08
Locations of significant spills and leaks	(A.4.d)		Figure 3	03-03-08
Storage areas / Storage tanks	(A.4.e)		Figure 3 Figures SC-03, SC-07, SC-18 and SR-01, Appendix B	03-03-08
Shipping and receiving areas	(A.4.e)		Figure SC-06, Appendix B	03-03-08
Fueling areas	(A.4.e)		Figure SC-03, Appendix B	03-03-08
Vehicle and equipment storage and maintenance	(A.4.e)		Figure SC-02B, Appendix B; Figure E-26, Appendix E	03-03-08
Material handling	(A.4.e)		Figure 3 Figure SC-07, Appendix B; Appendix E	03-03-08
Waste treatment, handling, disposal	(A.4.e)		Figure 3 Figures SC-08 and SC-11, Appendix B; Figure E-26, Appendix E	03-03-08
Dust generation / Particulate generation	(A.4.e)		Figure E-26, Appendix E	03-03-08
Cleaning areas / Rinsing areas	(A.4.e)		Figure SC-04, Appendix B	03-03-08

Storm Water Pollution Prevention Plan Requirements		Not Applicable	SWMP Page # or Reference Location	Date Revised
Aircraft Deicing/Anti-icing	(A.4.e)		Figure SC-05, Appendix B	03-03-08
List of Significant Materials (A.5)				
For each material listed:				
Storage location			Section 7; Figure 3 Appendix B	03-03-08
Receiving and shipping location			Section 7; Appendix B	03-03-08
Handling location			Section 7; Figure 3 Appendix B	03-03-08
Quantity			Section 7; Appendix E	03-03-08
Frequency			Section 7; Appendix E	03-03-08
Description of Potential Pollution Sources (A.6)				
Industrial processes	(A.6.a.i)		Section 7	03-03-08
Material handling and storage areas	(A.6.a.ii)		Section 7	03-03-08
Dust and particulate generating activities	(A.6.a.iii)		Section 7	03-03-08
Significant spills and leaks	(A.6.a.iv)		Section 7	03-03-08
Non-storm water discharges	(A.6.a.v)		Sections 3 and 7	03-03-08
Soil erosion	(A.6.a.vi)		Section 7	03-03-08
Assessment of Potential Pollutant Sources (A.7)				
Areas likely to be sources of pollutants	(A.7.a)		Section 7	03-03-08
Pollutants likely to be present	(A.7.b)		Section 7	03-03-08
Storm Water Best Management Practices (A.8)				
Industrial Activity BMP/ Pollutant Summary	(A.8.)		Section 7	03-03-08
Non-structural BMPs (A.8.a)				
Good housekeeping	(A.8.a.i)		Section 7; Appendix B	03-03-08
Preventative maintenance	(A.8.a.ii)		Section 7; Appendix B	03-03-08
Spill response	(A.8.a.iii)		Section 7; Appendix B	03-03-08
Material handling and storage	(A.8.a.iv)		Section 7; Appendix B	03-03-08
Employee training	(A.8.a.v)		Section 7; Appendix B	03-03-08
Waste handling / Waste recycling	(A.8.a.vi)		Section 7; Appendix B	03-03-08
Recordkeeping and internal reporting	(A.8.a.vii)		Section 7; Appendix B	03-03-08
Erosion control and site stabilization	(A.8.a.viii)		Section 7; Appendix B	03-03-08
Inspections	(A.8.a.ix)		Section 7	03-03-08
Quality assurance	(A.8.a.x)		Section 7	03-03-08
Structural BMPs (A.8.b)				
Overhead coverage	(A.8.b.i)		Section 7; Appendix B	03-03-08
Retention ponds	(A.8.b.ii)	X		
Control devices	(A.8.b.iii)		Section 7; Appendix E	03-03-08
Secondary containment structures	(A.8.b.iv)		Section 7; Appendix E	03-03-08
Treatment	(A.8.b.v)		Section 6.2; TC-01, Appendix B	03-03-08
Annual Comprehensive Site Compliance Evaluation (A.9)				
Review of visual observations,	(A.9.a)		Section 7	03-03-08

Storm Water Pollution Prevention Plan Requirements		Not Applicable	SWMP Page # or Reference Location	Date Revised
inspections, and sampling analysis				
Visual inspection of potential pollution sources	(A.9.b)		Section 7	03-03-08
Review and evaluation of BMPs	(A.9.c)		Section 7	03-03-08
Evaluation report	(A.9.d)		Section 7	03-03-08
MONITORING PROGRAM	(B)		Sections 7 and 9; Appendix D	03-03-08
Quarterly Non-Storm Water Discharge Visual Observations (B.3)				
All drainage areas	(B.3.a)		Included	03-03-08
Look for presence of unauthorized NSWDS	(B.3.a)		Included	03-03-08
Observe authorized NSWDS	(B.3.b)		Included	03-03-08
Observations to be conducted (Jan-March, April-June, July-September, October-December)	(B.3.c)		Included	03-03-08
Maintain observation records	(B.3.d)		Included	03-03-08
Storm Water Discharge Visual Observations (B.4)				
Once per month during wet season (October 1-May 31)	(B.4.a)		Included	03-03-08
Observe during first hour of discharge	(B.4.a)		Included	03-03-08
All drainage areas	(B.4.a)		Included	03-03-08
Observe stored or contained storm water at time of discharge	(B.4.a)		Included	03-03-08
Preceded by three working days dry weather	(B.4.c)		Included	03-03-08
Document discharge characteristics	(B.4.c)		Included	03-03-08
Sampling and Analysis (B.5)				
Samples to be collected during first hour of discharge	(B.5.a)		Included	03-03-08
Sample from first storm of the wet season	(B.5.a)		Included	03-03-08
Sample from one additional storm during wet season	(B.5.a)		Included	03-03-08
Samples collected from all discharge locations	(B.5.a)		Included	03-03-08
Sampling of contained storm water at time of discharge	(B.5.a)		Included	03-03-08
Sampling preceded by at least three working days without storm water discharges	(B.5.b)		Included	03-03-08
Sampling for pH, TSS, SC, TOC or O&G	(B.5.c.i)		Included	03-03-08
Sampling for toxic chemicals and other pollutants likely present in storm water discharges in significant quantities	(B.5.c.ii)		Included	03-03-08
Other analytical parameters listed in Table D	(B.5.c.iii)		Included	03-03-08
Storm Water Effluent Limitation Guidelines parameters	(B.6)		Included	03-03-08
Description of sampling locations	(B.7)		Included	03-03-08
Description of sampling methods	(B.10)		Included	03-03-08
Identification of analytical methods and method detection limits	(B.10.b)		Included	03-03-08
Retention of all records for at least five years	(B.13)		Included	03-03-08
Annual Report to be submitted by July 1 each year	(B.14)		Included	03-03-08

Appendix A – General Industrial Permit Checklist and Notices



SECTION IV. ADDRESS FOR CORRESPONDENCE☐ Facility Operator Mailing Address (Section II)☐ Facility Mailing Address (Section III, B.)☒ Both**SECTION V. BILLING ADDRESS INFORMATION**SEND BILL TO: ☐ Facility Operator Mailing Address (Section II) ☒ Facility Mailing Address (Section III, B.) ☐ Other (enter information below)Name: ISIAINI IDIIIEIGIOI ICIOIUNITIYI IRIEIGIIIOINIAILI IAIIRIP O R T
AUTHORITYPhone: 1611191-1410101-121719121Mailing Address: IP101 IB10IX1 18121717161City: ISIAINI IDIIIEIGIOIState: CIAZip Code: 19121113181-121717161Contact Person: IRIIICIKI IADICIOICIKI**SECTION VI. RECEIVING WATER INFORMATION**Your facility's storm water discharges flow: (check one) ☐ Directly OR ☒ Indirectly to waters of the United States.Name of receiving water: ISIAINI IDIIIEIGIOI IBIAIYI
(river, lake, stream, ocean, etc.)**SECTION VII. IMPLEMENTATION OF PERMIT REQUIREMENTS****A. STORM WATER POLLUTION PREVENTION PLAN (SWPPP) (check one)**☒ A SWPPP has been prepared for this facility and is available for review.☐ A SWPPP will be prepared and ready for review by (enter date): ____/____/____.**B. MONITORING PROGRAM (check one)**☒ A Monitoring Program has been prepared for this facility and is available for review.☐ A Monitoring Program will be prepared and ready for review by (enter date): ____/____/____.**C. PERMIT COMPLIANCE RESPONSIBILITY**

Has a person been assigned responsibility for:

1. Inspecting the facility throughout the year to identify any potential pollution problems? ☒ YES ☐ NO
2. Collecting storm water samples and having them analyzed? ☒ YES ☐ NO
3. Preparing and submitting an annual report by July 1 of each year? ☒ YES ☐ NO
4. Eliminating discharges other than storm water (such as equipment or vehicle wash-water) into the storm drain? ☒ YES ☐ NO

SECTION VIII. REGULATORY STATUS (Go to Section IX if not applicable)A. WASTE DISCHARGE REQUIREMENT ORDER NUMBER: 191710131DIW1A1 B. NPDES PERMIT CA CIAIS10101010111**SECTION IX. SITE MAP**

I HAVE ENCLOSED A SITE MAP

YES ☒

A new NOI submitted without a site map will be rejected.

SECTION X. CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. In addition, I certify that the provisions of the permit, including the development and implementation of a Storm Water Pollution Prevention Plan and a Monitoring Program Plan, will be complied with."

Printed Name: TED SEXTONSignature: Date 3-26-03Title: VICE PRESIDENT, AIRPORT OPERATIONS, SAN DIEGO REGIONAL AIRPORT AUTHORITY

- _____ 2. **Light Industry Exemption.** Exposure of industrial activities, materials, and equipment to storm water has been eliminated (Applies only to certain facilities - see instructions). Complete and submit Attachment A.
- Date of evaluation: ____/____/____ Date exposure eliminated (if applicable): ____/____/____
- Planned date of next evaluation: ____/____/____
- _____ 3. **No Storm Water Discharge.** Storm water associated with industrial activity does not discharge to waters of the United States because:
- _____ a. the storm water is retained on site (such as in evaporation or percolation ponds).
- _____ b. the storm water is discharged to a municipal sanitary sewer systems or municipal combined sewer system.
- _____ c. the storm water is retained offsite (such as in evaporation or percolation ponds).
- _____ 4. **Not Required to be Permitted.** The facility is not required by federal regulations to be regulated by an industrial activities storm water NPDES permit.

5. **Regulated by Another Permit.** Discharge of storm water associated with industrial activity is specifically regulated by another general or individual NPDES permit.

NPDES Permit No. _____ Date coverage began ____/____/____

- X 6. **New Facility Operator.** There is a new facility operator of the identified facility.

Date facility was transferred to new facility operator 01 / 01 / 03.

Have you notified the new facility operator of the storm water NPDES Permit requirements? Yes X No ____

NEW FACILITY OPERATOR INFORMATION

NAME San Diego County Regional Airport Authority CONTACT PERSON Rick Adcock
MAILING ADDRESS P.O. Box 82776 TITLE Senior Environmental Specialist
CITY San Diego STATE CA ZIP 92138 PHONE 619-725-6024
2976

V. ADDITIONAL TERMINATION INFORMATION

Are you attaching any additional termination information? Yes ____ No X

VI. FACILITY PHOTOGRAPHS

Have you attached facility photographs? Yes ____ No X (See Instructions)

VII. ANNUAL REPORT

Have you attached an Annual Report? Yes ____ No X (See Instructions)

VIII. CERTIFICATION

I certify under penalty of law that 1) I am not required to be permitted under the Industrial Activities Storm Water General Permit No. 97-03-DWQ, and 2) this document and all attachments were prepared under my direction and supervisions in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. I am aware that it is unlawful under the Clean Water Act to discharge storm water associated with industrial activity to waters of the United States if the discharge is not authorized by a NPDES permit, and there are significant penalties for submitting false information. I understand that the facility operator is still required to submit an annual report to the Regional Water Board by July 1. I also understand that the submittal of this Notice of Termination does not release a facility operator from liability for any violations of the General Permit or the Clean Water Act.

PRINTED NAME David Merk TITLE Director, Recreation & Env'l Services

SIGNATURE [Signature] DATE 09/17 / 02

REGIONAL WATER BOARD USE ONLY

☐ **Approved** and sent to State Board for termination

☐ **Denied** and returned to applicant

Printed Name

Signature

Date

NOTICE OF INTENT

FOR

GENERAL PERMIT TO DISCHARGE STORM WATER
 ASSOCIATED WITH INDUSTRIAL ACTIVITY (WD Order No. 91-13-DWQ)
 (Excluding Construction Activities)


 MARK ONLY
 ONE ITEM

- 1.
- ☒
- Existing Facility
-
- 2.
- ☐
- New Facility

- 3.
- ☐
- Change of Information
-
- WDD # _____

I. OWNER/OPERATOR

Name: San Diego Unified Port District	A. Owner/Operator Type: (Check one)	
Mailing Address: P.O. Box 488	1. <input type="checkbox"/> City	2. <input type="checkbox"/> County
City: San Diego	3. <input type="checkbox"/> State	4. <input type="checkbox"/> Federal
Contact Person: Ralph T. Hicks, Env'l. Mgmt.	5. <input checked="" type="checkbox"/> Special District	6. <input type="checkbox"/> Government Combo
	7. <input type="checkbox"/> Private	
State: CA	Zip: 92112	Phone: ext. 254 (619) 291-3900
B. 1. <input type="checkbox"/> Owner 2. <input type="checkbox"/> Operator 3. <input checked="" type="checkbox"/> Owner/Operator		

II. FACILITY/SITE INFORMATION

Facility Name: San Diego International Airport	County: San Diego
Street Address: 3707 & 3665 No. Harbor Drive	Contact Person: Bud McDonald, Airport Operations
City: San Diego	State: CA Zip: 92101 Phone: (619) 291-3900
Parcel Number(s) (If more than 4 apply to facility, enter additional numbers in SECTION IX. A):	
A. _____ B. _____ C. _____ D. _____	

III. BILLING ADDRESS

Send Billing Statements To:	A. <input checked="" type="checkbox"/> Owner/Operator	B. <input type="checkbox"/> Facility	C. <input type="checkbox"/> Other (Specify in SECTION IX. B)
-----------------------------	---	--------------------------------------	--

IV. RECEIVING WATER INFORMATION

A. Does your facility's storm water discharge directly to: (Check one)

- 1.
- ☒
- Storm drain system

Owner of storm drain system: (Name) City of San Diego

- 2.
- ☐
- Directly to waters of U.S. (e.g., river, lake, creek, ocean)

- 3.
- ☐
- Indirectly to waters of U.S.

B. Name of closest receiving water:

San Diego Bay

V. INDUSTRIAL INFORMATION

A. SIC Code(s):	B. Type of Business:
1. <u>4512</u> 2. <u>4513</u> 3. <u>3721</u> 4. <u>4581</u>	<u>Aviation transportation & cargo handling</u>
C. Industrial activities at facility: (Check all that apply)	
1. <input type="checkbox"/> Manufacturing	2. <input checked="" type="checkbox"/> Vehicle Maintenance
4. <input checked="" type="checkbox"/> Material Storage	5. <input checked="" type="checkbox"/> Vehicle Storage
8. <input type="checkbox"/> Power Generation	9. <input type="checkbox"/> Recycling
3. <input type="checkbox"/> Hazardous Waste Treatment, Storage, or Disposal Facility (RCRA Subtitle C)	7. <input type="checkbox"/> Wastewater Treatment
6. <input checked="" type="checkbox"/> Material Handling	10. <input type="checkbox"/> Landfill
99. <input checked="" type="checkbox"/> Other: <u>Aviation transport</u>	

FORC00183

NO-1 (12/91)

A. Types of materials handled and/or stored on site: (Check all that apply)

1. ☐ Solvents 2. ☐ Scrap 3. ☒ Petroleum Products 4. ☐ Plating Products
 5. ☐ Pesticides 6. ☐ Hazardous Wastes 7. ☒ Paints 8. ☐ Wood Treating Products
 9. ☐ Other (Please list)

B. Identify existing management practices employed to reduce pollutants in industrial storm water discharges: (Check all that apply)

1. ☒ Oil/Water Separator 2. ☒ Containment 3. ☐ Berms 4. ☐ Leachate Collection
 5. ☒ Overhead Coverage 6. ☐ Recycling 7. ☒ Retention Facilities 8. ☐ Chemical Treatment
 9. ☒ Other (Please list)
SPCCP compliance; monitoring

VII. FACILITY INFORMATION

- A. Total size of site: (Check one)
483 ☒ Acres ☐ Sq. Ft.
- B. Percent of site impervious: (including rooftops)
93 %

VIII. REGULATORY STATUS (Check all that apply)

- A. ☐ Regulated by Storm water Effluent Guidelines (40 CFR Subchapter N)
- B. ☐ Waste Discharge Requirements
 (Order Number) _____
- C. ☐ NPDES Permit
 CA _____
- D. ☐ RCRA Permit
 Number _____
- E. ☐ Regulated by California Code of Regulations Article 6, Chapter 15 (Feedlot).

IX. COMMENTS (Enter additional information for SECTIONS II AND III)

A. Additional Parcel Numbers:

B. Billing Information: (Enter Name and Address)

X. CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment." In addition, I certify that the provisions of the permit, including the development and implementation of a Storm Water Pollution Prevention Plan and a Monitoring Program Plan, will be complied with.

Printed Name: Manuel I. AcevesSignature: Manuel I. AcevesDate: 3-27-12Title: Deputy Port Director, Engineering and Development

STATE USE ONLY

WDID: _____		Regional Board Office: _____		Date Permit Issued: _____	
NPDES Permit Number: _____		Order Number: _____		Fee Amount Received: _____	
CA: _____		Date NOI Received: _____		_____	

**NOTICE OF INTENT
SITE MAP**ATTACHED**MAP INFORMATION**TYPE N/ANUMBER N/ASCALE 1" = 1200'**STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD**FACILITY San Diego International AirportCOUNTY San Diego

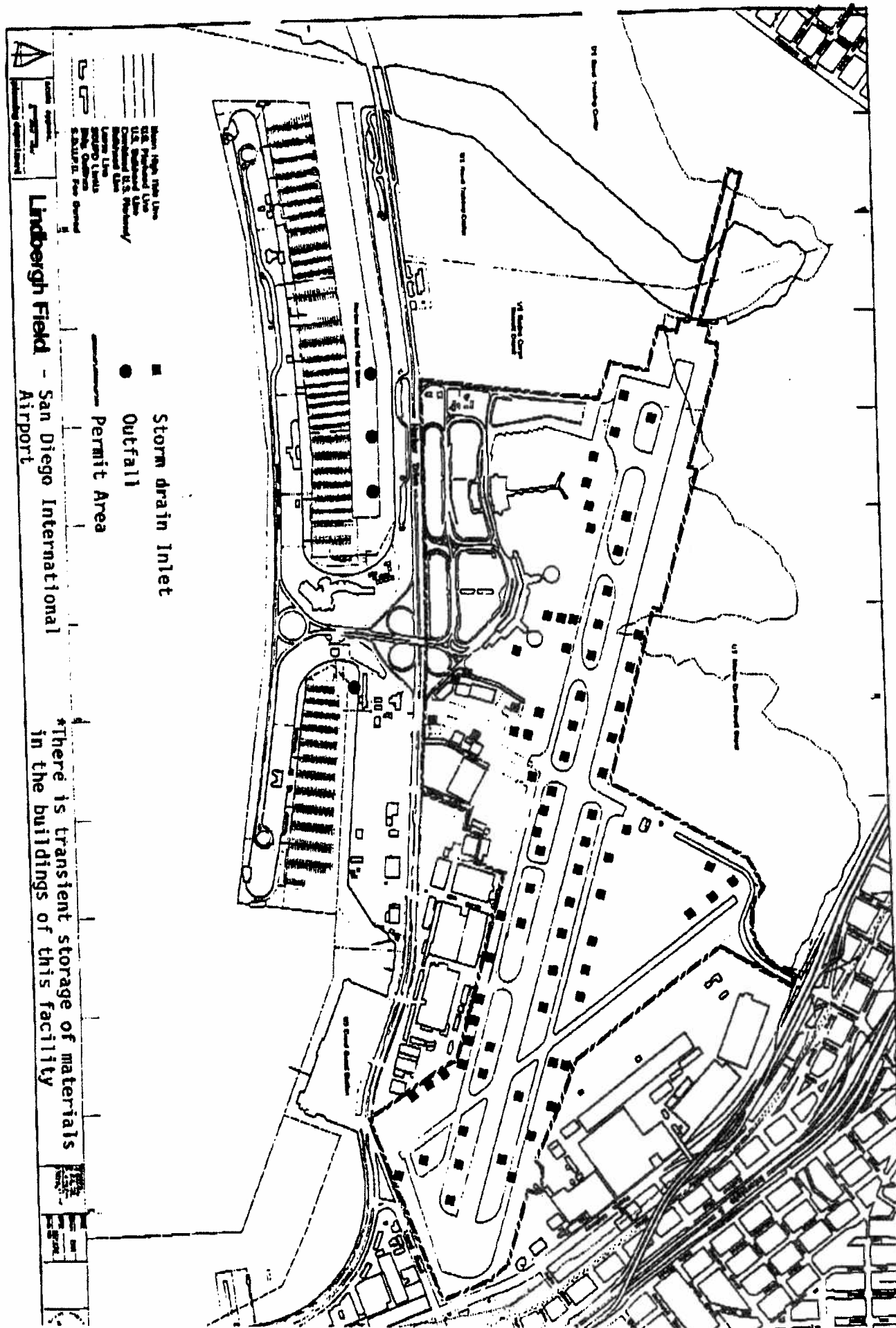
DATE

3/26/92

DRAWING

CHECKED

Planning



SAN DIEGO INTERNATIONAL AIRPORT TENANTS, CO-PERMITTEES

<u>Company</u>	<u>Operation</u>
AERO CALIFORNIA S.A. DE C.V.	- airline
AIR SUPPORT FACILITIES, INC.	- air cargo facility operator
AIRBORNE EXPRESS, INC.	- air cargo carrier
AIRCRAFT SERVICE INTERNATIONAL, INC.	- air cargo/hangar facility operator
ALASKA AIRLINES, INC.	- airline
AMERICA WEST AIRLINES, INC.	- airline
AMERICAN AIRLINES, INC.	- airline
ATLANTIC-RICHFIELD	- fueling operator
BURLINGTON AIR EXPRESS, INC.	- air cargo carrier
CATERAIR AIRPORT PROPERTIES, INC.	- inflight food services
CHEVRON USA, INC.	- fueling operation
CONTINENTAL AIRLINES, INC.	- airline
DELTA AIR LINES, INC.	- airline
EMERY AIR FREIGHT CORPORATION dba EMERY WORLD WIDE	- air cargo carrier
FEDERAL EXPRESS CORPORATION	- air cargo carrier
GRAND RENT A CAR CORP. dba AVIS RENT A CAR	- car rental
HERTZ CORPORATION	- car rental
HOST INTERNATIONAL	- food, beverage, gift, news concessions
JIMSAIR AVIATION SERVICES, INC.	- FBO, maintenance, fueling, airplane parking, car rental, etc.
JOHN DOUGLAS CORPORATION, THE dba DOLLAR RENT A CAR	- car rental
LEE-AL, INC.	- car rental

dba BUDGET RENT A CAR OF SAN DIEGO	
LINDBERGH PARKING, INC.	- parking lot operator
MIDWEST EXPRESS AIRLINES, INC.	- airline
NATIONAL CAR RENTAL SYSTEM, INC.	- car rental
NORTHWEST AIRLINES, INC.	- airline
P.S. TRADING, INC.	- fuel distributor
ROSENBALM AVIATION, INC.	- air cargo carrier
SKY CHEFS, INC.	- inflight food services
SKYWEST AVIATION, INC. dba SKYWEST AIRLINES	- airline
SOUTHWEST AIRLINES, INC. dba USAIR EXPRESS	- airline
TRANS WORLD AIRLINES, INC.	- airline
UNITED AIRLINES, INC.	- airline
UNITED PARCEL SERVICE CO.	- air cargo carrier
USAIR, INC.	- airline
WESTAIR COMMUTER AIRLINES, INC. dba UNITED EXPRESS	- airline
WINGS WEST AIRLINES, INC.	- airline

APPENDIX B
BEST MANAGEMENT PRACTICES

Appendix B – Best Management Practices (BMPs)



APPENDIX B

BEST MANAGEMENT PRACTICES (BMPS)

SC01	Non-Stormwater Management
SC02A	Outdoor Equipment Operations and Maintenance Areas
SC02B	Aircraft, Ground Vehicle, and Equipment Maintenance
SC03	Aircraft, Ground Vehicle, and Equipment Fueling
SC04	Aircraft, Ground Vehicle, and Equipment Cleaning
SC05	Aircraft De/ Anti-Icing;
SC06	Outdoor Loading/Unloading of Materials
SC07	Outdoor Material Storage
SC08	Waste Handling/Disposal
SC09	Building and Grounds Maintenance
SC10	Employee Training
SC11	Lavatory Service Operations
SC12	Outdoor Washdown/Sweeping (Apron Washing, Ramp Scrubbing)
SC13	Fire Fighting Foam Discharge
SC14	Potable Water System Flushing
SC15	Runway Rubber Removal
SC16	Parking Lots
SC17	Storm Drain Maintenance
SC18	Housekeeping
SC19	Safer/ Alternative Products
SR01	Spill Prevention, Control, and Clean-up
TC01	Treatment Controls

Appendix B – Best Management Practices (BMPs)

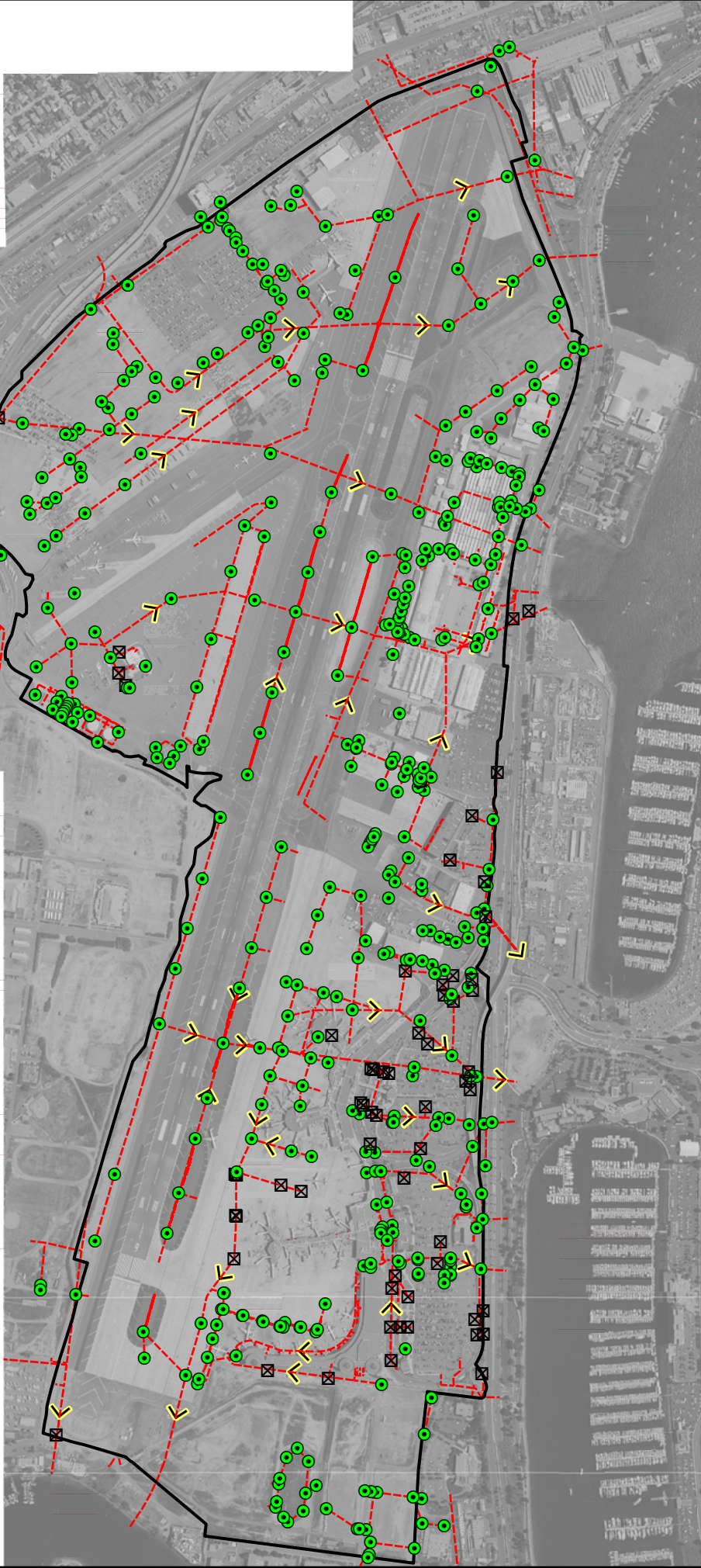
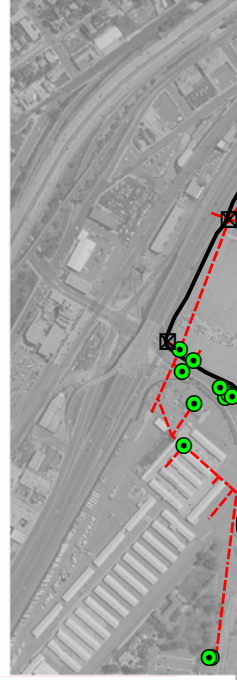


Appendix B – Best Management Practices (BMPs)

BMP SC01	NON-STORM WATER MANAGEMENT	
PURPOSE: Eliminate non-storm water discharges to the storm water collection system.		TARGETED ACTIVITIES: <ul style="list-style-type: none"> ➔ Aircraft Deicing/Anti-Icing ➔ Aircraft Lavatory Service ➔ All Cleaning ➔ All Fueling ➔ All Maintenance ➔ All Storage ➔ All Washing ➔ Cargo Handling ➔ Fire Fighting Equipment Testing ➔ Floor Washdowns ➔ Garbage Collection ➔ Painting/Stripping ➔ Potable Water System Flush ➔ Runway Rubber Removal
POLLUTION PREVENTION:		POLLUTANTS of CONCERN: <ul style="list-style-type: none"> ➔ Aircraft Fire Fighting Foam ➔ Battery Acid ➔ Deicing/Anti-Icing Fluid ➔ Dumpster Wastes ➔ Floatables ➔ Oil and Grease ➔ Fuel ➔ Landscape Waste ➔ Lavatory Chemical Wastes ➔ Metals ➔ Paint ➔ Pesticides/Herbicides/Fertilizers ➔ Potable Water System Chemicals ➔ Rubber Particles ➔ Sediment ➔ Solvents/Cleaning Solutions ➔ Vehicle Fluids
	<p>Implement the following pollution prevention practices and BMPs to prevent non-storm water discharges to the storm water collection system (also see Section 3 for authorized and unauthorized non-storm water discharges, and BMPs to control them):</p> <ul style="list-style-type: none"> <input type="checkbox"/> Perform visual inspections of discharge points to the storm drain system – observe uncharacteristic volumes, colors, turbidity, odors, deposition, staining, floatables, and foaming characteristics of any flow. <input type="checkbox"/> Locate illicit connections to the storm drain system by visual inspections, CCTV survey, smoke testing, and electromagnetic radio frequency testing. <input type="checkbox"/> Isolate problem areas and plug illicit discharge points. <input type="checkbox"/> Post “No Dumping” signs with a phone number for reporting dumping and disposal. <input type="checkbox"/> Use “dry” cleaning and surface preparation techniques where feasible. <input type="checkbox"/> Inspect waste and material containers frequently for leaks and proper closure seal. <input type="checkbox"/> Maintain adequate supplies of spill response equipment and materials in accessible locations near areas where spills may occur. <p>NEVER HOSE DOWN OR BURY MATERIAL SPILLS</p>	

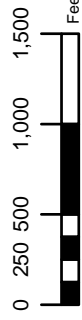
Appendix B – Best Management Practices (BMPs)

OPERATIONS:		APPLICABLE TENANTS/DEPARTMENTS: → Aero Mexico → Alaska Airlines → Allied Aviation → Aloha Airlines → American Airlines → American Eagle → ARFF → ASIG → BAX Global → Continental → Delta → DHL Express → Elite Line Services → Exec Air → Express Jet → FedEx → Frontier → Hawaiian → HMS Host → Jet Wash Inc. → Jet Blue → Jimsair → LPi → Midwest → Northwest → SDCRAA → Sky West → Southwest → SPC → United → UPS → US Airways
Sub-BMPs	- 01 <input type="checkbox"/> Notify Airport Operations (619-400-2710) and the Airport Authority Environmental Affairs Department (619-400-2784) if there is any evidence of illicit connections or illegal discharges. - 02 <input type="checkbox"/> Provide the appropriate level of employee, tenant and public training or education in non-storm water discharge management, i.e., spill response and prevention, non-storm water pollution prevention, and hazardous materials management. 03 <input type="checkbox"/> Limit the availability of outdoor water supplies (hose bibs) and post with appropriate use signs to discourage uses that may pollute the storm drain system/receiving water. - 04 <input type="checkbox"/> Ensure the site is free of illicit connections and illegal discharges.	
STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.		
AUTHORIZED LOCATIONS TO IMPLEMENT BMPs TO PREVENT NON-STORM WATER DISCHARGES:		
<input type="checkbox"/>	Implement BMPs for the prevention of non-storm water discharges within the entire airport boundary. In particular, do not discharge non-storm water to the designated areas (storm drains) as shown on the attached map.	
Date:		Version: 1.0



Legend

-  Catch Basin
-  Storm Drain
-  Storm Drain Line
-  Flow Direction



PROJECT NO.: 5012-08-0002

DATE: February 2008

DRAWN BY: SKR

CHECKED BY:



San Diego
International Airport

BMP SC-01
Non-Stormwater Management

FIGURE
SC-01

Appendix B – Best Management Practices (BMPs)

BMP SC02A	OUTDOOR EQUIPMENT OPERATIONS AND MAINTENANCE AREAS	
PURPOSE: To prevent the discharge of pollutants to storm water from outdoor equipment operations and general maintenance facilities.		TARGETED ACTIVITIES: ➔ All Outdoor Equipment Operations ➔ All Maintenance
POLLUTION PREVENTION: <div style="display: flex; align-items: flex-start;"> <div style="flex: 1; padding-right: 10px;"> <input type="checkbox"/> Provide covered maintenance areas when designing new facilities or upgrading existing facilities. If possible utilize indoor areas, lean-tos, or portable covers. <input type="checkbox"/> Perform the activity during dry periods. <input type="checkbox"/> Use non-toxic, biodegradable chemicals or products for maintenance, minimize or eliminate the use of solvents and substitute materials with less hazardous properties where feasible. <input type="checkbox"/> Use absorbent materials at potential problem areas. Adequately collect/remove absorbent materials from area after use and dispose of them in an appropriate manner. <input type="checkbox"/> DO NOT HOSE DOWN WORK AREAS TO THE STORM DRAIN SYSTEM. Notify Airport Operations (619-400-2710) and the Airport Authority Environmental Affairs Department (619-400-2784) if any evidence of the disposal of solvents or cleaning solutions to the storm drain has occurred. </div> <div style="flex: 1;"> POLLUTANTS of CONCERN: ➔ Bacteria ➔ Battery Acid ➔ Fuel ➔ Metals ➔ Nutrients ➔ Oil and Grease ➔ Organics ➔ Paint ➔ Sediments ➔ Solvents/Cleaning Solutions ➔ Trash ➔ Vehicle Fluids </div> </div>		
OPERATIONS:		APPLICABLE TENANTS/ DEPARTMENTS:
Sub-BMPs - 01 <input type="checkbox"/> - 02 <input type="checkbox"/>	Equipment operations and maintenance areas should not be located directly in the path of storm drains. Perform equipment operations and maintenance in designated areas with overhead cover for pollutant sources and/or activity areas. SEE ALSO BMP SC02B	➔ Aero Mexico ➔ Alaska Airlines ➔ Allied Aviation ➔ Aloha ➔ American Airlines ➔ American Eagle ➔ ARFF ➔ ASIG ➔ BAX Global ➔ Delta ➔ DHL Express ➔ Elite Line Service ➔ Exec Air ➔ Express Jet ➔ FedEx ➔ Frontier ➔ Hawaiian ➔ Jet Wash ➔ Jimsair

Appendix B – Best Management Practices (BMPs)

		<ul style="list-style-type: none"> ➔ LPi ➔ Midwest ➔ Northwest ➔ SDCRAA ➔ Sky West ➔ Southwest ➔ SPC ➔ United ➔ UPS ➔ US Airways
STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.		
AUTHORIZED OUTDOOR OPERATIONS AND MAINTENANCE LOCATIONS:		
<input type="checkbox"/>	Use only the designated areas for outdoor operations and maintenance activities as shown in the attached map.	
Date:		Version: 1.0



Facilities Legend

1 - AeroMexico	5 - American Airlines	9 - BAX Global	13 - Elite Line Services	17 - Frontier	21 - JetBlue	25 - Midwest	31 - SPC
2 - Alaska	6 - American Eagle	10 - Continental	14 - ExecAir	18 - Hawaiian	22 - Jimsair	26 - Northwest	32 - United
3 - Allied Aviation	7 - ARFF	11 - Delta	15 - Express Jet	19 - HMS Host	23 - Landfill	29 - SkyWest	33 - UPS
4 - Aloha	8 - ASIG	12 - DHL	16 - FedEx	20 - Jet Wash, Inc.	24 - Lpi	30 - Southwest	34 - US Airways



PROJECT NO.:
5012-08-0002

DATE:
February 2008

DRAWN BY:
SKR

CHECKED BY:



San Diego
International Airport

BMP SC-02A
Outdoor Equipment Operations
and Maintenance Areas

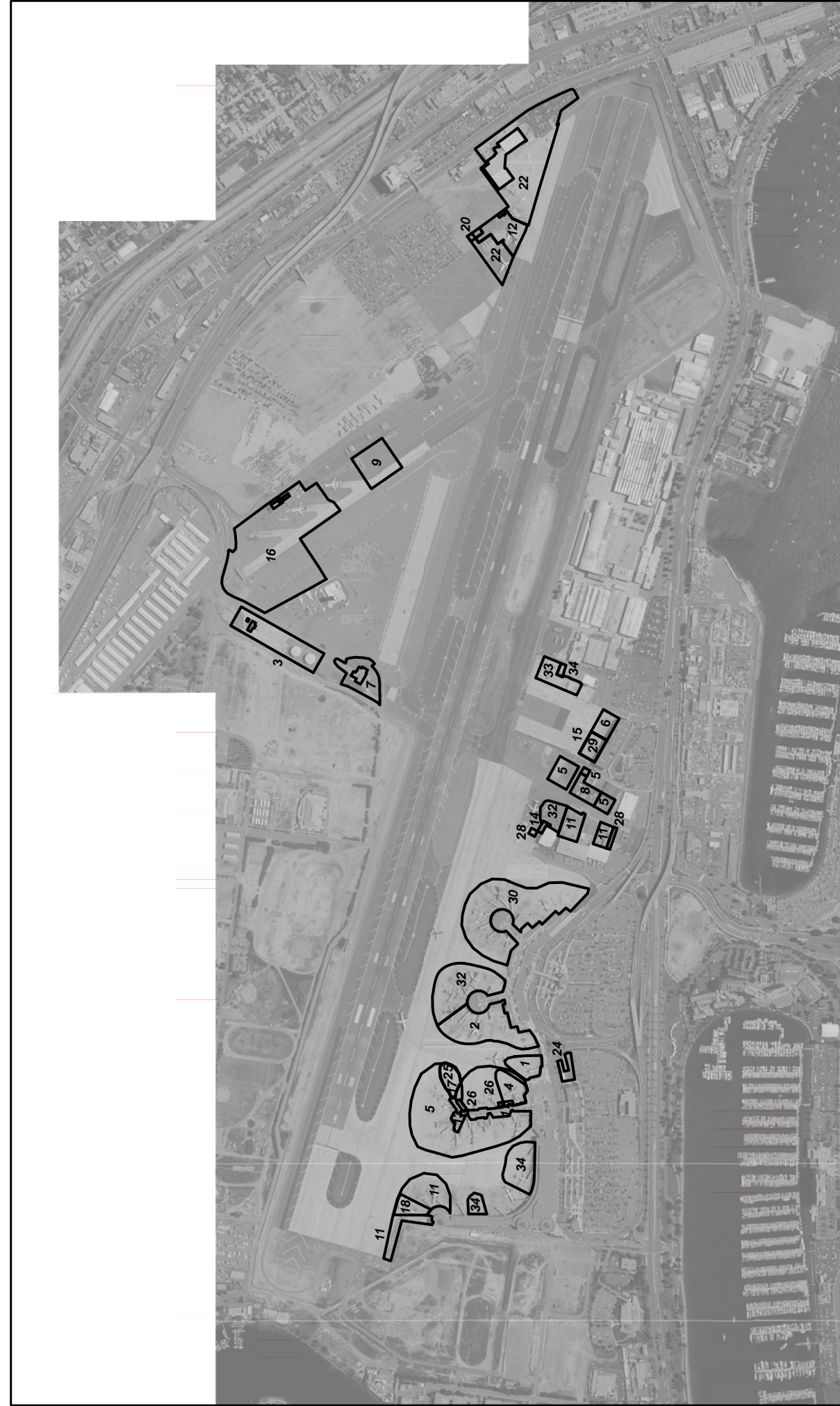
FIGURE
SC-02A

Appendix B – Best Management Practices (BMPs)

BMP SC02B	AIRCRAFT, GROUND VEHICLE, AND EQUIPMENT MAINTENANCE	
PURPOSE: To prevent or reduce the discharge of pollutants to storm water from any type of aircraft, vehicle, or equipment maintenance and repair, including ground vehicle and equipment painting/stripping and floor washdowns.		TARGETED ACTIVITIES: ➔ Aircraft Maintenance ➔ Vehicle Maintenance ➔ Equipment Maintenance
POLLUTION PREVENTION: Implement the following pollution prevention practices and BMPs to prevent discharges of pollutants to the storm water collection system: <ul style="list-style-type: none"> <input type="checkbox"/> Provide covered maintenance areas when designing new facilities or upgrading existing facilities. Utilize indoor areas, lean-tos, or portable covers. <input type="checkbox"/> Perform the activity during dry periods. <input type="checkbox"/> Use non-toxic, biodegradable chemicals or products for maintenance, minimize or eliminate the use of solvents and substitute materials with less hazardous properties where feasible. <input type="checkbox"/> Recycle or properly dispose of the following: greases, oils, antifreeze, brake fluid, cleaning solutions, hydraulic fluid, batteries and transmission fluid. Drain and crush oil filters and oil containers before recycling or disposal. Store crushed oil filters, empty lubricant containers, and cracked batteries in a leak-proof covered container. <input type="checkbox"/> DO NOT HOSE DOWN WORK AREAS TO THE STORM DRAIN SYSTEM. Notify Airport Operations (619-400-2710) and the Airport Authority Environmental Affairs Department (619-400-2784) if there is any evidence of the disposal of solvents, cleaning solutions or other materials to the storm drain, or hosing down of work areas. 		POLLUTANTS of CONCERN: ➔ Battery Acid ➔ Fuel ➔ Metals ➔ Nutrients ➔ Oil and Grease ➔ Organics ➔ Paint ➔ Sediments ➔ Solvents/Cleaning Solutions ➔ Vehicle Fluids
OPERATIONS: Sub-BMPs <ul style="list-style-type: none"> - 01 <input type="checkbox"/> Employees are trained in safe vehicle and equipment operations and maintenance. - 02 <input type="checkbox"/> Aircraft, vehicle and equipment maintenance areas should not be located directly in the path of storm drains. - 03 <input type="checkbox"/> Perform maintenance of aircraft, ground vehicles and equipment in designated areas that are either indoors or are covered, bermed, enclosed, or sloped/positioned away from the MS4. - 04 <input type="checkbox"/> Perform regular equipment inspection and testing. - 05 <input type="checkbox"/> Inspect aircraft, vehicles and equipment on a regular basis for fluid leaks. Place drip pans under leaks as needed. - 06 <input type="checkbox"/> Maintain aircraft, vehicles and equipment in good condition to prevent or correct any leakage of oil or other fluids. - 07 <input type="checkbox"/> Use drip pans during maintenance. 		APPLICABLE TENANTS/ DEPARTMENTS: ➔ Aero Mexico ➔ Alaska Airlines ➔ Allied Aviation ➔ Aloha ➔ American Airlines ➔ American Eagle ➔ ARFF ➔ ASIG ➔ BAX Global ➔ Delta ➔ DHL Express ➔ Elite Line Service ➔ Exec Air ➔ Express Jet ➔ FedEx ➔ Frontier ➔ Hawaiian ➔ Jet Wash

Appendix B – Best Management Practices (BMPs)

<p>- 08 <input type="checkbox"/></p> <p>- 09 <input type="checkbox"/></p> <p>- 10 <input type="checkbox"/></p> <p>- 11 <input type="checkbox"/></p> <p>- 12 <input type="checkbox"/></p> <p>- 13 <input type="checkbox"/></p>	<p>Do not leave drip pans containing fluids or other open containers lying around. Regularly transfer fluids for recycling or proper disposal.</p> <p>Minimize the use of solvents or use less toxic solvents whenever possible. If solvents cannot be avoided, clean or drain parts in self-contained sinks or drum units, and check those units regularly for leaks.</p> <p>Store mechanical parts, equipment and vehicles awaiting repair under cover and away from storm drains.</p> <p>Store spill response materials in maintenance areas and on maintenance vehicles. Adequately collect/remove absorbent materials from area after use and dispose of them in an appropriate manner.</p> <p>Remove fluids and batteries from salvage vehicles and equipment and dispose of properly.</p> <p>Properly dispose of obsolete and inoperable vehicles and equipment.</p>	<p>➔ Jimsair</p> <p>➔ LPi</p> <p>➔ Midwest</p> <p>➔ Northwest</p> <p>➔ SDCRAA</p> <p>➔ Sky West</p> <p>➔ Southwest</p> <p>➔ United</p> <p>➔ UPS</p> <p>➔ US Airways</p>
<p>STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.</p>		
<p>AUTHORIZED AIRCRAFT, GROUND VEHICLE AND EQUIPMENT MAINTENANCE LOCATIONS:</p>		
<p><input type="checkbox"/></p>	<p>Use only the designated areas for aircraft, ground vehicle and equipment maintenance as shown in the attached map.</p>	
<p>Date:</p>		<p>Version: 1.0</p>



Facilities Legend

- | | | | | | | |
|---------------------|-----------------------|--------------------------|------------------|---------------------|----------------|-----------------|
| 1 - AeroMexico | 5 - American Airlines | 9 - BAX Global | 14 - ExecAir | 18 - Hawaiian | 25 - Midwest | 30 - Southwest |
| 2 - Alaska | 6 - American Eagle | 11 - Delta | 15 - Express Jet | 20 - Jet Wash, Inc. | 26 - Northwest | 32 - United |
| 3 - Allied Aviation | 7 - ARFF | 12 - DHL | 16 - FedEx | 22 - Jimsair | 28 - SDCRAA | 33 - UPS |
| 4 - Aloha | 8 - ASIG | 13 - Elite Line Services | 17 - Frontier | 24 - Lpi | 29 - SkyWest | 34 - US Airways |



PROJECT NO.:	5012-08-0002
DATE:	February 2008
DRAWN BY:	SKR
CHECKED BY:	

**San Diego
International Airport**



**BMP SC-02B
Aircraft, Ground Vehicle,
and Equipment Maintenance**

FIGURE
SC-02B

Appendix B – Best Management Practices (BMPs)

BMP SC03	AIRCRAFT, GROUND VEHICLE, AND EQUIPMENT FUELING	
PURPOSE: To prevent fuel spills and leaks, and reduce their impacts to storm water.		TARGETED ACTIVITIES: ➔ Aircraft Fueling ➔ Vehicle Fueling ➔ Equipment Fueling
POLLUTION PREVENTION: Implement the following pollution prevention practices and BMPs to prevent fuel discharges to the storm water collection system: <ul style="list-style-type: none"> <input type="checkbox"/> Use pigs/mats over storm drains during fueling activities. <input type="checkbox"/> Fuel pumps should be posted with signs stating “No Topping Off” to prevent overflow. <input type="checkbox"/> Use absorbent materials and spot cleaning for small spills, and properly dispose of the spill response materials. <input type="checkbox"/> Properly dispose of any fuel spills and leaks. If feasible, collect any fuel spills through vacuum equipment / trucks. <input type="checkbox"/> Report leaking vehicles to fleet maintenance. <input type="checkbox"/> Develop and implement a Spill Prevention, Control and Countermeasure (SPCC) Plan if required under guidelines set forth in 40 CFR, Section 112. <input type="checkbox"/> DO NOT DISCHARGE FUEL TO A CATCH BASIN OR STORM DRAIN. Notify Airport Operations (619-400-2710) and the Airport Authority Environmental Affairs Department (619-400-2784) if any fuel spill or leak is observed. 		POLLUTANTS of CONCERN: ➔ Fuel ➔ Metals ➔ Oil and Grease ➔ Organics
OPERATIONS: Sub-BMPs <ul style="list-style-type: none"> - 01 <input type="checkbox"/> Perform aircraft, ground vehicle and equipment fueling in the designated areas that are covered, bermed, enclosed, or sloped/positioned away from the MS4. - 02 <input type="checkbox"/> Fueling areas should not be located directly in the path of storm drains. - 03 <input type="checkbox"/> Label, regularly inspect and keep in good condition all tanks, piping and valves. - 04 <input type="checkbox"/> Store absorbent booms, spill kits, or vacuum equipment in fueling areas or on fueling vehicles. - 05 <input type="checkbox"/> Regularly inspect fueling areas. - 06 <input type="checkbox"/> Monitor major fueling operations. - 07 <input type="checkbox"/> Use secondary containment or cover when transferring fuel from a tanker truck to a fuel tank. 		APPLICABLE TENANTS/ DEPARTMENTS: ➔ Aero Mexico ➔ Alaska Airlines ➔ Allied Aviation ➔ Aloha ➔ American Airlines ➔ American Eagle ➔ ARFF ➔ ASIG ➔ BAX Global ➔ Continental ➔ Delta ➔ DHL Express ➔ Elite Line Service ➔ Exec Air ➔ Express Jet ➔ FedEx ➔ Frontier

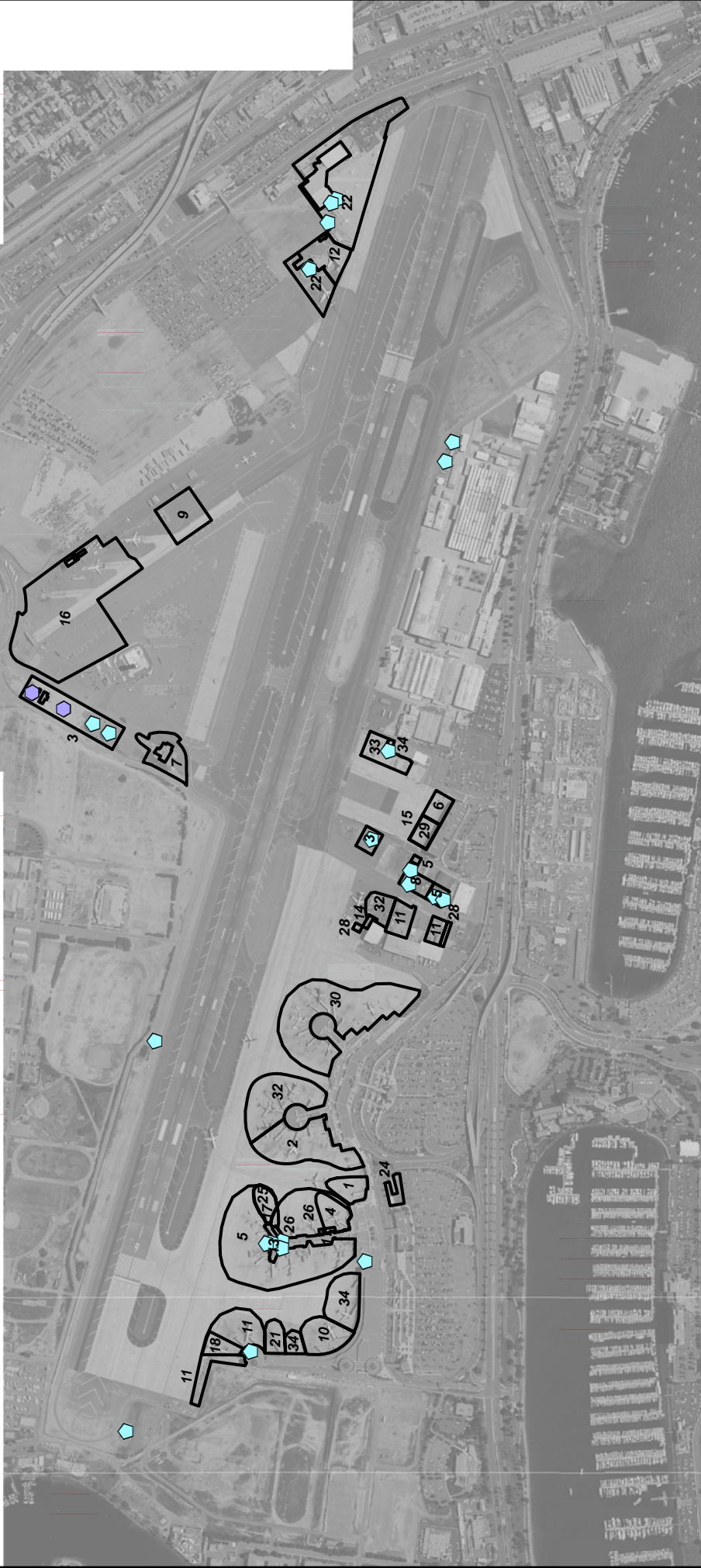
Appendix B – Best Management Practices (BMPs)

- 08 <input type="checkbox"/> - 09 <input type="checkbox"/> - 10 <input type="checkbox"/> -11 <input type="checkbox"/>	Use leak detection, overfill protection and spill prevention devices for tanks and piping. Use automatic shut-off mechanisms for fuel tankers and hose connections. Do not top off fuel tanks. Restrict access to fuel tanks and fueling vehicles.	➔ Hawaiian ➔ Jet Blue ➔ Jimsair ➔ LPi ➔ Midwest ➔ Northwest ➔ SDCRAA ➔ Sky West ➔ Southwest ➔ SPC ➔ United ➔ UPS ➔ US Airways
STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.		
AUTHORIZED AIRCRAFT, GROUND VEHICLE AND EQUIPMENT FUELING LOCATIONS:		
<input type="checkbox"/>	Use only the designated areas for aircraft, ground vehicle and equipment fueling as shown in the attached map.	
Date:		Version: 1.0

Legend

Fueling

Fuel Storage



Facilities Legend

0	250	500	1,000	1,500	Feet	13 - Elite Line Services	17 - Frontier	24 - Lpi	29 - SkyWest	34 - US Airways
						14 - ExecAir	18 - Hawaiian	25 - Midwest	30 - Southwest	
						15 - Express Jet	21 - JetBlue	26 - Northwest	32 - United	
						16 - FedEx	22 - Jimsair	28 - SDCRAA	33 - UPS	

PROJECT NO.:	5012-08-0002
DATE:	February 2008
DRAWN BY:	SKR
CHECKED BY:	



MACTEC

MACTEC Engineering and Consulting Inc.

San Diego
International Airport

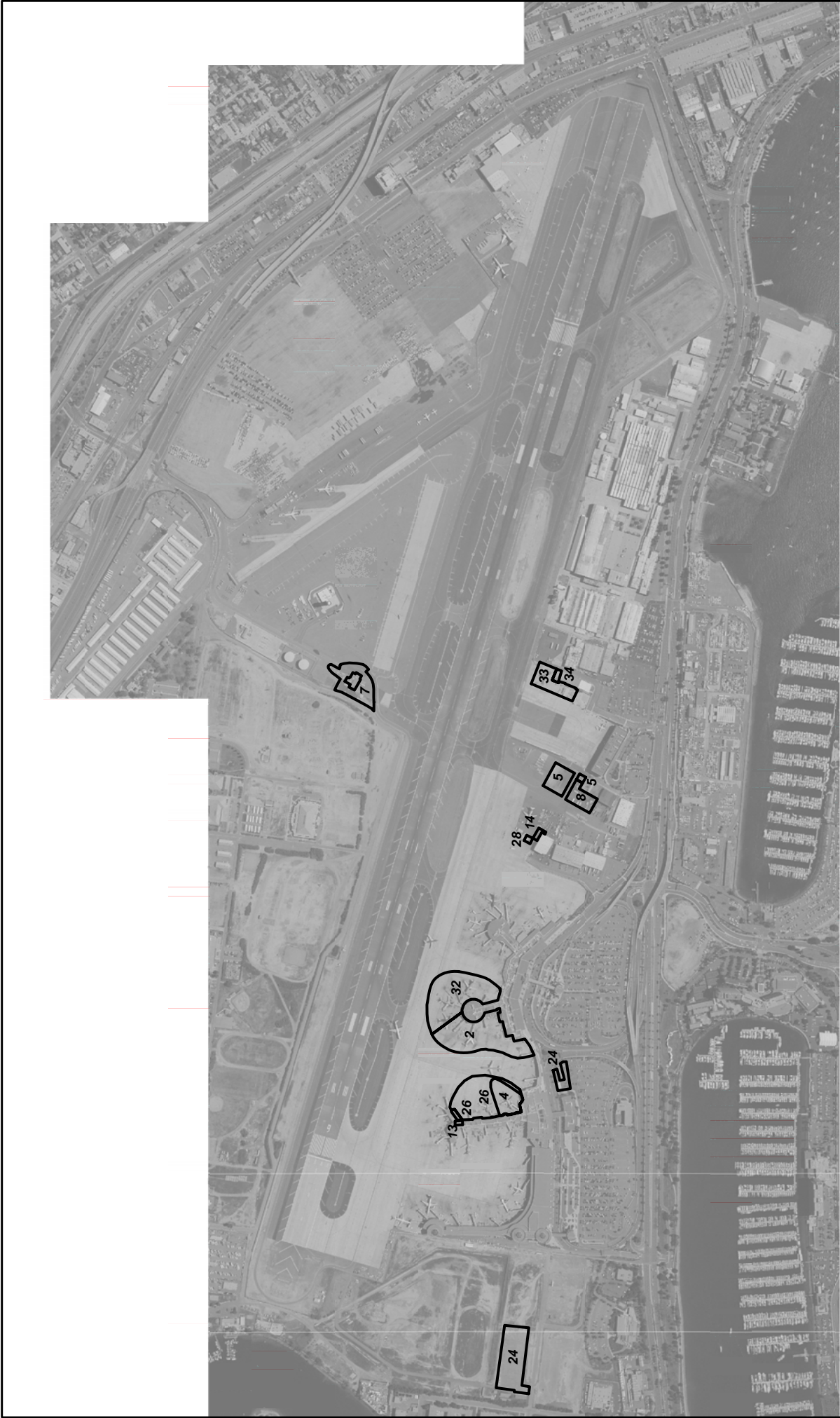
BMP SC-03
Aircraft, Ground Vehicle,
and Equipment Fueling

Appendix B – Best Management Practices (BMPs)

BMP SC04		AIRCRAFT, GROUND VEHICLE, AND EQUIPMENT CLEANING	
PURPOSE: Prevent or reduce the discharge of pollutants to storm drains from aircraft, vehicle, and equipment washing, and equipment degreasing.		TARGETED ACTIVITIES: ➔ Aircraft Washing ➔ Vehicle Washing ➔ Equipment Washing ➔ Equipment Degreasing	
POLLUTION PREVENTION: <div> <input type="checkbox"/> Implement the following pollution prevention practices and BMPs to prevent discharges from the cleaning of aircraft, ground vehicles and equipment to the storm water collection system: <input type="checkbox"/> Store significant cleaning materials in leak-free containers and within areas of secondary containment. <input type="checkbox"/> Use biodegradable, non-toxic cleaning solutions. <input type="checkbox"/> DO NOT DISCHARGE WASTE WASH WATER OR CLEANING AGENTS TO A CATCH BASIN OR STORM DRAIN. Notify Airport Operations (619-400-2710) and the Airport Authority Environmental Affairs Department (619-400-2784) if any non-storm water discharges from cleaning activities to the storm drain system are observed. </div>		POLLUTANTS of CONCERN: ➔ Cleaning Solutions ➔ Oil and Grease ➔ Solvents ➔ Vehicle Fluids ➔ Metals	
OPERATIONS: Sub-BMPs - 01 <input type="checkbox"/> Keep vehicles, equipment, and washing areas clean and free of waste. - 02 <input type="checkbox"/> Use dry washing and surface preparation techniques where feasible. - 03 <input type="checkbox"/> Wash areas should not be located directly in the path of storm drains. - 04 <input type="checkbox"/> Use pigs and cover mats to cover all catch basins in the surrounding area to contain the wash water during washing activities. - 05 <input type="checkbox"/> Perform all washing activities in designated areas that capture or divert all wash water to a structural treatment control BMP, sanitary sewer or dead end sump with pump. - 06 <input type="checkbox"/> Perform routine visual observations of washing activities and inspect nearby storm drains to detect discharges from cleaning activities. - 07 <input type="checkbox"/> Filter and recycle wash water where possible. If not possible, collect and properly dispose of the contained wash water. - 08 <input type="checkbox"/> Remove all excess materials such as drippings and residue by using vacuum methods. Properly dispose of all waste materials.		APPLICABLE TENANTS/ DEPARTMENTS: ➔ Alaska ➔ Aloha ➔ American Airlines ➔ American Eagle ➔ ARFF ➔ ASIG ➔ BAX Global ➔ Delta ➔ DHL ➔ Elite Line Services ➔ Exec Air ➔ Express Jet ➔ HMS Host ➔ Jet Wash ➔ Jimsair ➔ LPI ➔ Northwest ➔ SDCRAA ➔ Sky West ➔ Southwest ➔ SPC Airport Services ➔ United ➔ UPS ➔ US Airways	

Appendix B – Best Management Practices (BMPs)

STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.		
AUTHORIZED AIRCRAFT, GROUND VEHICLE AND EQUIPMENT CLEANING:		
<input type="checkbox"/>	Use only the designated areas for aircraft, ground vehicle and equipment cleaning as shown in the attached map.	
Date:		Version: 1.0



Facilities Legend

- | | | | |
|-----------------------|--------------------------|----------------|-----------------|
| 2 - Alaska | 8 - ASIG | 26 - Northwest | 34 - US Airways |
| 4 - Aloha | 13 - Elite Line Services | 28 - SDCRAA | |
| 5 - American Airlines | 14 - ExecAir | 32 - United | |
| 7 - ARFF | 24 - Lpi | 33 - UPS | |

PROJECT NO.: 5012-08-0002

DATE: February 2008

DRAWN BY: SKR

CHECKED BY:



San Diego
International Airport

BMP SC-04
Aircraft, Ground Vehicle,
and Equipment Cleaning

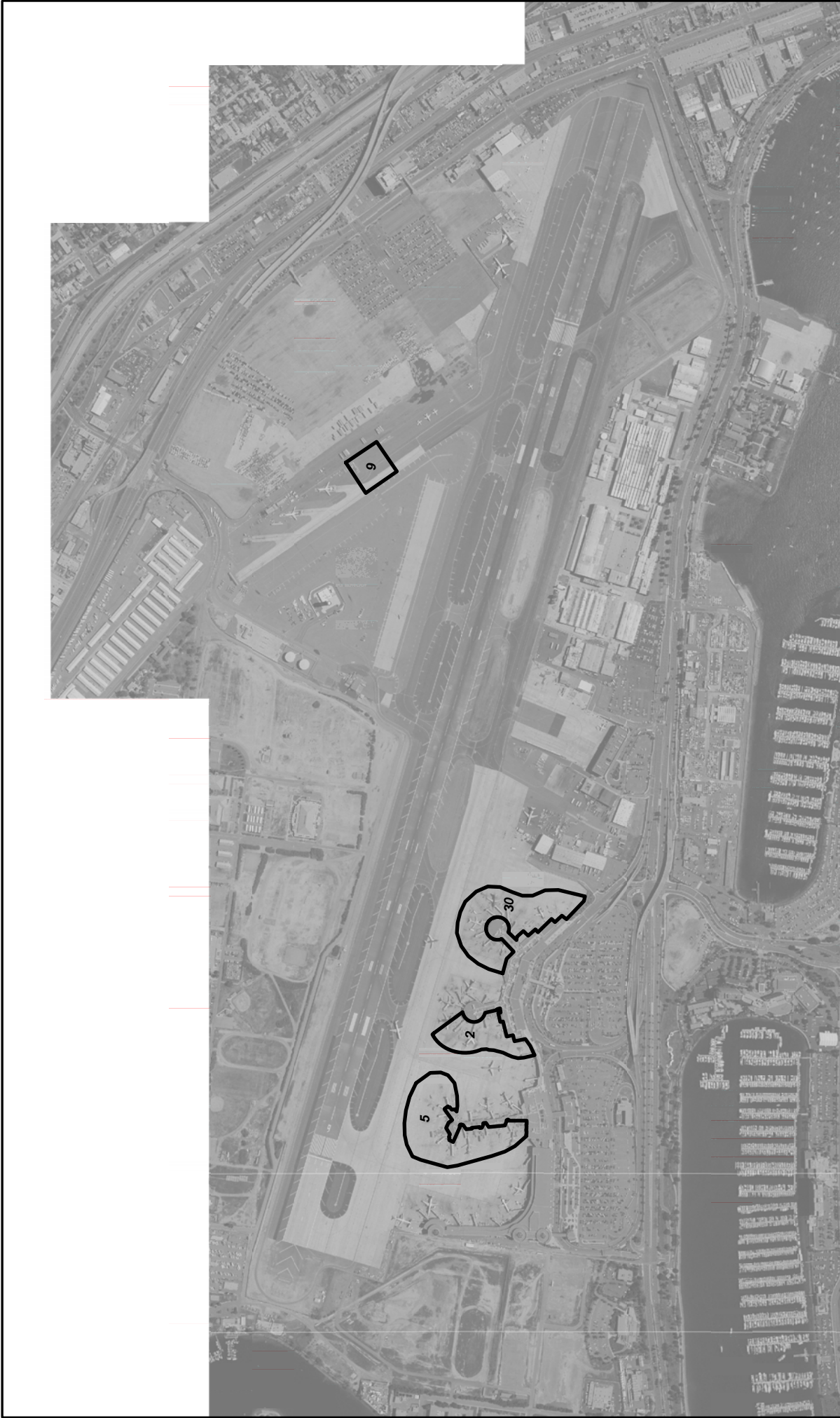
FIGURE
SC-04

Appendix B – Best Management Practices (BMPs)

BMP SC05	AIRCRAFT DEICING/ANTI-ICING	
PURPOSE: Prevent or reduce the discharge of pollutants to storm water from aircraft deicing and anti-icing procedures.		TARGETED ACTIVITIES: ➔ Aircraft Deicing ➔ Aircraft Anti-Icing
POLLUTION PREVENTION:		POLLUTANTS of CONCERN: ➔ Ethylene Glycol ➔ Propylene Glycol
	<p>Implement the following pollution prevention practices and BMPs to prevent discharges to the storm water collection system from aircraft deicing and anti-icing activities:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Depending on conditions, apply only enough fluid to surfaces to ensure the safe operation of the aircraft. Excess fluid dripped to the ground contaminates soil and water if not properly contained. <input type="checkbox"/> Maintain adequate supplies of spill response equipment and materials in accessible locations near areas where spills may occur. <input type="checkbox"/> Recycle or dispose of the fluids in accordance with local, state, and federal regulations. <input type="checkbox"/> Implement forthcoming recommendations of the FAA technical committee on deicing. <input type="checkbox"/> Provide the appropriate level of employee training in the following areas: spill response and prevention, storm water pollution prevention education, right-to-know awareness training, and hazardous materials management. <input type="checkbox"/> DO NOT OVERSPRAY OR ALLOW ANY DISCHARGE OF DEICING/ANTI-ICING AGENTS TO A CATCH BASIN OR STORM DRAIN. Notify Airport Operations (619-400-2710) and the Airport Authority Environmental Affairs Department (619-400-2784) if any discharges of aircraft deicing or anti-icing fluids have occurred. 	
OPERATIONS:		APPLICABLE TENANTS/ DEPARTMENTS:
Sub-BMPs - 01 <input type="checkbox"/> - 02 <input type="checkbox"/> - 03 <input type="checkbox"/> - 04 <input type="checkbox"/>	<p>Perform all anti-icing and deicing operations only in designated areas that are covered, bermed, enclosed or sloped/positioned away from the MS4.</p> <p>Monitor deicing and anti-icing operations regularly to ensure quantities of fluids used are at a minimum while not jeopardizing aircraft safety and operation.</p> <p>All fluids are captured or diverted to a structural treatment control BMP, recycling system, sanitary sewer or dead end sump with pump.</p> <p>Clean the designated anti-icing and deicing ramp areas following deicing/anti-icing operations with wet-type sweepers to remove deicing fluids from the paved areas.</p>	

Appendix B – Best Management Practices (BMPs)

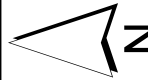
STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.		
AUTHORIZED LOCATIONS TO PERFORM AIRCRAFT ANTI-ICING AND DEICING ACTIVITIES:		
<input type="checkbox"/>	Use only the designated areas for aircraft anti-icing and deicing activities as shown in the attached map.	
Date:		Version: 1.0



Facilities Legend

- 2 - Alaska
- 5 - American Airlines
- 9 - BAX Global
- 30 - Southwest

PROJECT NO.:	5012-08-0002
DATE:	February 2008
DRAWN BY:	SKR
CHECKED BY:	



San Diego
International Airport

BMP SC-05
Aircraft Deicing/Anti-Icing

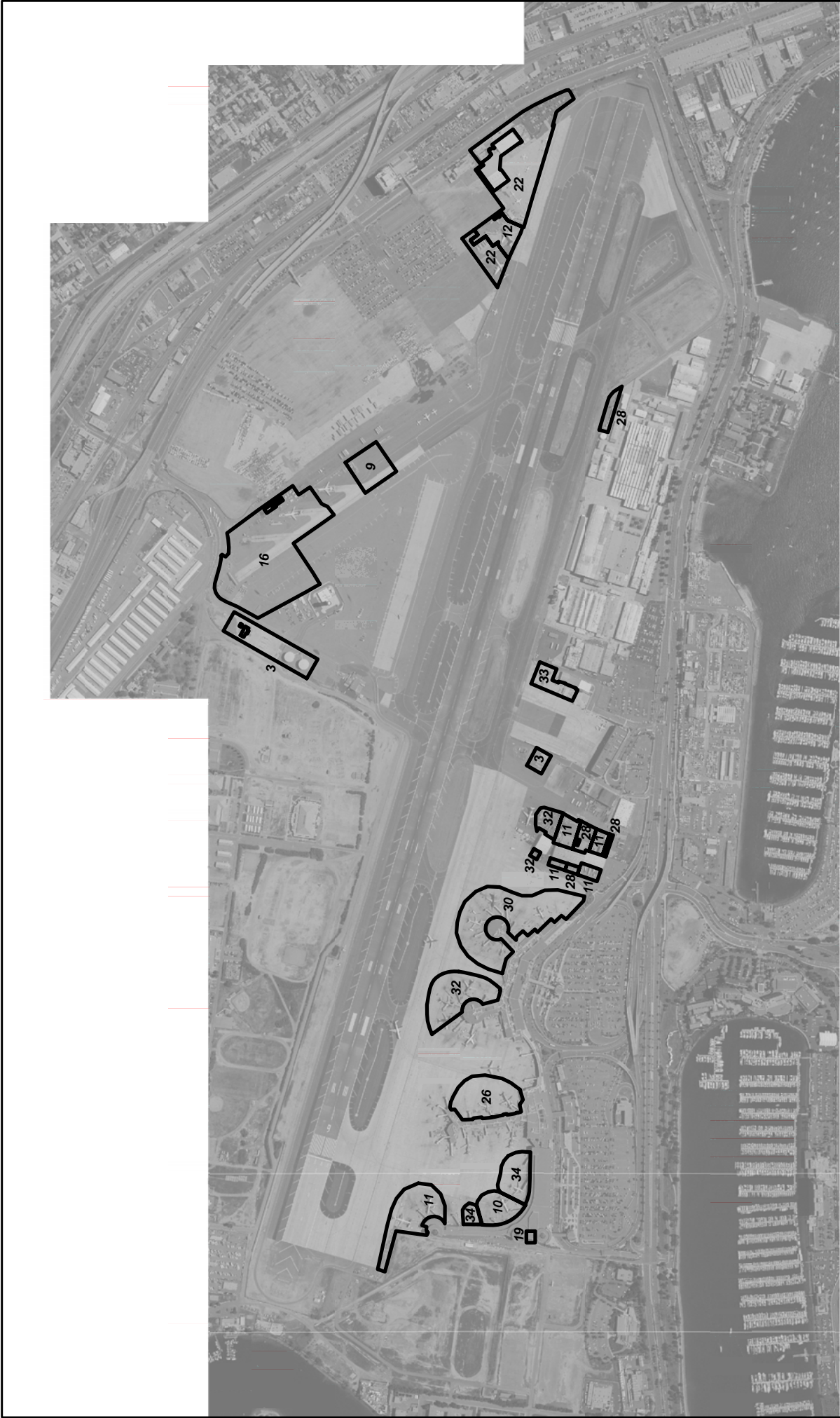
FIGURE
SC-05

Appendix B – Best Management Practices (BMPs)

BMP SC06		OUTDOOR LOADING/UNLOADING OF MATERIALS	
PURPOSE: Prevent or reduce the discharge of pollutants to storm water from loading and unloading of material and cargo.		TARGETED ACTIVITIES: ➔ Cargo Handling ➔ Fuel Storage ➔ Chemical Storage ➔ Equipment Storage	
POLLUTION PREVENTION:		POLLUTANTS of CONCERN:	
<input type="checkbox"/> Transfer materials in paved areas, away from storm drain inlets. <input type="checkbox"/> Contain and absorb leaks during transfers and spillage from hose disconnections; dispose of residue properly. <input type="checkbox"/> Notify Airport Operations (619-400-2710) and the Airport Authority Environmental Affairs Department (619-400-2784) if any evidence of illegal discharges from outdoor material loading and unloading is observed.	Implement the following pollution prevention practices and BMPs to prevent non-storm water discharges of pollutants from outdoor loading and unloading of materials to the storm water collection system:	➔ Fuel ➔ Pesticides/Herbicides/Fertilizers ➔ Oil and Grease ➔ Solvents/Cleaning Solutions ➔ Battery Acid	
OPERATIONS:		APPLICABLE TENANTS/ DEPARTMENTS:	
Sub-BMPs - 01 <input type="checkbox"/> Contractors and haulers should be made aware of and adhere to BMPs specifications that are relevant to the loading and unloading of materials. - 02 <input type="checkbox"/> Loading and unloading areas should not be located directly in the path of storm drains. - 03 <input type="checkbox"/> Loading and unloading areas should be graded, bermed, covered or otherwise protected to prevent contact with rainfall and storm water run-on and runoff. - 04 <input type="checkbox"/> Equipment used for loading and unloading should be checked on a regular basis for leaks. - 05 <input type="checkbox"/> Use drip pans or other containment measures under hoses. - 06 <input type="checkbox"/> Keep loading and unloading areas free of spills and debris by containing and absorbing leaks during transfers and spillage from hose disconnections or cargo pallets; dispose of residue or debris properly. - 07 <input type="checkbox"/> Spill kits or other measures are available in accessible locations near areas where spills may be likely to occur to contain spills and/or prevent tracking off-site.	➔ Allied Aviation ➔ ASIG ➔ BAX Global ➔ Delta ➔ DHL Express ➔ FedEx ➔ HMS Host ➔ Jimsair ➔ SDCRAA ➔ Southwest ➔ United ➔ UPS		

Appendix B – Best Management Practices (BMPs)

STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.		
AUTHORIZED LOCATIONS FOR THE OUTDOOR LOADING AND UNLOADING OF SIGNIFICANT MATERIALS:		
<input type="checkbox"/>	Use only the designated areas for outdoor loading and unloading of significant materials as shown in the attached map.	
Date:		Version: 1.0



Facilities Legend

- | | | | |
|---------------------|---------------|----------------|-----------------|
| 3 - Allied Aviation | 11 - Delta | 22 - Jimsair | 32 - United |
| 8 - ASIG | 12 - DHL | 26 - Northwest | 33 - UPS |
| 9 - BAX Global | 16 - FedEx | 28 - SDCRAA | 34 - US Airways |
| 10 - Continental | 19 - HMS Host | 30 - Southwest | |



PROJECT NO.:	5012-08-0002
DATE:	February 2008
DRAWN BY:	SKR
CHECKED BY:	

BMP SC-06
Outdoor Loading/Unloading
of Materials

San Diego
International Airport



FIGURE
SC-06

Appendix B – Best Management Practices (BMPs)

BMP SC07	OUTDOOR MATERIAL STORAGE	
<p>PURPOSE: Prevent or reduce the discharge of pollutants to storm water from outdoor storage areas for significant material (e.g., fuels, chemicals, bagged material on pallets, soils or asphalt materials bulk storage, deicing, compounds, etc.)</p>		<p>TARGETED ACTIVITIES:</p> <ul style="list-style-type: none"> ➔ Aircraft/Vehicle/Equipment Maintenance ➔ Aircraft/Vehicle Fueling ➔ Fuel/Chemical/Equipment Storage ➔ Cargo Handling
<p>POLLUTION PREVENTION:</p>		<p>POLLUTANTS of CONCERN:</p> <ul style="list-style-type: none"> ➔ Fuel ➔ Solvents/Cleaning Solutions ➔ Deicing/Anti-Icing Fluids
	<p>Implement the following pollution prevention practices and BMPs to prevent discharges of pollutants from outdoor storage areas to the storm water collection system:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Store all significant materials indoors or under cover areas. <input type="checkbox"/> Develop and implement a Spill Prevention Control and Countermeasure (SPCC) Plan if required. <input type="checkbox"/> Install overflow protection devices on ASTs to warn the operator or install automatic shut-off transfer pumps. <input type="checkbox"/> Restrict access to AST, piping, valves. <input type="checkbox"/> Properly label all storage containers <input type="checkbox"/> Train personnel in the handling and management of hazardous materials. <input type="checkbox"/> Store hazardous materials away from high-traffic areas to prevent accidental spills or damage to storage containers. <input type="checkbox"/> Use tarpaulins, plastic sheeting, roofs, buildings, and other enclosures for temporary or permanent coverings that are effective in preventing storm water contamination. <input type="checkbox"/> Stack storage containers in accordance with the manufacturers' directions. <input type="checkbox"/> In hazardous materials storage areas ensure sufficient aisle space to provide access for inspections and to improve the ease of material transport. <input type="checkbox"/> Place adequate spill kits in appropriate locations. 	
<p>OPERATIONS:</p>		<p>APPLICABLE TENANTS/</p>

Appendix B – Best Management Practices (BMPs)

Sub-BMPs	<div> <ul style="list-style-type: none"> - 01 <input type="checkbox"/> Outdoor material storage areas are not located directly in the path of storm drains. - 02 <input type="checkbox"/> Outdoor material storage areas have areas with overhead cover and secondary containment. - 03 <input type="checkbox"/> Outdoor material storage areas are prevented from contacting stormwater run-on and run-off (e.g., by the use of berms, wood pallets etc). - 04 <input type="checkbox"/> Cover and contain material stockpiles or implement erosion control practices at the perimeter of the site and at any inlets or catch basins to prevent the off-site transport of eroded material. - 05 <input type="checkbox"/> Cover wood products treated with preservative chemicals with tarps or store them indoors. - 06 <input type="checkbox"/> Install protection guards (bollards, posts, or guardrails) around ASTs and piping to prevent damage from vehicles or forklifts and any subsequent release. - 07 <input type="checkbox"/> Regular inspections are performed on tanks, storage containers, and berms to check for corrosion, structural failure, loose fittings, poor welds, leaks etc. Repairs or replacements are performed as needed. - 08 <input type="checkbox"/> Liquid materials in ASTs should be stored in double-walled, valved storage tanks or within concrete bermed secondary containment areas to provide the capacity to contain the entire volume of the single largest container, with sufficient freeboard to contain precipitation. The area inside the curb should slope to a drain. - 09 <input type="checkbox"/> Precipitation from bermed areas should be drained to the sanitary sewer if available, or inspected and tested according to applicable regulations prior to its release to a storm drain. The drain must have a positive control, such as a lock, valve, or plug, below the product level in the tank to prevent release of contaminated liquids. - 10 <input type="checkbox"/> Properly dispose of ponded storm water removed from bermed or containment areas. - 11 <input type="checkbox"/> The facility/operation has and displays a County hazardous materials permit for hazardous materials storage. - 12 <input type="checkbox"/> Maintain an accurate, up-to-date inventory of the materials delivered and stored on site. </div>	<div> <p>DEPARTMENTS:</p> <ul style="list-style-type: none"> ➔ Aero Mexico ➔ Alaska Airlines ➔ Allied Aviation ➔ American Airlines ➔ ARFF ➔ ASIG ➔ BAX Global ➔ Delta ➔ DHL Express ➔ Elite Line Service ➔ Exec Air ➔ FedEx ➔ Frontier ➔ Jet Blue ➔ Jet Wash Inc. ➔ Jimsair ➔ LPi ➔ Northwest ➔ SDCRAA ➔ Sky West ➔ Southwest ➔ SPC ➔ United ➔ UPS ➔ US Airways </div>
STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.		
AUTHORIZED LOCATIONS FOR THE OUTDOOR STORAGE OF SIGNIFICANT MATERIALS:		

Appendix B – Best Management Practices (BMPs)

<input type="checkbox"/>	To implement BMPs for the prevention of discharges of pollutants from outdoor storage areas, store significant materials at the designated storage areas as shown in the attached map.	
Date:		Version: 1.0

Legend

Significant Material Storage

- Metals Storage
- Fuel Storage
- Deicing Fluid

- Material Storage
- UST
- Oil Storage



Facilities Legend

- | | | | | | | |
|-----------------------|----------------|--------------------------|---------------------|----------------|----------------|-----------------|
| 1 - AeroMexico | 7 - ARFF | 12 - DHL | 17 - Frontier | 24 - Lpi | 30 - Southwest | 34 - US Airways |
| 2 - Alaska | 8 - ASIG | 13 - Elite Line Services | 20 - Jet Wash, Inc. | 26 - Northwest | 31 - SPC | |
| 3 - Allied Aviation | 9 - BAX Global | 14 - ExecAir | 21 - JetBlue | 28 - SDCRAA | 32 - United | |
| 5 - American Airlines | 11 - Delta | 16 - FedEx | 22 - Jimsair | 29 - SkyWest | 33 - UPS | |

PROJECT NO.: 5012-08-0002

DATE: February 2008

DRAWN BY: SKR

CHECKED BY:



**San Diego
International Airport**

**BMP SC-07
Outdoor Material Storage**

FIGURE
SC-07

Appendix B – Best Management Practices (BMPs)

BMP SC08	WASTE HANDLING AND DISPOSAL	
PURPOSE: Prevent or reduce the discharge of pollutants to storm water from waste handling, storage and disposal by through source reduction, re-use, and recycling; and preventing run-on and runoff from waste management areas, including waste/garbage collection areas.		TARGETED ACTIVITIES: ➔ Fuel/Chemical/Oil Waste Storage ➔ . Painting/Stripping ➔ . Waste/Garbage Collection
POLLUTION PREVENTION:		POLLUTANTS of CONCERN:
	Implement the following pollution prevention practices and BMPs to prevent discharges of pollutants from waste handling, storage and disposal to the storm water collection system: <div style="margin-left: 20px;"> <input type="checkbox"/> Inspect on a regular basis waste/garbage collection areas for spills and waste/garbage management containers for leaks. <input type="checkbox"/> Enclose or berm waste/garbage storage areas, if possible, to prevent contact with storm water run-on and run-off. <input type="checkbox"/> Place adequate spill kits in appropriate locations. </div>	➔ Oil and Grease ➔ Paints ➔ . Solvents/Cleaning Solutions ➔ . Trash and Debris ➔ . Vehicle Fluids
OPERATIONS:		APPLICABLE TENANTS/ DEPARTMENTS:
Sub-BMPs	<div style="margin-left: 20px;"> - 01 <input type="checkbox"/> Reduce the amount of waste generated (e.g., use only amount needed, use solvents more than once, practice good inventory control, do not over-buying, purchase long-lasting products, etc.).. - 02 <input type="checkbox"/> Recycle materials whenever possible. - 03 <input type="checkbox"/> Designate waste/recycling areas with restrict access. - 04 <input type="checkbox"/> Do not locate waste/recycling areas directly in the path of storm drains. - 05 <input type="checkbox"/> Provide secondary containment and cover for wastes. - 06 <input type="checkbox"/> Wastes that are not contained or covered are prevented from contacting storm water and run-on and run-off by the use of berms. - 07 <input type="checkbox"/> All dumpsters are covered and kept closed and any drain holes plugged. - 08 <input type="checkbox"/> Inspect on a frequent basis all waste collection and storage containers for evidence of leaks, spills, compromised structural integrity, and proper closure seal. - 09 <input type="checkbox"/> Train all employees in the proper handling and disposal of waste materials. - 10 <input type="checkbox"/> Store wastes and recyclable materials in appropriate containers and segregate and properly labeled them. </div>	➔ . Aero Mexico ➔ . Alaska Airlines ➔ . Allied Aviation ➔ . American Airlines ➔ . ARFF ➔ . ASIG ➔ . BAX Global ➔ . Delta ➔ . DHL Express ➔ . Elite Line Service ➔ . Exec Air ➔ . FedEx ➔ . HMS Host ➔ . Jet Wash Inc. ➔ . Jimsair ➔ . LPi ➔ . Northwest ➔ . SDCRAA ➔ . Sky West ➔ . Southwest ➔ . SPC ➔ . United ➔ . UPS ➔ . US Airways

Appendix B – Best Management Practices (BMPs)

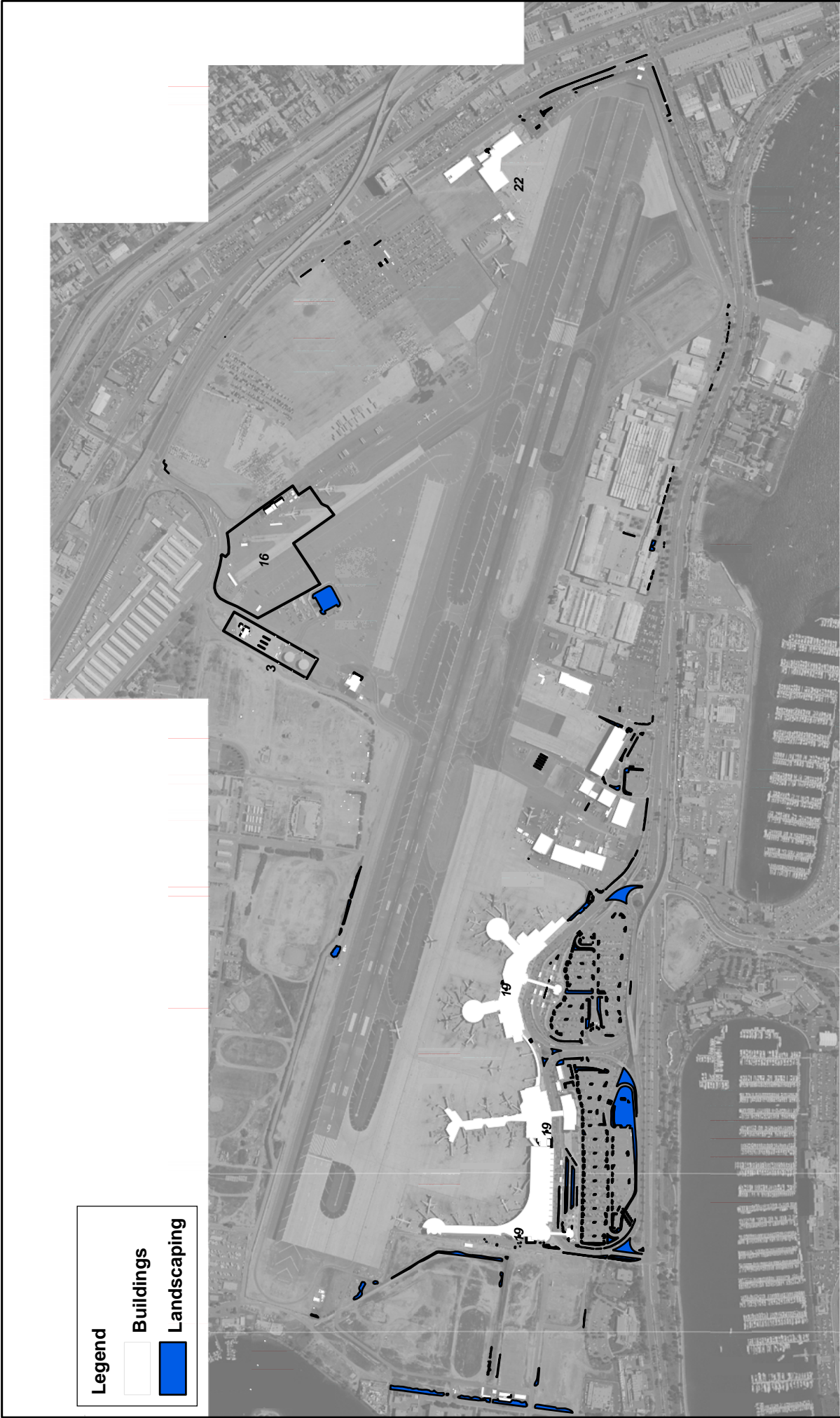
- 11 <input type="checkbox"/> - 12 <input type="checkbox"/> - 13 <input type="checkbox"/> - 14 <input type="checkbox"/>	Wastes are properly characterized and disposed of. Prevent overflow of waste containers by timely pickup/service and removal. Perform dumpster cleaning in designated areas that are bermed to contain wash water. Properly dispose of all fluids collected or discharge to the sanitary sewer. Track waste generated, stored, and disposed.	
STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.		
AUTHORIZED LOCATIONS FOR WASTE HANDLING AND DISPOSAL:		
<input type="checkbox"/>	Conduct waste handling and disposal activities in the designated areas as shown in the attached map.	
Date:		Version: 1.0

Appendix B – Best Management Practices (BMPs)

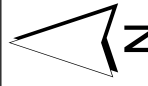
BMP SC09	BUILDING AND GROUNDS MAINTENANCE	
PURPOSE: Prevent or reduce the discharge of pollutants to storm water from building and grounds maintenance by washing and cleaning up with as little water as possible, preventing and cleaning up spills immediately, keeping debris from entering storm drains, and maintaining the storm water collection system.		TARGETED ACTIVITIES: → . Building Maintenance → . Grounds Maintenance
POLLUTION PREVENTION: Implement the following pollution prevention practices and BMPs to prevent discharges of pollutants from building and grounds maintenance to the storm water collection system: <div style="list-style-type: none;"> <input type="checkbox"/> Regularly clean paved surfaces that are exposed to industrial activity. Use “dry” cleaning techniques, such as sweeping, whenever possible. </div> <div style="list-style-type: none;"> <input type="checkbox"/> Clean any catch basins that receive runoff from maintenance areas on a regular basis. Use a vacuum truck to remove accumulated materials. Do not flush wastes into the storm drain system. </div> <div style="list-style-type: none;"> <input type="checkbox"/> Minimize use of pesticides, herbicides, and fertilizers and use according to directions. Seek less harmful/toxic products to replace ones currently used. </div> <div style="list-style-type: none;"> <input type="checkbox"/> Reduce the exposure of galvanized metal structures to rainfall. Possible actions to reduce exposure include; application of a coating of inert paint to the metal surface, replace uncoated galvanized metal fence with vinyl coated galvanized steel or polyester coated galvanized steel. </div> <div style="list-style-type: none;"> <input type="checkbox"/> Investigate the use of downspout filters on roof downspouts to minimize pollutants in roof runoff. </div> <div style="list-style-type: none;"> <input type="checkbox"/> Use safer non-toxic products for the outside painting of buildings and grounds maintenance. </div> <div style="list-style-type: none;"> <input type="checkbox"/> Reduce the exposure of galvanized metal structures to rainfall, by using coated galvanized structures or coating or painting existing structures with non-toxic paints or coatings. </div>		POLLUTANTS of CONCERN: → . Pesticides/Herbicides/ Fertilizers → . Oil and Grease → . Sediment → . Landscape Waste → . Metals → . Cleaning Solutions
OPERATIONS: Sub-BMPs <div style="list-style-type: none;"> - 01 <input type="checkbox"/> Landscape, re-vegetate, or install erosion and sediment controls in areas of exposed soil. </div> <div style="list-style-type: none;"> - 02 <input type="checkbox"/> Irrigate all landscaped areas on a regular basis. </div> <div style="list-style-type: none;"> - 03 <input type="checkbox"/> Implement integrated pest management methods, minimize the use of pesticides, herbicides, and fertilizers and use according to directions. </div> <div style="list-style-type: none;"> - 04 <input type="checkbox"/> Use temporary BMPs such as portable booms and vacuum trucks to contain water from outdoor building or structure washdown activities. Collect and properly dispose of all waste water through a </div>		APPLICABLE TENANTS/ DEPARTMENTS: → . Allied Aviation → . FedEx → . HMS Host → . Jimsair → . SDCRAA

Appendix B – Best Management Practices (BMPs)

	permitted connection to the sanitary sewer.	
STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.		
AUTHORIZED BUILDING AND GROUNDS MAINTENANCE LOCATIONS:		
<input type="checkbox"/>	To implement BMPs for the prevention of discharges or pollutants from buildings and grounds maintenance, perform maintenance activities within the designated areas as shown in the attached map.	
Date:		Version: 1.0



PROJECT NO.: 5012-08-0002
 DATE: February 2008
 DRAWN BY: SKR
 CHECKED BY:



San Diego
 International Airport

BMP SC-09
 Building and Grounds
 Maintenance

FIGURE
 SC-09

Appendix B – Best Management Practices (BMPs)

BMP SC10		EMPLOYEE TRAINING	
PURPOSE: Prevent or reduce the discharge of pollutants to storm water from activities through implementing an education program targeting employees, tenants, vendors, contractors and the public.		TARGETED ACTIVITIES: → . All Maintenance → . All Fueling → . All Washing → . Equipment Cleaning → . Cargo Handling → . All Storage → . Painting/Stripping → . Floor Washdowns → . Aircraft Deicing/Anti-Icing → . Garbage Collection → . Aircraft Lavatory Service → . Fire Fighting Equipment Testing → . Potable Water System Flush → . Runway Rubber Removal	
POLLUTION PREVENTION:		POLLUTANTS of CONCERN:	
<input type="checkbox"/> Implement the following pollution prevention practices and BMPs to prevent non-storm water discharges to the storm water collection system: <input type="checkbox"/> Implement an annual storm water pollution prevention education program for employees, tenants, contractors and the public that cover storm water issues, BMPs, spill cleanup, hazardous materials management, right-to-know awareness, and SWPPP implementation. <input type="checkbox"/> Provide adequate implementation training for facilities with a Spill Prevention Control and Countermeasure (SPCC) Plan. <input type="checkbox"/> Adequately train employees in the use of spill response equipment and materials. <input type="checkbox"/> Train construction contractors on the regulations prohibiting cross connections between sanitary sewers and storm drains.	→ . Oil and Grease → . Vehicle Fluids → . Fuel → . Solvents/Cleaning Solutions → . Deicing/Anti-Icing → . Battery Acid → . Pesticides/Herbicides/ Fertilizers → . Paint → . Aircraft Fire Fighting Foam → . Metals → . Dumpster Wastes → . Sediment → . Landscape Waste\ → . Floatables → . Lavatory Chemical Wastes → . Potable Water System Chemicals → . Rubber Particles		
OPERATIONS:		APPLICABLE TENANTS/ DEPARTMENTS:	
Sub-BMPs - 01 <input type="checkbox"/> Update the Authority SWMP and tenant SWPPPs covering the facility or operation on a periodic basis and complete and insert the amendment pages for the SWMP or SWPPP, as needed. - 02 <input type="checkbox"/> Train Authority and tenant employees and contractors in storm water pollution prevention education covering all storm water issues, implementation and effectiveness of BMPs, spill prevention and cleanup, hazardous materials management, right-to-know awareness, and SWMP or SWPPP implementation. - 03 <input type="checkbox"/> Implement additional training programs for relevant Authority and	→ . Aero Mexico → . Alaska Airlines → . Allied Aviation → . American Airlines → . American Eagle → . ARFF → . ASIG → . BAX Global → . Continental		

Appendix B – Best Management Practices (BMPs)

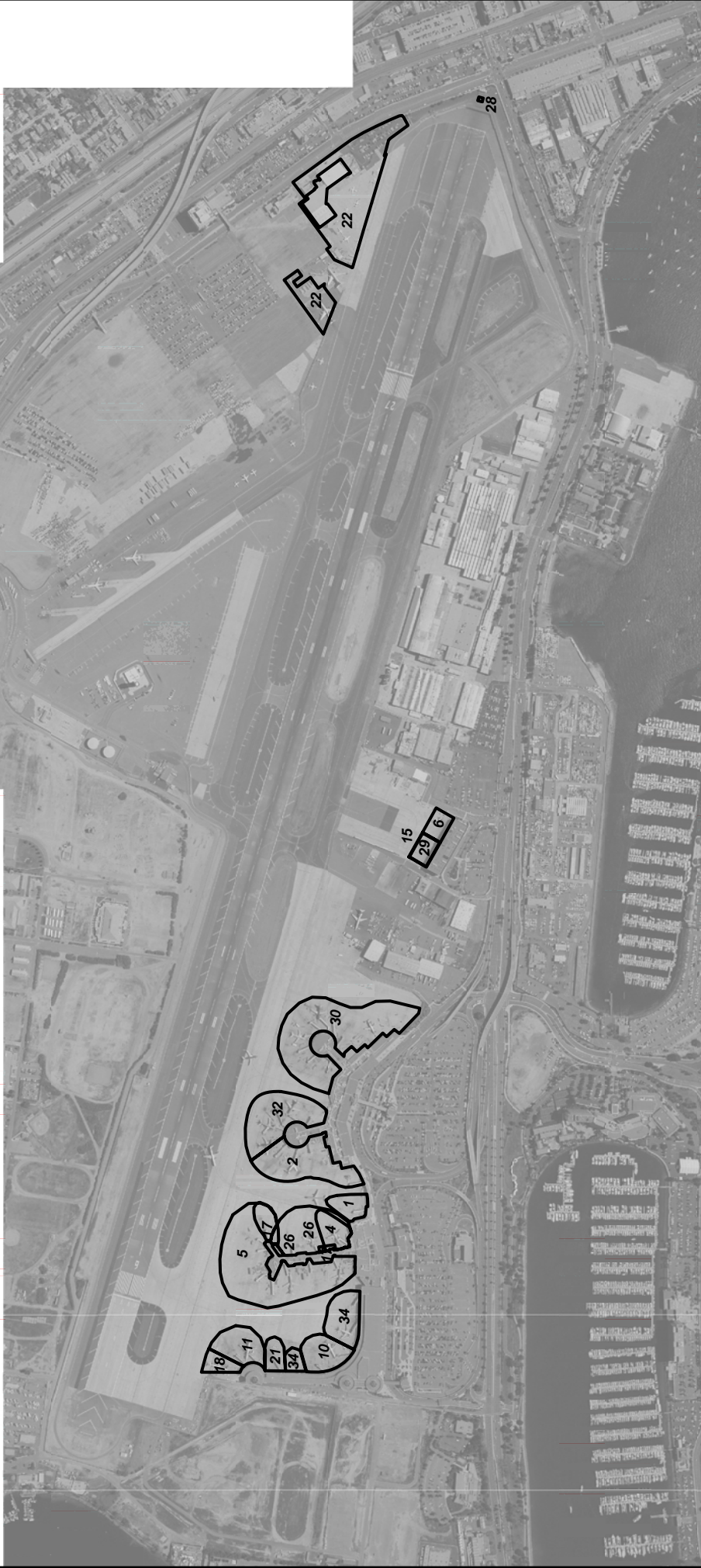
- 04 <input type="checkbox"/>	<p>tenant employees and contractors covering any Spill Prevention Control and Countermeasure (SPCC) Plan implementation, the prohibition on cross-connections between sanitary sewers and storm drains, and contractor responsibility to comply with adopted BMPs.</p> <p>Maintain training records for current employees that have participated in the storm water pollution prevention education program and other related training programs.</p>	<ul style="list-style-type: none"> ➔ Delta ➔ DHL Express ➔ Elite Line Service ➔ Exec Air ➔ Express Jet ➔ FedEx ➔ Frontier ➔ Hawaiian ➔ HMS Host ➔ Jet Blue ➔ Jet Wash Inc. ➔ Jimsair ➔ LPi ➔ Midwest ➔ Northwest ➔ SDCRAA ➔ Sky West ➔ Southwest ➔ SPC ➔ United ➔ UPS ➔ US Airways
STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.		
AUTHORIZED LOCATIONS TO IMPLEMENT BMPs TO PREVENT NON-STORM WATER DISCHARGES:		
<input type="checkbox"/>	<p>To implement BMPs for the prevention of non-storm water discharges, put into practice all lessons learnt from training in the designated areas as shown in the attached map.</p>	
Date:		Version: 1.0

Appendix B – Best Management Practices (BMPs)

BMP SC11	LAVATORY SERVICE OPERATION	
PURPOSE: Eliminate discharges to the storm drain system associated with ground servicing of aircraft lavatory facilities.		TARGETED ACTIVITIES: ➔ Aircraft Lavatory Service ➔ Lavatory Truck/Cleanout Backflushing
POLLUTION PREVENTION:		POLLUTANTS of CONCERN:
<input type="checkbox"/>	Implement the following pollution prevention practices and BMPs to prevent discharges to the storm drain system associated with ground servicing of aircraft lavatory facilities: Use only surfactants and disinfectants approved for discharge to the sanitary sewer system.	➔ Lavatory Chemicals ➔ Lavatory Waste ➔ Lavatory Truck Wash Water
OPERATIONS:		APPLICABLE TENANTS/ DEPARTMENTS:
Sub-BMPs - 01 <input type="checkbox"/> - 02 <input type="checkbox"/> - 03 <input type="checkbox"/> - 04 <input type="checkbox"/> - 05 <input type="checkbox"/> - 06 <input type="checkbox"/> - 07 <input type="checkbox"/> - 08 <input type="checkbox"/> - 09 <input type="checkbox"/>	Triturator facilities are covered and have low roll-over type berming. Triturator facilities should not be located directly in the path of storm drains. Perform regular inspections of all hoses and fittings used for transferring lavatory waste and keep the equipment in good condition. Absorbent booms, spill kits and other containment equipment are present on lavatory service equipment and at the triturator facility. Perform all mixing and transfers of surfactants and disinfectants within the covered and bermed triturator area or under a cover. Use drip pans when draining aircraft lavatory systems. Immediately dump the collected drippage into the bulk storage tank on the lavatory service cart or lavatory service truck. Immediately clean and properly dispose of all spills of lavatory wastes and lavatory chemicals at the triturator facility. Secure all hoses, valves, and equipment when transporting lavatory waste. Perform lavatory truck cleanouts/backflushing and lavatory waste discharging to sanitary sewer connections ONLY at triturator facilities.	➔ Alaska Airlines ➔ Aloha Airlines ➔ American Airlines ➔ American Eagle ➔ Delta ➔ Express Jet ➔ Frontier ➔ Jimsair ➔ Northwest ➔ SDCRAA ➔ Sky West ➔ Southwest ➔ United ➔ US Airways

Appendix B – Best Management Practices (BMPs)

- 10 <input type="checkbox"/>	Completely drain all hoses.	
STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.		
AUTHORIZED LOCATIONS FOR LAVATORY SERVICE OPERATIONS:		
<input type="checkbox"/>	Use only the designated areas for ground servicing of aircraft lavatory facilities as shown in the attached map.	
Date:		Version: 1.0



Facilities Legend

- | | | | | |
|-----------------------|--------------------|---------------|----------------|-----------------|
| 1 - AeroMexico | 6 - American Eagle | 17 - Frontier | 26 - Northwest | 32 - United |
| 2 - Alaska | 10 - Continental | 18 - Hawaiian | 28 - SDCRAA | 34 - US Airways |
| 4 - Aloha | 11 - Delta | 21 - JetBlue | 29 - SkyWest | |
| 5 - American Airlines | 15 - Express Jet | 22 - Jimsair | 30 - Southwest | |



PROJECT NO.: 5012-08-0002

DATE: February 2008

DRAWN BY: SKR

CHECKED BY:



**San Diego
International Airport**

**BMP SC-11
Lavatory Service Operation**

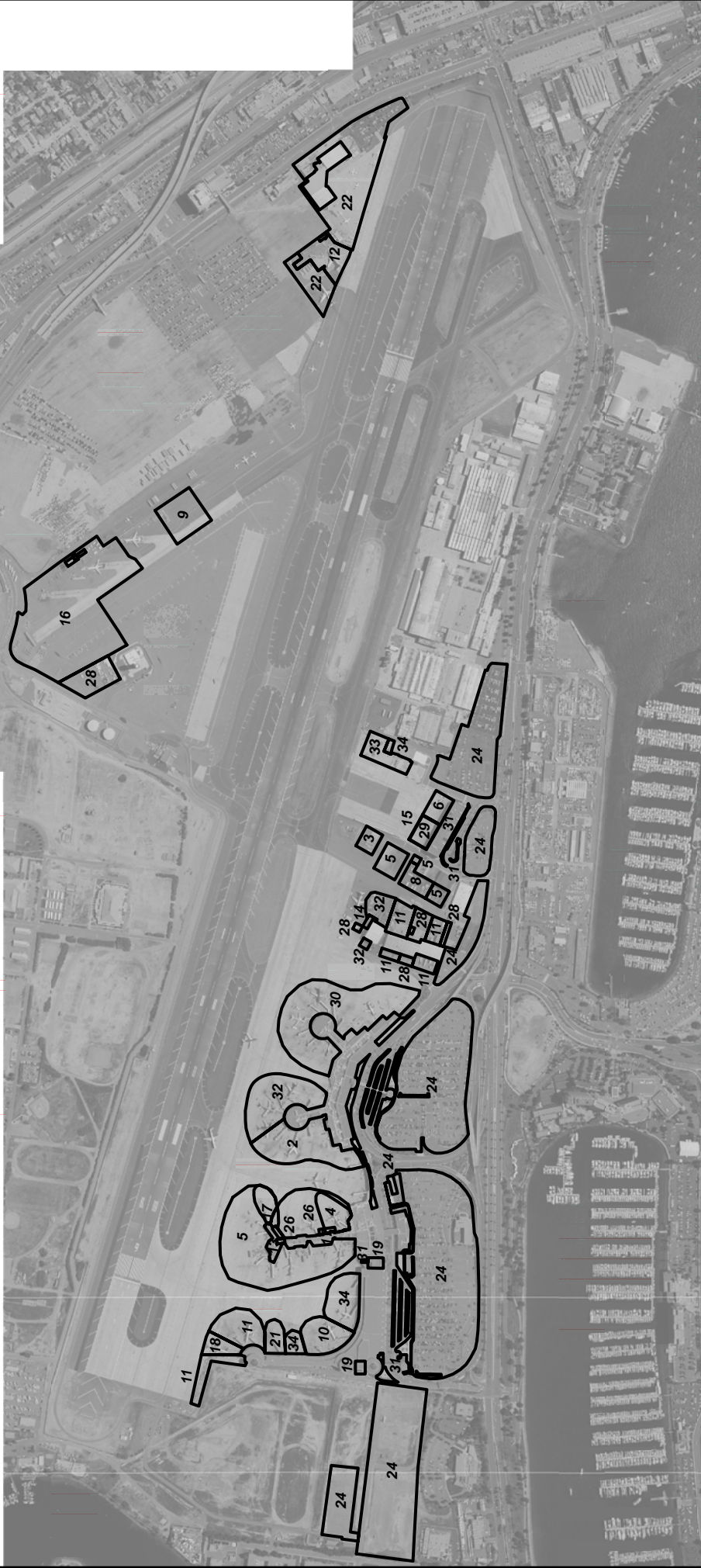
FIGURE
SC-11

Appendix B – Best Management Practices (BMPs)

BMP SC12	OUTDOOR WASHDOWN/SWEEPING (APRON WASHING, RAMP SCRUBBING)	
PURPOSE: Prevent or reduce the discharge of pollutants to storm water from outdoor washdown and sweeping operations.		TARGETED ACTIVITIES: → Apron Washing → Ramp Scrubbing → Outdoor Washdown → Road Sweeping → Ramp Sweeping
POLLUTION PREVENTION:		POLLUTANTS of CONCERN:
	Implement the following pollution prevention practices and BMPs to prevent non-storm water discharges of pollutants from outdoor washdown and sweeping operations to the storm water collection system: <input type="checkbox"/> Use biodegradable or non-toxic cleaning products for outdoor washdown activities. <input type="checkbox"/> Investigate newer sweeping technologies such as high-efficiency sweepers or the CASQA-recommended regenerative air and vacuum-assisted dry sweepers.	→ Oil and Grease → Solvents/Cleaning Solutions → Fuel → Aircraft Fire Fighting Foam → Deicing/Anti-Icing Fluids → Sediment → Floatables
OPERATIONS:		APPLICABLE TENANTS/ DEPARTMENTS:
Sub-BMPs - 01 <input type="checkbox"/>	Inspect and maintain sweeping and scrubbing equipment regularly to ensure effectiveness at removing pollutants and to avoid leaks.	→ Alaska Airlines → Allied Aviation → Aloha Airlines → American Airlines → American Eagle → ASIG → BAX Global → Continental → Delta → DHL Express → Elite Line Service → Exec Air → Express Jet → FedEx → Frontier → Hawaiian → HMS Host → Jet Blue → Jimsair → LPi → Northwest → SDCRAA → Sky West
- 02 <input type="checkbox"/>	Roads, ramp areas, apron areas, and, if feasible, runway/taxiway areas are swept on a regular basis.	
- 03 <input type="checkbox"/>	Perform sweeping during dry weather using dry sweeping techniques where feasible.	
- 04 <input type="checkbox"/>	Operate sweepers at manufacturer-recommended optimal speeds.	
- 05 <input type="checkbox"/>	Properly dispose of debris and sediment from sweeping.	
- 06 <input type="checkbox"/>	Berm outdoor washdown areas to contain the wash water and to prevent run-on to adjacent areas.	
- 07 <input type="checkbox"/>	Minimize the amount of water used during outdoor washdown activities.	
- 08 <input type="checkbox"/>	Wash water is collected and discharged to the sanitary sewer system through a permitted connection at designated and approved discharge facilities (i.e., dewatering bin).	
- 09 <input type="checkbox"/>	Maintain records of the sweeping or scrubbing activities including	

Appendix B – Best Management Practices (BMPs)

	the miles swept or scrubbed and the amount of waste collected.	➔ Southwest ➔ SPC ➔ United ➔ UPS ➔ US Airways
STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.		
AUTHORIZED LOCATIONS FOR OUTDOOR WASHDOWN AND SWEEPING ACTIVITIES:		
<input type="checkbox"/>	To implement BMPs for the prevention of non-storm water discharges, perform outdoor washdown and sweeping activities in the designated areas as shown on the attached map.	
Date:		Version: 1.0



Facilities Legend

- | | | | | | | |
|-----------------------|--------------------|--------------------------|------------------|---------------|----------------|-----------------|
| 2 - Alaska | 6 - American Eagle | 11 - Delta | 15 - Express Jet | 19 - HMS Host | 26 - Northwest | 31 - SPC |
| 3 - Allied Aviation | 8 - ASIG | 12 - DHL | 16 - FedEx | 21 - JetBlue | 28 - SDCRAA | 32 - United |
| 4 - Aloha | 9 - BAX Global | 13 - Elite Line Services | 17 - Frontier | 22 - Jimsair | 29 - SkyWest | 33 - UPS |
| 5 - American Airlines | 10 - Continental | 14 - ExecAir | 18 - Hawaiian | 24 - Lpi | 30 - Southwest | 34 - US Airways |



PROJECT NO.: 5012-08-0002

DATE: February 2008

DRAWN BY: SKR

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San Diego
International Airport

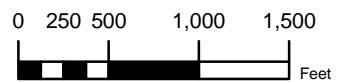
BMP SC-12
Outdoor Washdown/Sweeping

FIGURE
SC-12

BMP SC13		FIRE FIGHTING FOAM DISCHARGE	
PURPOSE: To prevent the discharge of pollutants to storm water drains associated with flushing or testing of fire fighting foam systems.		TARGETED ACTIVITIES: ➔ Fire Fighting Foam Testing	
POLLUTION PREVENTION:		POLLUTANTS of CONCERN: ➔ Aircraft Fire Fighting Foam (AFFF)	
<input type="checkbox"/> Implement the following pollution prevention practices and BMPs to prevent discharges of pollutants from fire fighting foam testing entering the storm water collection system:	<input type="checkbox"/> Perform fire fighting foam testing during dry weather and in designated areas only. <input type="checkbox"/> Before performing fire fighting foam testing, block off all storm drain inlets within the designated testing area. <input type="checkbox"/> All discharges should be collected and disposed of properly. <input type="checkbox"/> DO NOT DISCHARGE AFFF OR WASTEWATER TO A CATCH BASIN OR STORM DRAIN. Notify Airport Operations (619-400-2710) and the Airport Authority Environmental Affairs Department (619-400-2784) if any discharges of AFFF have occurred.		
OPERATIONS:		APPLICABLE TENANTS/ DEPARTMENTS: ➔ ARFF ➔ Allied Aviation	
Sub-BMPs - 01 <input type="checkbox"/> Do not perform fire fighting foam testing directly in the path of storm drains. - 02 <input type="checkbox"/> Inspect and test fire fighting equipment on a regular basis. - 03 <input type="checkbox"/> Perform fire fighting foam testing ONLY in a designated area that captures or diverts all foam waste to a structural treatment control, sanitary sewer, or dead end sump with pump. - 04 <input type="checkbox"/> Service sump(s) and/or oil/water separators on a regular basis. - 05 <input type="checkbox"/> Prevent all designated testing areas from contacting storm water run-on and run-off or from reaching storm drains (e.g. by the use of berms or sandbags).			
STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.			
AUTHORIZED LOCATIONS FOR FIRE FIGHTING FOAM TESTING:			
<input type="checkbox"/> Use only the designated areas for fire fighting foam testing as shown in the attached map.			
Date:		Version: 1.0	



Facilities Legend



- 3 - Allied Aviation**
- 7 - ARFF**

PROJECT NO.:
5012-08-0037

DATE:
March 2009

DRAWN BY:
RMH

CHECKED BY:



**San Diego
International Airport**

**BMP SC-13
Fire Fighting
Foam Testing**

**FIGURE
SC-13**

BMP SC14		POTABLE WATER SYSTEM FLUSHING	
PURPOSE: To prevent the discharge of pollutants to storm water drains associated with flushing and cleaning of aircraft potable water systems.		TARGETED ACTIVITIES: ➔ Aircraft potable water system cleaning and flushing ➔ Water truck cleaning and flushing	
POLLUTION PREVENTION:		POLLUTANTS of CONCERN:	
<input type="checkbox"/> Implement the following pollution prevention practices and BMPs to prevent discharges from potable water system flushing: <input type="checkbox"/> Perform flushing activities within designated areas that divert the flushed water away from the storm drain system when ever possible. <input type="checkbox"/> DO NOT DISCHARGE WASTE WATER OR CLEANING AGENTS TO A CATCH BASIN OR STORM DRAIN. Notify Airport Operations (619-400-2710) and the Airport Authority Environmental Affairs Department (619-400-2784) if any discharges associated with flushing and cleaning of aircraft potable water systems have occurred.	➔ Chlorine Bleach ➔ Purine		
OPERATIONS:		APPLICABLE TENANTS/ DEPARTMENTS:	
Sub-BMPs - 01 <input type="checkbox"/> The aircraft potable water system and water truck flushing/cleaning areas should not be located directly in the path of storm drains. - 02 <input type="checkbox"/> Perform potable water system flushing only in designated flushing/cleaning areas that capture or divert all wastewater away from storm drains, or to a structural treatment control, sanitary sewer, or dead end sump with pump. - 03 <input type="checkbox"/> Prevent flushing/cleaning areas from contacting storm water run-on and run-off.	➔ Alaska ➔ American Airlines ➔ American Eagle ➔ Express Jet ➔ Jimsair ➔ Northwest ➔ Sky West ➔ Southwest ➔ US Airways		
STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.			
AUTHORIZED LOCATIONS FOR POTABLE WATER SYSTEM FLUSHING/CLEANING:			
<input type="checkbox"/> Use only the designated areas for aircraft potable water system flushing/cleaning as shown in the attached map.			
Date:		Version: 1.0	



Facilities Legend



2 - Alaska	15 - Express Jet	29 - SkyWest
5 - American Airlines	22 - Jimsair	30 - Southwest
6 - American Eagle	26 - Northwest	34 - US Airways

PROJECT NO.:
5012-08-0037

DATE:
March 2009

DRAWN BY:
RMH

CHECKED BY:



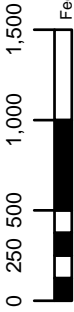
**San Diego
International Airport**

**BMP SC-14
Potable Water
System Flushing**

FIGURE
SC-14

Appendix B – Best Management Practices (BMPs)

BMP SC15		RUNWAY RUBBER REMOVAL	
PURPOSE: Eliminate discharges to the storm drain of particulate rubber and other pollutants generated by runway rubber removal activities.		TARGETED ACTIVITIES: ➔ Runway Rubber Removal	
POLLUTION PREVENTION:		POLLUTANTS of CONCERN:	
<input type="checkbox"/>	Implement the following pollution prevention practices and BMPs to prevent non-storm water discharges of particulate rubber and other pollutants generated by runway rubber removal activities to the storm water collection system: <input type="checkbox"/> Use biodegradable or non-toxic cleaning products for runway rubber removal activities.	➔ Rubber particles ➔ Dirt particles ➔ Metals	
OPERATIONS:		APPLICABLE TENANTS/ DEPARTMENTS:	
Sub-BMPs - 01 <input type="checkbox"/> - 02 <input type="checkbox"/> - 03 <input type="checkbox"/> - 04 <input type="checkbox"/>	Minimize the amount of water used during runway rubber removal activities. Prevent waste water produced from runway rubber removal activities from entering the storm drainage system by immediately collecting and properly disposing of it. Use manual or mechanical cleaning methods such as mechanical street sweepers to remove rubber particulates from the runway and adjacent paved areas following runway rubber removal activities. Inspect storm drain inlets, catch basins, and runway drainage areas following runway rubber removal activities for any resulting debris, and remove and properly dispose of debris.	➔ SDCRAA	
STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.			
AUTHORIZED LOCATIONS FOR RUNWAY RUBBER REMOVAL ACTIVITIES:			
<input type="checkbox"/>	Perform all runway rubber removal activities in the designated areas as shown in the attached map.		
Date:		Version: 1.0	



PROJECT NO.:	5012-08-0002
DATE:	February 2008
DRAWN BY:	SKR
CHECKED BY:	



San Diego
International Airport

BMP SC-15
Runway Rubber Removal

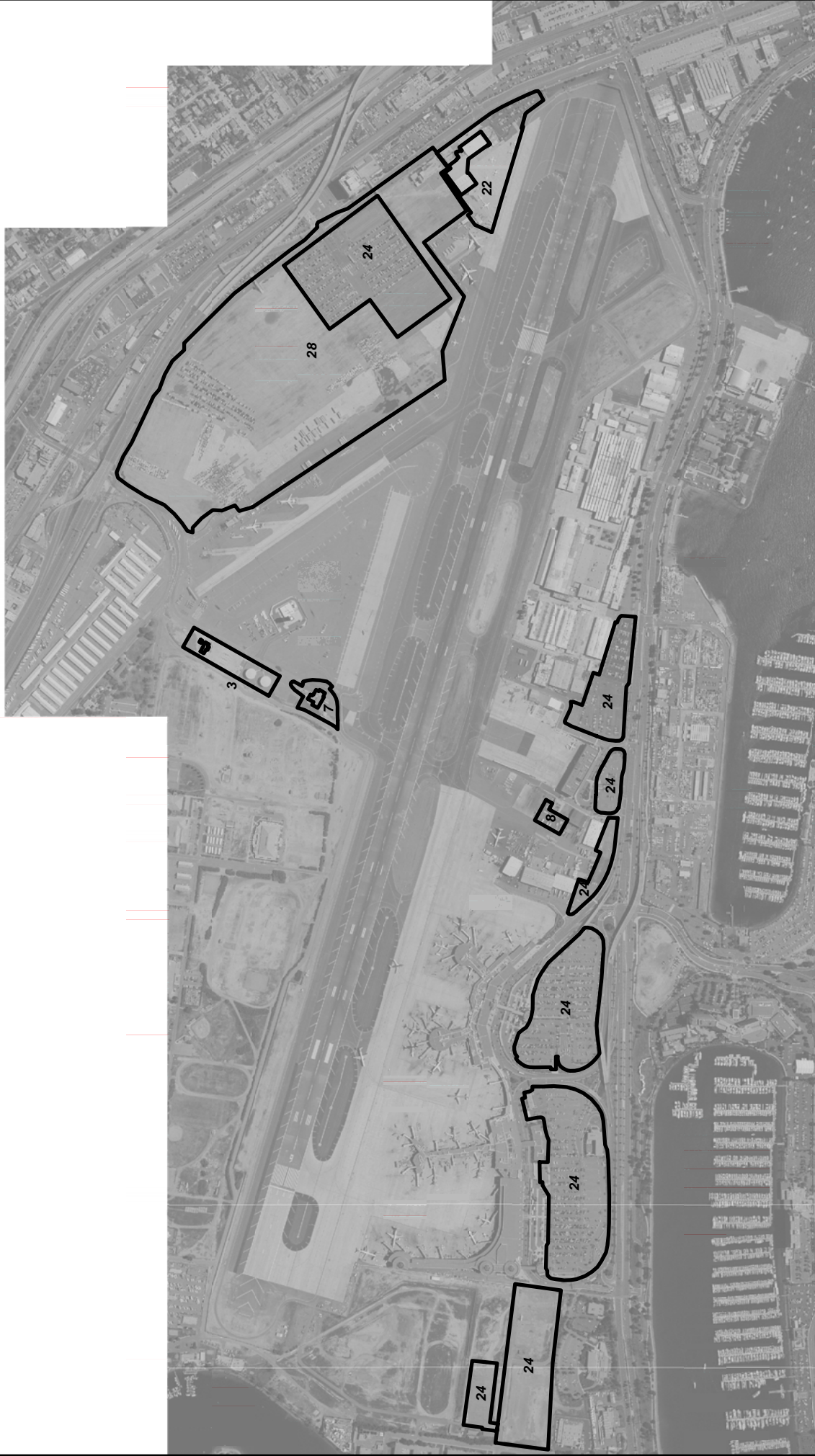
FIGURE
SC-15

Appendix B – Best Management Practices (BMPs)

BMP SC16	PARKING LOTS	
PURPOSE: Prevent and reduce the discharge of pollutants from parking areas.		TARGETED ACTIVITIES: ➔ Vehicle parking ➔ Surface cleaning and maintenance ➔ Litter control
POLLUTION PREVENTION: <div style="display: flex;"> <div style="flex: 1;"> <input type="checkbox"/> Ensure all trash receptacles are covered. <input type="checkbox"/> Install treatment control BMPs, where practicable, in parking lot areas to treat parking lot runoff. <input type="checkbox"/> Design parking lot areas to include semi-permeable hardscape and Low Impact Development practices. <input type="checkbox"/> Inspect and maintain sweeping equipment regularly to ensure effectiveness at removing pollutants and to avoid leaks. </div> <div style="flex: 1; padding-left: 20px;"> Implement the following pollution prevention practices and BMPs to prevent non-storm water discharges from parking areas to the storm water collection system: </div> </div>		POLLUTANTS of CONCERN: ➔ Trash ➔ Suspended solids ➔ Hydrocarbons ➔ Oil and grease ➔ Heavy Metals
OPERATIONS: Sub-BMPs - 01 <input type="checkbox"/> Post “No Littering” signs around parking lots and regularly empty trash receptacles. - 02 <input type="checkbox"/> Sweep all parking lot areas on a regular basis to remove accumulated debris and sediment. - 03 <input type="checkbox"/> Operate sweepers at manufacturer-recommended optimal speeds. - 04 <input type="checkbox"/> Perform sweeping in parking lot areas when the number of parked vehicles is lowest to maximize areas swept. - 05 <input type="checkbox"/> Maintain records of the sweeping activities including the miles swept and the amount of waste collected. - 06 <input type="checkbox"/> Clean oily spots from parking lot surfaces with absorbent materials. - 07 <input type="checkbox"/> Perform all repairs to parking lot surfaces during periods of dry weather. - 08 <input type="checkbox"/> Cover and seal nearby storm drain inlets, catch basins, and manholes during parking lot repairs. - 09 <input type="checkbox"/> Use drip pans and absorbent materials to catch and collect drips and leaks from paving equipment that are not in use. - 10 <input type="checkbox"/> Hot bituminous materials used for parking lot repairs are to be		APPLICABLE TENANTS/ DEPARTMENTS: ➔ Allied Aviation ➔ ARFF ➔ ASIG ➔ Jimsair ➔ LPI ➔ SDCRAA

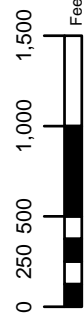
Appendix B – Best Management Practices (BMPs)

- 11 <input type="checkbox"/>	preheated and transferred or loaded away from storm drain inlets. Properly dispose of used absorbent materials, debris, and collected drips.	
- 12 <input type="checkbox"/>	Avoid draining rooftop downspout drains onto paved parking lot surfaces.	
STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.		
AUTHORIZED LOCATIONS TO IMPLEMENT BMPs FOR PARKING LOTS:		
<input type="checkbox"/>	To reduce pollutants in parking lot storm water discharges, implement BMPs in areas as shown in the attached map.	
Date:		Version: 1.0



Facilities Legend

- 3 - Allied Aviation
- 7 - ARFF
- 8 - ASIG
- 22 - Jimsair
- 24 - Lpi
- 28 - SDCRAA



PROJECT NO.:
5012-08-0002

DATE:
February 2008

DRAWN BY:
SKR

CHECKED BY:



**San Diego
International Airport**

**BMP SC-16
Parking Lots and Tenants
with Parking Areas**

FIGURE
SC-16

Appendix B – Best Management Practices (BMPs)

BMP SC17	STORM DRAIN MAINTENANCE	
PURPOSE: Maintain catch basins, storm water inlets, and other storm water conveyance structures on a regular basis to remove pollutants, reduce high pollutant concentrations during the first flush of storms, prevent clogging of the downstream conveyance system, restore catch basins' sediment trapping capacity, and ensure the system functions properly hydraulically to avoid flooding.		TARGETED ACTIVITIES: ➔ Storm water conveyance system
POLLUTION PREVENTION: <div style="display: flex; align-items: flex-start;"> <div style="flex: 1; padding-right: 10px;"> <input type="checkbox"/> Look for evidence of illegal dumping, illegal discharges or illicit connections during routine inspection, cleaning, and maintenance of the storm drainage system and drainage structures. </div> <div style="flex: 2;"> Implement the following pollution prevention practices and BMPs to remove pollutants, sediment, and debris from the storm water collection system: </div> </div>		POLLUTANTS of CONCERN: ➔ Trash ➔ Suspended solids ➔ Hydrocarbons ➔ Oil and grease ➔ Heavy Metals ➔ Bacteria ➔ Organics
OPERATIONS: Sub-BMPs <ul style="list-style-type: none"> - 01 <input type="checkbox"/> Stencil storm drains with “No Dumping” messages. - 02 <input type="checkbox"/> Conduct routine self-inspections of the storm drainage system. The Authority should inspect the entire MS4 at least annually, between the dates of May 1 and September 30. - 03 <input type="checkbox"/> Use appropriate measures to prevent discharges during MS4 cleaning and maintenance. - 04 <input type="checkbox"/> Clean and maintain storm drain inlets, catch basins, pipes, and other conveyance structures before the wet season and when accumulated trash and debris is greater than 33 percent of design capacity. - 05 <input type="checkbox"/> Clear open channels of accumulated litter in a timely manner. - 06 <input type="checkbox"/> Properly dispose of all accumulated sediments, contaminants, debris and waste water from cleaning and maintenance activities. - 07 <input type="checkbox"/> Maintain records for all inspections, cleaning, and maintenance, including the quantity of waste removed. 		APPLICABLE TENANTS/ DEPARTMENTS: ➔ Allied Aviation ➔ American Airlines ➔ American Eagle ➔ ARFF ➔ ASIG ➔ Continental ➔ Delta ➔ Elite Line Service ➔ Exec Air ➔ FedEx ➔ Hawaiian ➔ HMS Host ➔ Jet Blue ➔ Jet Wash Inc. ➔ LPi ➔ SDCRAA ➔ Southwest ➔ SPC ➔ UPS ➔ US Airways

Appendix B – Best Management Practices (BMPs)

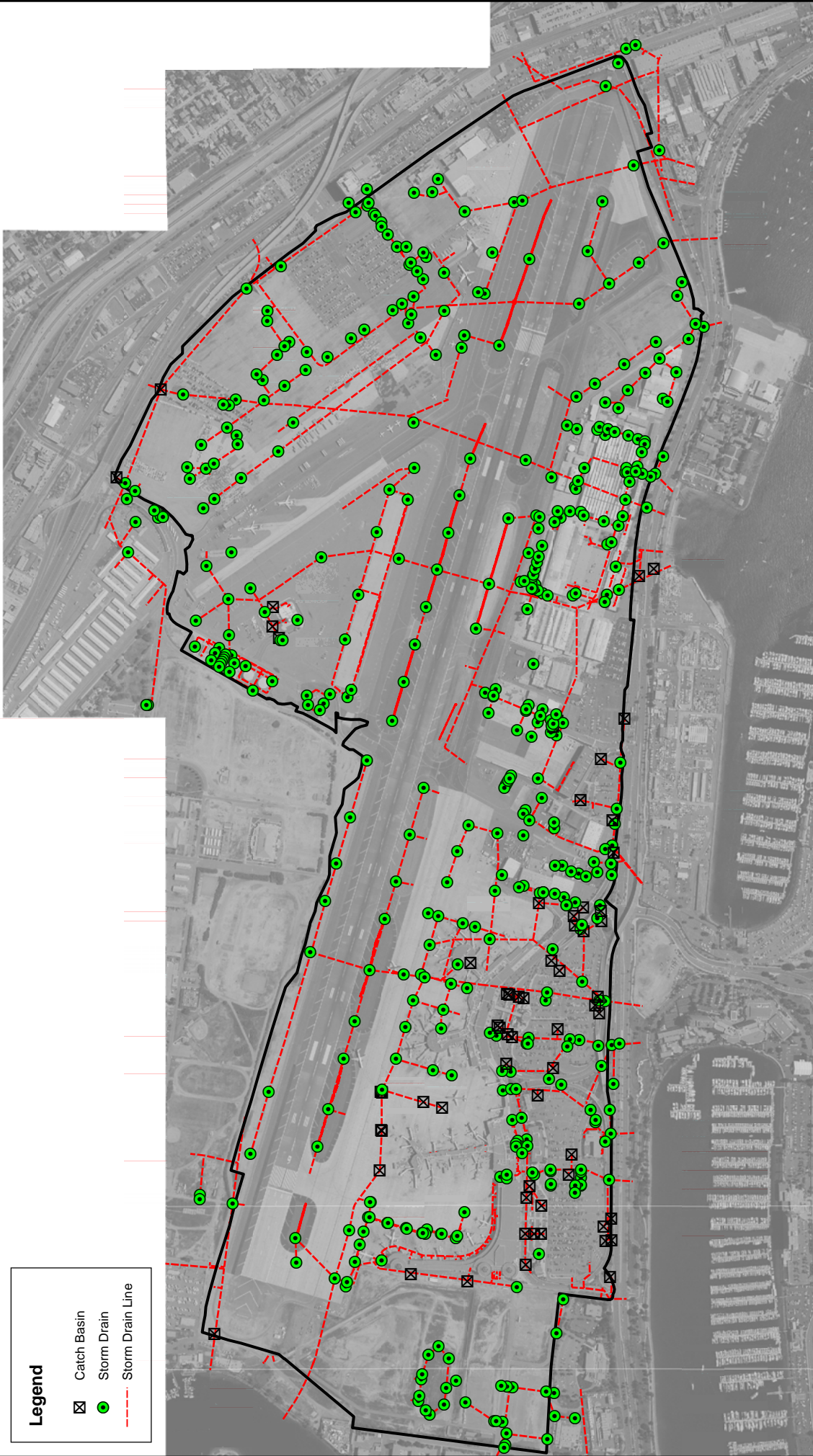
STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.		
AUTHORIZED LOCATIONS FOR STORM DRAIN MAINTENANCE:		
<input type="checkbox"/>	To implement BMPs for the removal of pollutants, sediment, and debris from the storm drain system, maintenance of the storm drain system will be performed at the designated areas as shown on the attached map.	
Date:		Version: 1.0

Legend

Catch Basin

Storm Drain

Storm Drain Line



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DATE:	February 2008
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CHECKED BY:	



MACTEC
MACTEC Engineering and Consulting Inc.

San Diego
International Airport

BMP SC-17
Storm Drain Maintenance

FIGURE
SC-17

Appendix B – Best Management Practices (BMPs)

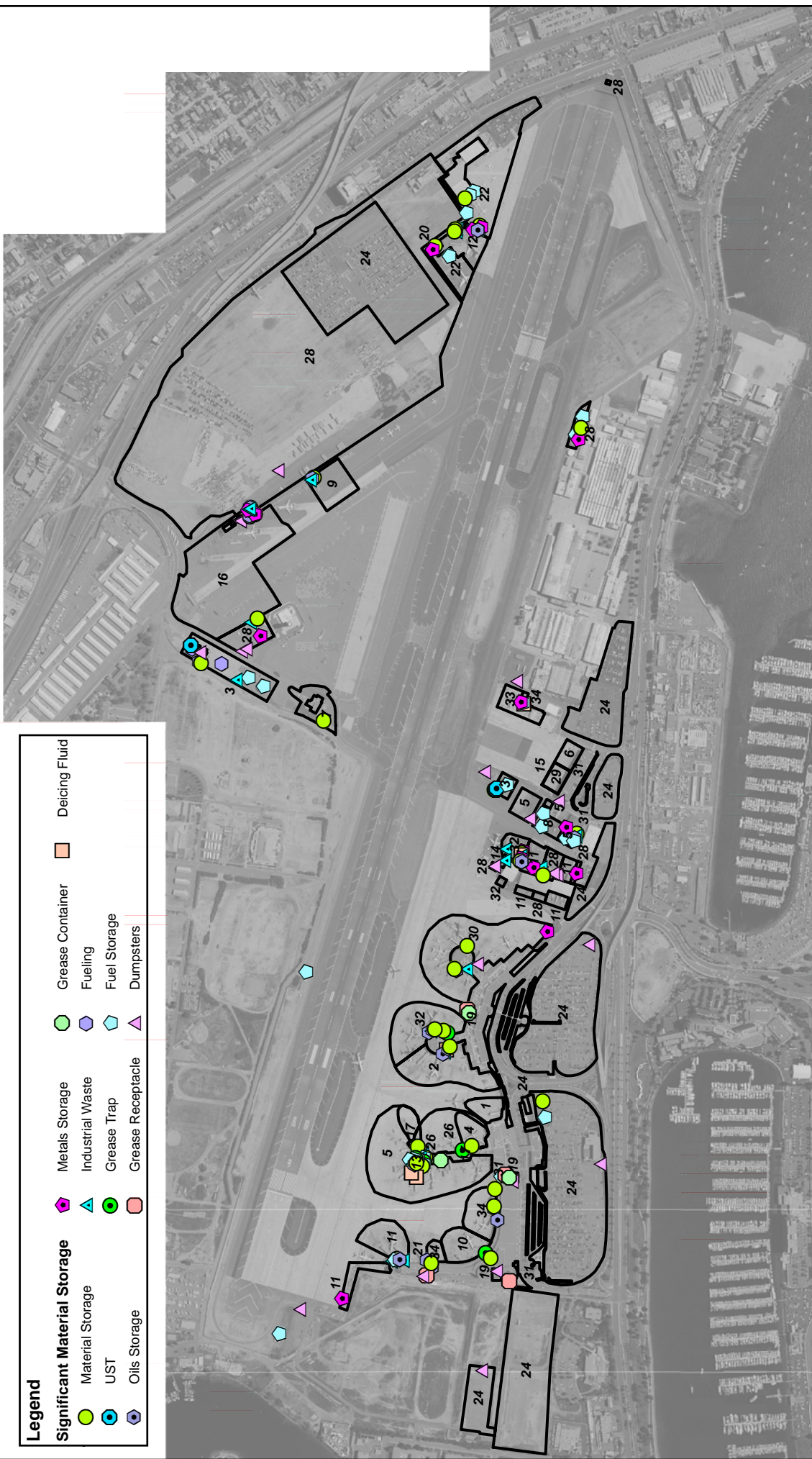
BMP SC18	HOUSEKEEPING	
	<p>PURPOSE: Implement good housekeeping measures to eliminate non-storm water discharges and reduce the potential for pollutants to enter the storm water collection system.</p>	<p>TARGETED ACTIVITIES:</p> <ul style="list-style-type: none"> ➔ Aircraft Deicing/Anti-Icing ➔ Aircraft Lavatory Service ➔ All Fueling ➔ All Maintenance ➔ All Storage ➔ All Washing ➔ Cargo Handling ➔ Equipment Cleaning ➔ Fire Fighting Equipment Testing ➔ Floor Washdowns ➔ Garbage Collection ➔ Painting/Stripping ➔ Potable Water System Flushing ➔ Runway Rubber Removal
	<p>POLLUTION PREVENTION:</p> <p>Implement the following pollution prevention practices and BMPs to eliminate non-storm water discharges and reduce the potential for pollutants to enter the storm water collection system:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Clean operation areas and facilities using dry methods. <input type="checkbox"/> Maintain adequate supplies of spill response equipment and absorbent materials in accessible locations where significant materials are stored and used. <input type="checkbox"/> NEVER HOSE DOWN PAVED AREAS TO THE STORM DRAINS. 	<p>POLLUTANTS of CONCERN:</p> <ul style="list-style-type: none"> ➔ Aircraft Fire Fighting Foam ➔ Battery Acid ➔ Cleaning Solution ➔ Deicing/Anti-Icing Fluid ➔ Dirt particles ➔ Dumpster Wastes ➔ Floatables ➔ Fuel ➔ Heavy Metals ➔ Hydrocarbons ➔ Landscape Waste ➔ Lavatory Chemicals ➔ Lavatory Chemical Waste ➔ Lavatory Truck Wash Water ➔ Lavatory Waste ➔ Metals ➔ Oil and Grease ➔ Paint ➔ Pesticides/Herbicides/ Fertilizers ➔ Potable Water System Chemicals ➔ Rubber Particles ➔ Sediment ➔ Solvents ➔ Suspended solids ➔ Trash ➔ Vehicle Fluids

Appendix B – Best Management Practices (BMPs)

OPERATIONS:		APPLICABLE TENANTS/ DEPARTMENTS:
Sub-BMPs - 01 <input type="checkbox"/> Perform and document on a regular basis self-inspections and evaluations of the implemented BMPs. - 02 <input type="checkbox"/> Keep all facility and operation areas clean and orderly. - 03 <input type="checkbox"/> Place trash receptacles in appropriate locations. - 04 <input type="checkbox"/> Sweep all facility and operation areas at least once per week to prevent the accumulation of sediments, debris, and contaminants. - 05 <input type="checkbox"/> Properly dispose of all debris and sediment from sweeping. - 06 <input type="checkbox"/> Store significant materials in the appropriate containers that are properly sealed and labeled. - 07 <input type="checkbox"/> Store significant materials within secondary containment. - 08 <input type="checkbox"/> Store significant materials in a restricted access area. - 09 <input type="checkbox"/> Material Safety Data Sheets (MSDSs) are readily available for all significant materials.		→ Aero Mexico → Alaska Airlines → Allied Aviation → Aloha Airlines → American Airlines → American Eagle → ARFF → ASIG → BAX Global → Continental → Delta → DHL Express → Elite Line Service → Exec Air → Express Jet → FedEx → Frontier → HMS Host → Jet Wash Inc. → Jet Blue → Jimsair → LPi → Northwest → SDCRAA → Sky West → Southwest → SPC → United → UPS → US Airways
STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.		
AUTHORIZED LOCATIONS TO IMPLEMENT HOUSEKEEPING BMPs:		

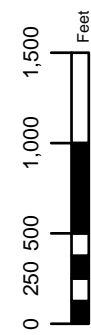
Appendix B – Best Management Practices (BMPs)

<input type="checkbox"/>	Prevent non-storm water discharges, and contact of pollutants with storm water discharges by implementing good housekeeping BMPs in the designated areas as shown in the attached map.	
Date:		Version: 1.0



Facilities Legend

1 - AeroMexico	5 - American Airlines	9 - BAX Global	13 - Elite Line Services	17 - Frontier	22 - Jimsair	29 - SkyWest	33 - UPS
2 - Alaska	6 - American Eagle	10 - Continental	14 - ExecAir	19 - HMS Host	24 - Lpi	30 - Southwest	34 - US Airways
3 - Allied Aviation	7 - ARFF	11 - Delta	15 - Express Jet	20 - Jet Wash, Inc.	26 - Northwest	31 - SPC	
4 - Aloha	8 - ASIG	12 - DHL	16 - FedEx	21 - JetBlue	28 - SDCRAA	32 - United	



PROJECT NO.: 5012-08-0002

DATE: February 2008

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**San Diego
International Airport**



**BMP SC-18
Housekeeping**

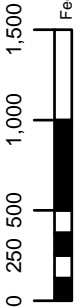
FIGURE
SC-18

Appendix B – Best Management Practices (BMPs)

BMP SC19	SAFER/ALTERNATIVE PRODUCTS	
PURPOSE: Reduce the use of harmful, toxic and non-biodegradable products that could pollute storm water runoff.		TARGETED ACTIVITIES: <ul style="list-style-type: none"> ➔ Aircraft Deicing/Anti-Icing ➔ Aircraft Lavatory Service ➔ All Fueling ➔ All Maintenance ➔ All Storage ➔ All Washing ➔ Cargo Handling ➔ Equipment Cleaning ➔ Fire Fighting Equip. Testing ➔ Floor Washdowns ➔ Garbage Collection ➔ Outdoor Washdown ➔ Painting/Stripping ➔ Potable Water System Flush ➔ Runway Rubber Removal
POLLUTION PREVENTION:		POLLUTANTS of CONCERN:
<input type="checkbox"/>	Implement the following pollution prevention practices and BMPs to prevent toxic, non-biodegradable materials from entering the storm water collection system: <input type="checkbox"/> Develop an Environmentally Preferable Purchasing Program to (1) minimize the purchase of products containing hazardous ingredients, (2) maximize the purchase of alternative products that pose less risk to employees and to the environment, and (3) maximize the purchase of products containing recycled materials.	<ul style="list-style-type: none"> ➔ Aircraft Fire Fighting Foam ➔ Battery Acid ➔ Cleaning Solution ➔ Deicing/Anti-Icing Fluid ➔ Fuel ➔ Heavy Metals ➔ Hydrocarbons ➔ Lavatory Chemicals ➔ Metals ➔ Oil and Grease ➔ Paint ➔ Pesticides/Herbicides/ Fertilizers ➔ Potable Water System Chemicals ➔ Solvents ➔ Vehicle Fluids
OPERATIONS:		APPLICABLE TENANTS/DEPARTMENTS:
Sub-BMPs - 01 <input type="checkbox"/> - 02 <input type="checkbox"/>	Whenever possible, use alternative products that are “Regionally Accepted” and are identified as being non-toxic, less toxic, or biodegradable. Whenever possible, maximize the purchase and use of products containing recycled materials.	<ul style="list-style-type: none"> ➔ Aero Mexico ➔ Alaska Airlines ➔ Allied Aviation ➔ American Airlines ➔ American Eagle ➔ ARFF ➔ ASIG ➔ BAX Global

Appendix B – Best Management Practices (BMPs)

		<ul style="list-style-type: none"> ➔ . Continental ➔ . Delta ➔ . DHL Express ➔ . Elite Line Service ➔ . Exec Air ➔ . Express Jet ➔ . FedEx ➔ . Frontier ➔ . Hawaiian ➔ . HMS Host ➔ . Jet Blue ➔ . Jet Wash Inc. ➔ . Jimsair ➔ . Northwest ➔ . SDCRAA ➔ . Sky West ➔ . Southwest ➔ . SPC ➔ . United ➔ . UPS ➔ . US Airways
STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.		
AUTHORIZED LOCATIONS TO USE SAFER/ALTERNATIVE PRODUCTS:		
<input type="checkbox"/>	Use non-toxic, less toxic, biodegradable, alternative products whenever possible in the designated areas shown in the attached map.	
Date:		Version: 1.0



PROJECT NO.:	5012-08-0002
DATE:	February 2008
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**San Diego
International Airport**

**BMP SC-19
Safer/Alternative Products**

FIGURE
SC-19

Appendix B – Best Management Practices (BMPs)

BMP SR01	SPILL PREVENTION, CONTROL, AND CLEAN-UP	
<p>PURPOSE: Prevent or reduce the discharge of pollutants to storm water resulting from spills, leaks and improper cleanup of significant and other materials.</p>		<p>TARGETED ACTIVITIES:</p> <ul style="list-style-type: none"> ➔ Aircraft Deicing/Anti-Icing ➔ Aircraft Lavatory Service ➔ All Fueling ➔ All Maintenance ➔ All Storage ➔ All Washing ➔ Cargo Handling ➔ Equipment Cleaning ➔ Fire Fighting Equip. Testing ➔ Floor Washdowns ➔ Garbage Collection ➔ Outdoor Washdown ➔ Painting/Stripping ➔ Runway Rubber Removal
<p>POLLUTION PREVENTION:</p>		<p>POLLUTANTS of CONCERN:</p>
	<p>Implement the following pollution prevention practices and BMPs to prevent spills and leaks of significant and other materials to the storm water collection system:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Provide formal training in execution of the SPCC plan to key personnel, with additional training for first responder level personnel. All employees should have basic knowledge of spill control procedures. <input type="checkbox"/> Maintain an inventory of appropriate cleanup materials and equipment on-site and strategically deploy cleanup materials and equipment based on the type and quantities of chemicals present. 	<ul style="list-style-type: none"> ➔ Aircraft Fire Fighting Foam ➔ Battery Acid ➔ Cleaning Solution ➔ Deicing/Anti-Icing Fluid ➔ Fuel ➔ Heavy Metals ➔ Hydrocarbons ➔ Lavatory Chemicals ➔ Metals ➔ Oil and Grease ➔ Paint ➔ Pesticides/Herbicides/ Fertilizers ➔ Potable Water System Chemicals ➔ Solvents ➔ Vehicle Fluids
<p>OPERATIONS:</p>		<p>APPLICABLE TENANTS/ DEPARTMENTS:</p>
<p>Sub-BMPs</p> <ul style="list-style-type: none"> - 01 <input type="checkbox"/> - 02 <input type="checkbox"/> - 03 <input type="checkbox"/> 	<ul style="list-style-type: none"> Develop, implement and keep current Spill Prevention, Control, and Countermeasure (SPCC) Plans, where required, or develop facility spill prevention and response procedures. Post a summary of the SPCC Plan, or spill response procedures, at key locations, identifying the spill cleanup coordinators, location of cleanup equipment, and phone numbers of regulatory agencies to be contacted in the event of a spill. Train relevant employees and contractors in the implementation of the SPCC Plan, if applicable, or spill control procedures. 	<ul style="list-style-type: none"> ➔ Aero Mexico ➔ Alaska Airlines ➔ Allied Aviation ➔ Aloha Airlines ➔ American Airlines ➔ American Eagle ➔ ARFF ➔ ASIG ➔ BAX Global

Appendix B – Best Management Practices (BMPs)

<p>- 04 <input type="checkbox"/></p> <p>- 05 <input type="checkbox"/></p> <p>- 06 <input type="checkbox"/></p> <p>- 07 <input type="checkbox"/></p> <p>- 08 <input type="checkbox"/></p> <p>- 09 <input type="checkbox"/></p> <p>- 10 <input type="checkbox"/></p>	<p>Use leak and spill prevention devices.</p> <p>Place adequate spill kits in appropriate locations.</p> <p>Notify Airport Operations (619-400-2710), the Airport Authority Environmental Affairs Department (619-400-2784), and any agencies or companies identified in the SPCC or facility spill prevention and response procedures in the event of a spill.</p> <p>In the event of a spill or release, follow procedures identified in the SPCC or facility spill prevention and response procedures.</p> <p>Use only dry cleaning methods.</p> <p>Properly dispose of all used spill control and clean-up materials.</p> <p>Waste water from washing activities is captured by vacuum and properly disposed of, or is diverted to a structural treatment control, sanitary sewer, or dead end sump with pump.</p>	<p>→ Continental</p> <p>→ Delta</p> <p>→ DHL Express</p> <p>→ Elite Line Service</p> <p>→ Exec Air</p> <p>→ Express Jet</p> <p>→ FedEx</p> <p>→ Frontier</p> <p>→ HMS Host</p> <p>→ Jet Blue</p> <p>→ Jet Wash Inc.</p> <p>→ Jimsair</p> <p>→ LPi</p> <p>→ Northwest</p> <p>→ SDCRAA</p> <p>→ Sky West</p> <p>→ Southwest</p> <p>→ SPC</p> <p>→ United</p> <p>→ UPS</p> <p>→ US Airways</p>
<p>STRUCTURAL TREATMENT BMPs: Refer to BMP TC01 for information on structural treatment BMPs.</p>		
<p>AUTHORIZED LOCATIONS TO IMPLEMENT SPILL PREVENTION, CONTROL AND CLEANUP BMPs:</p>		
<p><input type="checkbox"/></p>	<p>Implement BMPs for the prevention of non-storm water discharges from spills, leaks or improper cleanups at the designated areas as shown in the attached map.</p>	
<p>Date:</p>		<p>Version: 1.0</p>

Appendix B – Best Management Practices (BMPs)

BMP TC01	TREATMENT CONTROLS	
PURPOSE: Eliminate non-storm water discharges to the storm water collection system and remove petroleum compounds, grease, sediments, trash and debris, metals and other contaminants from storm water through the use of structural treatment control BMPs.		TARGETED ACTIVITIES: <ul style="list-style-type: none"> ➔ Aircraft Deicing/Anti-Icing ➔ Aircraft Lavatory Service ➔ All Fueling ➔ All Maintenance ➔ All Storage ➔ All Washing ➔ Cargo Handling ➔ Equipment Cleaning ➔ Fire Fighting Equip. Testing ➔ Floor Washdowns ➔ Garbage Collection ➔ Outdoor Washdown ➔ Painting/Stripping ➔ Potable Water System Flush ➔ Runway Rubber Removal
POLLUTION PREVENTION:		POLLUTANTS of CONCERN: <ul style="list-style-type: none"> ➔ Aircraft Fire Fighting Foam ➔ Battery Acid ➔ Cleaning Solution ➔ Deicing/Anti-Icing Fluid ➔ Fuel ➔ Heavy Metals ➔ Hydrocarbons ➔ Lavatory Chemicals ➔ Metals ➔ Oil and Grease ➔ Paint ➔ Pesticides/Herbicides/ Fertilizers ➔ Potable Water System Chemicals ➔ Solvents ➔ Vehicle Fluids
	Implement the following pollution prevention practices and BMPs to reduce pollutants in storm water and non-storm water discharges and to maintain the proper functioning of structural treatment control BMPs: <ul style="list-style-type: none"> <input type="checkbox"/> Properly dispose of any standing water and accumulated waste removed during cleaning operations in accordance with federal, state, and local requirements. <input type="checkbox"/> CASQA recommends cleaning of water quality inlets (which includes OWSs) at least twice during the wet season. However, the schedule depends on the operating conditions of the SDIA OWSs. <input type="checkbox"/> Inspect and maintain oil water separators as follows: <ol style="list-style-type: none"> 1. Inspect OWSs monthly to establish trends in operating conditions of the SDIA OWSs. 2. Prior to the wet season, inspect for sediment accumulation in the pre-separator and/or separator chambers, and if it is greater than 12 inches deep, remove the accumulated material (for example, with a vacuum truck), characterize it, and properly dispose of it. 3. Prior to the wet season, inspect for oil accumulation in the oil chamber, and if it is more than 50 percent of the chamber volume, remove the oil and grease, characterize it, and properly dispose of it. 4. Inspect coalescer for debris and gummy deposits. If these are present, wash the coalescer in an appropriate area with high pressure hot water. 5. Inspect for general mechanical integrity per manufacturer's guidelines at least annually and operate each mechanical component to ensure proper operation. Repair as needed. 	

Appendix B – Best Management Practices (BMPs)

<input type="checkbox"/>	<p>Inspect and maintain drain inlet inserts (DIIs) as follows:</p> <ol style="list-style-type: none"> 1. Inspect DIIs every 3 months in the dry season and prior to every storm event in the wet season. Remove any trash and debris that could interfere with the proper functioning of the insert. 2. Replace DII if sediment reaches a depth of greater than 6 inches, or if rips or tears are observed. Properly characterize and dispose of the insert and sediment. 3. Inspect monthly for saturation of any oil absorbent material in the DII. Upon saturation, replace absorbent material. 	
<input type="checkbox"/>	<p>Inspect and maintain Vortechs hydrodynamic separator units according to the manufacturer's recommendations and operating conditions. Inspect monthly in the wet season and every 3 months in the dry until operating conditions and maintenance needs are known. Properly characterize and dispose of accumulated waste.</p>	
OPERATIONS:		
Sub-BMPs - 01 <input type="checkbox"/> - 02 <input type="checkbox"/> - 03 <input type="checkbox"/> - 04 <input type="checkbox"/>	<p>Regularly inspect, clean, and maintain all structural treatment control BMPs to prevent the accumulation or resuspension of oil, grease, floating debris and sediments.</p> <p>During cleaning operations, close any effluent valves at the treatment control device and properly dispose of any standing water and accumulated waste that are removed. Replace oil absorbent pads in the treatment control device prior to the start of the wet season and as needed.</p> <p>Document and maintain records for all inspections, cleaning, and maintenance of structural treatment control BMPs.</p> <p>Perform an annual inventory of all structural treatment control BMPs.</p>	
AUTHORIZED LOCATIONS TO IMPLEMENT TREATMENT CONTROL BMPs AND TO MAINTAIN TREATMENT CONTROL BMPs:		
<input type="checkbox"/>	<p>To implement BMPs for the prevention of non-storm water discharges, and to reduce pollutants in storm water discharges, inspect and maintain water structural treatment control BMPs located within the designated areas as shown in the attached map.</p>	
Date:		Version: 1.0

APPENDIX C
STANDARD URBAN STORMWATER MITIGATION PLAN

Appendix C – Standard Urban Stormwater Mitigation Plan



SAN DIEGO COUNTY REGIONAL AIRPORT AUTHORITY SUSMP

*Standard Urban Stormwater Mitigation Plan
Requirements for Development Applications*

January 14, 2011

Table of Contents

CHAPTER 1. INTRODUCTION	1
Background.....	1
Development Review Process	2
Tenant Projects	3
Capital Projects	3
Departmental Responsibilities	4
Adequacy of Proposed Plans	4
How to Use This SUSMP	7
Compliance Process at a Glance	9
Policies and Procedures	9
Phased Projects.....	10
LID Design Procedure	10
Requirements for All Development Projects	11
Additional Requirements for Priority Development Projects.....	11
Compliance with Flow-Control Requirements.....	14
Waivers From Numeric Sizing Criteria	15
Conflicts with Other Regulations	16
CHAPTER 2. CONCEPTS AND CRITERIA	17
Water-Quality Regulations.....	17
Pollutants of Concern	19
Selection of Permanent Source Control BMPs.....	23
Selection of Stormwater Treatment Facilities.....	23
Hydrology for NPDES Compliance	26
Criteria for Infiltration Devices.....	28

CHAPTER 3. THE PROJECT SUBMITTAL	31
Step by Step.....	31
Step 1: Assemble Needed Information.....	33
Step 2: Identify Constraints & Opportunities	34
Step 3: Prepare and Document The LID Design	34
Step 4. Specify Source Control BMPs	35
Step 5: Stormwater Facility Maintenance.....	37
Step 6: Complete The SUSMP Project Submittal	37
CHAPTER 4. LOW IMPACT DEVELOPMENT DESIGN GUIDE.....	41
Analyze The Project for LID	41
Develop and Document The Drainage Design	46
Specify Preliminary Design Details	55
Alternatives to Integrated LID Design.....	55
Self-Treating and Self-Retaining Areas	59
Pervious Pavements	63
Bioretention Facilities	65
Flow-through Planter	73
Dry Wells and Infiltration Basins	78
Cistern with Bioretention Facility	79
CHAPTER 5. OPERATION & MAINTENANCE OF STORMWATER FACILITIES	83
Maintenance Mechanisms	83
Verification Mechanisms	84
Maintenance Requirements.....	84
Maintenance Plans	84
Stage 1: General Maintenance Requirements.....	85

Stage 2: Detailed Maintenance Plan	85
Stage 3: Interim Maintenance	90
Stage 4: Transfer Responsibility	90
Stage 5: Operation and Maintenance Verification	90
BIBLIOGRAPHY	91
APPENDIX A: GLOSSARY	93
APPENDIX B: POLLUTANT SOURCES AND SOURCE CONTROL CHECKLIST	99
APPENDIX C: INFORMATION ON SIC CODES.....	109
APPENDIX D: EXAMPLE TENANT CONDITION OF APPROVAL	117

Figures

FIGURE 1-1 TENANT DEVELOPMENT REVIEW PROCESS	5
FIGURE 1-2 CAPITAL PROJECTS DEVELOPMENT REVIEW PROCESS	6
FIGURE 4-1 SELF-TREATING AREAS	47
FIGURE 4-2 SELF-RETAINING AREAS.....	48
FIGURE 4-3 RELATIONSHIP OF IMPERVIOUS TO PERVIOUS AREA	48
FIGURE 4-4 MORE THAN ONE DMA CAN DRAIN TO ONE IMP	50
FIGURE 4-5 ONE DMA CANNOT DRAIN TO MORE THAN ONE IMP	50

Tables

TABLE 1-1 DEPARTMENTAL RESPONSIBILITIES FOR SUSMP IMPLEMENTATION	7
TABLE 1-2 PRIORITY DEVELOPMENT PROJECTS	13
TABLE 1-3 PROJECT TYPES FOR WHICH TREATMENT CONTROL REQUIREMENTS DO NOT APPLY	14
TABLE 2-1 ANTICIPATED AND POTENTIAL POLLUTANTS BY LAND USE TYPE AT SAN DIEGO INTERNATIONAL AIRPORT.....	21
TABLE 2-2 GROUPING OF POTENTIAL POLLUTANTS OF CONCERN BY FATE DURING STORMWATER TREATMENT	23

TABLE 2-3 GROUPS OF POLLUTANTS AND RELATIVE EFFECTIVENESS OF TREATMENT FACILITIES	24
TABLE 3-1 FORMAT FOR TABLE OF SOURCE CONTROL MEASURES	36
TABLE 3-2 FORMAT FOR CONSTRUCTION PLAN CHECKLIST	38
TABLE 4-1 IDEAS FOR RUNOFF MANAGEMENT	43
TABLE 4-2 RUNOFF FACTORS FOR SURFACES DRAINING TO IMPS	49
TABLE 4-3 FORMAT FOR TABULATING SELF-TREATING AREAS	51
TABLE 4-4 FORMAT FOR TABULATING SELF-RETAINING AREAS	51
TABLE 4-5 FORMAT FOR TABULATING AREAS DRAINING TO SELF-RETAINING AREAS	51
TABLE 4-6 IMP SIZING FACTORS	52
TABLE 4-7 FORMAT FOR PRESENTING CALCULATIONS OF MINIMUM IMP AREAS FOR BIORETENTION AREAS AND PLANTER BOXES ..	52
TABLE 4-8 FORMAT FOR PRESENTING SUMMARY CALCULATIONS OF IMP AREAS	54

Checklists

SUBMITTAL CHECKLIST	32
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Chapter 1 - INTRODUCTION

The San Diego County Regional Airport Authority (Authority) Standard Urban Storm Water Mitigation Plan (SUSMP) addresses post-construction urban runoff pollution from new development and redevelopment projects. This SUSMP provides airport tenants and Authority staff with information on how to comply with the urban runoff management requirements for development projects at the San Diego International Airport (SDIA). This SUSMP guides the project manager or engineer through the selection, design, and incorporation of stormwater best management practices (BMPs) or stormwater treatment control/management facilities into the project design plans.

Background

Impervious surfaces now cover much of the land, and storm drains discharge runoff from urban areas directly into streams, bays, and the ocean. As in many of California's urban areas, growth and development have caused changes in the timing and intensity of stream flows. Once altered, natural streams and their ecosystems generally cannot be fully restored. Nonetheless, it is possible to stop, and partially reverse the trend of declining habitat and preserve some ecosystem values for the benefit of future generations. Managing runoff from a single development site may seem inconsequential, but by changing the way most sites are developed (and redeveloped), it may be possible to preserve and enhance existing stream ecosystems in urban and urbanizing areas. That is the goal of the SUSMP process. In January 2007, the California Regional Water Quality Control Board for the San Diego Region (RWQCB) reissued National Pollutant Discharge Elimination System (NPDES) Permit No. CAS0108758 as RWQCB Order No. R9-2007-0001, hereinafter referred to as "Municipal Permit." The Municipal Permit was issued to the County of San Diego, the Port of San Diego, the Authority, and the 18 cities in San Diego County – known collectively as the Copermittees. Among other things, the reissued permit updates and expands stormwater requirements for new developments and redevelopments. Stormwater treatment requirements have been made more widely applicable and more stringent; minimum standards for Low Impact Development (LID) have been added, and the Copermittees have been required to develop and implement criteria for the control of runoff peaks and durations from development sites.

The Municipal Permit also required the Copermittees to prepare an updated Countywide Model SUSMP to replace the model that had been in effect since 2002. The Model SUSMP created the template for all the individual Copermittee SUSMP processes. The goal of the updated Model SUSMP still remains to develop and implement practicable policies to ensure to the maximum extent practicable that development does not increase pollutant loads from a project site and addresses the impacts of changes in urban runoff flow rates and velocities. The updated Model SUSMP, and the Hydromodification Plan contained therein, has been reviewed and approved by the RWQCB in a public process.

The most recent, updated version of the Copermittee Model SUSMP, including updates and errata between editions, is available on the Project Clean Water website (www.projectcleanwater.org). The on-line Model SUSMP is presented in Adobe Acrobat format and features hyperlinks to help navigate the document and to access various references.

The Copermittees are required to update their own Local SUSMP and ordinances consistent with the RWQCB-approved Model SUSMP. Under the Local SUSMP, each Copermittee will approve project plans as part of the development plan approval process for discretionary projects, and prior to issuing permits for ministerial projects. Structural treatment control BMPs may be located on- or off-site, used singly or in combination, or shared by multiple developments, provided certain conditions are met, to allow flexibility in meeting SUSMP design standards. This document, hereafter referred to as the Authority SUSMP, is the SUSMP required for use with projects proposed within the jurisdiction of the Authority.

Applicants must also incorporate into their project design those features which have been identified by the Copermittees as necessary to control pollutants from specified on-site sources, such as refuse areas, outdoor storage areas, and vehicle washing and repair facilities. The Copermittees have developed a table listing the types of sources to be controlled and, for each, the corresponding source control measures required. All such applicable measures are incorporated here in the Authority SUSMP.

Development Review Process

As described in the Authority's Storm Water Management Plan (SWMP), the Authority is a special government entity, created in 2003 by the California legislature and granting the Authority the responsibility of managing the San Diego International Airport. Several tenants and subtenants operate businesses at the SDIA under the Authority's jurisdiction. In addition, the Authority operates its own "municipal" facilities including the terminals, parking lots, and other support buildings.

Article 8 of the Authority Code, referred to as the Storm Water Code, consists of its storm water management and discharge controls. Section 8.74(a)(3) address New Development and Redevelopment and states that "the Executive Director may establish controls on the volume and rate of storm water runoff from new developments and redevelopments as may be reasonably necessary to minimize the discharge and transport of pollutants." The Authority SUSMP represents one mechanism by which the Executive Director has established such controls in order to comply with the Municipal Permit.

New development and redevelopment projects are conducted by two major categories of project proponents, tenants of the airport (hereafter referred to as "tenant projects") and the Authority itself (hereafter referred to as "capital projects"). The Authority has a different project approval process for each of these two project proponent categories and these differences are reflected in the Authority SUSMP project review and approval processes. The Authority SUSMP project

approval process, including roles and responsibilities of Authority departments, is described below for both tenant and capital projects.

Tenant Projects

Authority tenants desiring to implement surface or subsurface improvements or to perform new construction, reconstruction, modification, or demolition, must submit a request for approval. Project approval typically involves several steps and review by several Authority departments. The process is outlined in the flow chart in Figure 1-1 and is further described below.

Project approval starts with the project proponent submitting a project description to the Real Estate Management Department, where a project completeness check is conducted. Real Estate Management will then coordinate with the Facilities Development Department to complete a review of the project. These two departments complete a Project Evaluation Form (PEF) and submit the PEF to Environmental Affairs. The PEF includes information pertinent to the SUSMP, such as land use, location, and the project square footage. Based on the PEF, Environmental Affairs determines whether SUSMP requirements apply to the project. The guidelines used to assist project proponents, Environmental Affairs, and others, in determining whether SUSMP requirements apply to projects conducted under the Authority jurisdiction are presented further below.

If SUSMP requirements apply, in order for the project application to be considered complete, the project proponent must submit an SUSMP Project Submittal (Project Submittal) in accordance with the Authority SUSMP describing how the project will meet the SUSMP requirements. Once the entire project application is complete, a project manager from either Real Estate Management or Facilities Development is assigned to the project. The project manager coordinates technical review and approval of the project including obtaining review from other Authority Departments. Environmental Affairs reviews and approves all Project Submittal documents and associated final design plans to ensure that SUSMP requirements are met. The approval of an Authority tenant project becomes part of the lease or part of a use permit. For discretionary projects, measures specified in the Project Submittal, such as implementation and maintenance of stormwater BMPs, are typically incorporated as mitigation measures as part of the California Environmental Quality Act (CEQA) environmental review process. Therefore, in addition to becoming part of the lease or use permit, the measures are also typically adopted by the Executive Officer or the Board of Authority Commissioners as part of the CEQA Mitigation Monitoring and Reporting Program.

Capital Projects

Development projects at the airport which are carried out by the Authority itself are considered Capital Projects or Major Maintenance Projects. The process for implementing SUSMP requirements for Authority capital projects and major maintenance projects is outlined in the flow chart in Figure 1-2 and is further described below.

All Capital and Major Maintenance Projects undergo an environmental review as part of the standard development review process. Authority staff from the department proposing a project act as the project sponsors and initiate the review process by submitting project information to Facilities Development Department. Facilities Development completes a PEF and forwards the PEF to Environmental Affairs for evaluation of the applicability of SUSMP requirements. If SUSMP requirements apply, Environmental Affairs advises Facilities Development that a Project Submittal must be submitted prior to final plan approval. Facilities Development coordinates with the project proponents and consultants to prepare the Project Submittal. Environmental Affairs reviews and approves the Project Submittal documents and associated final design plans to ensure that SUSMP requirements are met.

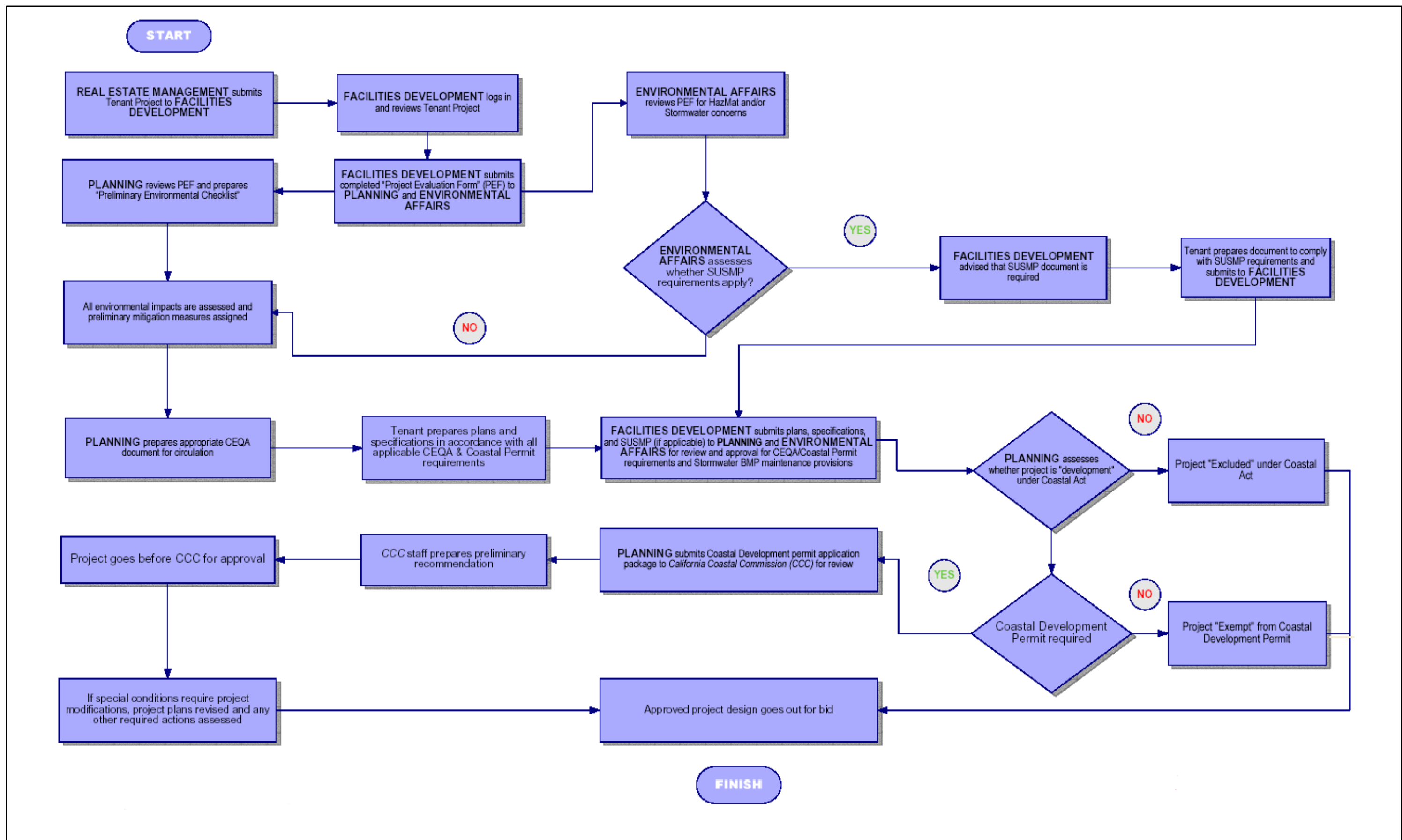
The approval of development and improvement projects carried out by the Authority itself includes the incorporation of environmental mitigation measures that are self-imposed as a result of the CEQA review process. Such mitigation measures become part of the project design and/or implementation and are formalized as an adopted CEQA Mitigation Monitoring and Reporting Program.

Departmental Responsibilities

The general responsibilities of those departments involved in the implementation of the Authority's SUSMP process are listed in Table 1-1. The inspectors of Facilities Development ensure that structural BMPs are installed according to approved plans. Real Estate Management and Environmental Affairs are responsible for ensuring that tenants properly operate and maintain any stormwater pollution control measures that were required as part of the project approval. The Facilities Maintenance Department and Airside Operations Department and Land Operations Department staffs are involved with the operation and proper maintenance of BMPs installed for capital projects and major maintenance projects.

Adequacy of Proposed Plans

Environmental Affairs will review Project Submittal documents and other relevant plans for compliance with the applicable SUSMP requirements. Environmental Affairs may approve proposed alternatives to the BMP requirements in the Authority SUSMP if they are determined to be applicable and equally effective. Additional analysis or information may be required to enable staff to determine the adequacy of proposed BMPs and will be requested following the conclusion of a staff review cycle. The Project Submittal will be deemed complete once Environmental Affairs determines that the project's compliance with the Authority SUSMP is adequately described in the Project Submittal and related plans.



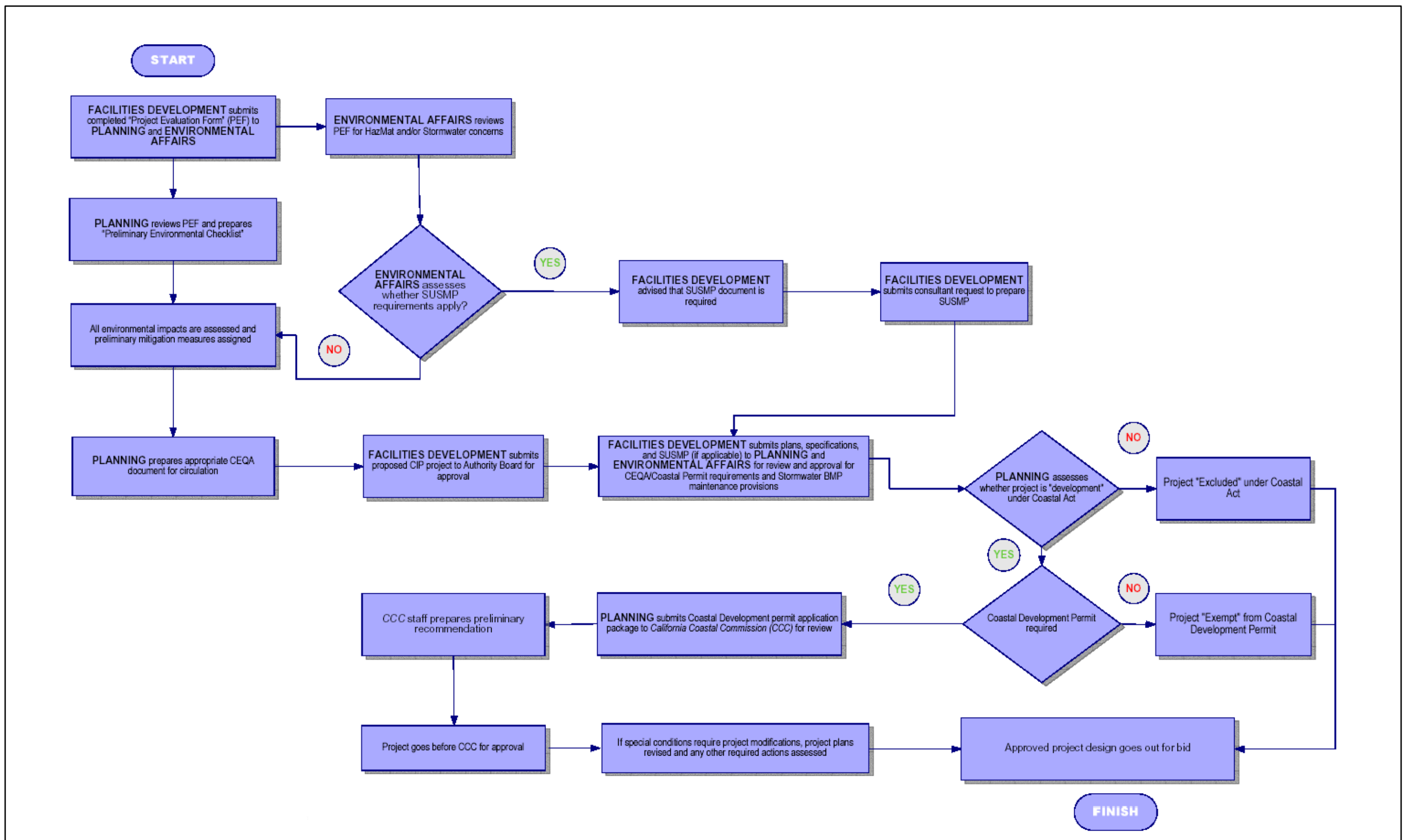


TABLE 1-1. DEPARTMENTAL RESPONSIBILITIES FOR SUSMP IMPLEMENTATION

Department	Education	Tenant Project Review	Tenant Project Approval	Capital Project Planning	Capital Project Review	Capital Project Approval	Construction Inspection	Capital Project Operations and Maintenance	Enforcement
Airport Planning	O	O		X					
Airside Operations	O						O	X	O
Environmental Affairs	X	X	X	O	X	X	O	O	X
Facilities Development	O	X	X	X	X	X	X		
Facilities Maintenance	O							X	
Landside Operations	O						O	X	O
Real Estate Management	X	X	X				O		X
X – Primary responsibility									
O – Secondary responsibility									

How to Use this SUSMP

While the Authority SUSMP details the process for ensuring that the project complies with the Municipal Permit requirements, most applicants will also require the assistance of a qualified civil engineer, architect, and/or landscape architect to ensure an effective project design. Because every project is different, project applicants should also check with staff from the Environmental Affairs Department on the specific requirements for the project.

This updated Authority SUSMP provides the applicant with step-by-step instructions for preparing a Project Submittal for review by the Authority Environmental Affairs Department.

CHAPTER 1 - INTRODUCTION

These steps are:

1. Assemble needed information.
2. Identify site opportunities and constraints.
3. Follow the LID Design Guidance to analyze the project for LID and to develop and document the drainage design.
4. Identify the specific source control requirements using the sources/source control checklist in the appendix.
5. Plan for ongoing maintenance of treatment and flow-control facilities.
6. Complete the Project Submittal.

The step-by-step instructions are augmented by a checklist which Environmental Affairs Department staff use as a guide when reviewing the Project Submittal. This SUSMP also includes a Project Submittal outline and content requirements.

Chapter 1 provides an overview of when and how stormwater quality management requirements apply to the proposed project. Chapter 1 also provides an overview of the process of planning, design, construction, operation, and maintenance leading to compliance.

Chapter 2 provides background on key stormwater concepts, terms, issues, and water quality regulations, including design criteria.

Chapter 3 provides a step-by-step guide to and checklist for preparing a Project Submittal.

Chapter 4, the Low Impact Development Design Guide, includes design procedures, calculation procedures, and instructions for presenting the design and calculations in the Project Submittal.

Chapter 5 outlines acceptable means for ensuring that stormwater treatment facility maintenance plans are prepared and implemented, as required by the Municipal Permit.

At the end of each Chapter, there are references and resources to help facilitate understanding of the regulations, complete the Project Submittal, and design effective stormwater control measures for the project.

The most common (and costly) errors made by applicants for development approvals with respect to stormwater quality compliance are:

1. Not planning for compliance early enough. The strategy for stormwater quality compliance should be developed before completing a conceptual site design or sketching a layout of the project site (Chapter 3).
2. Mistakenly assuming proprietary stormwater treatment facilities will be adequate for compliance (Chapter 2).

3. Not planning for periodic inspections and maintenance of treatment and flow-control facilities. Consider who will own and who will maintain the facilities in perpetuity and how they will obtain access, and identify which arrangements are acceptable to the Authority (Chapter 5).

Compliance Process at a Glance

The applicant for development project approval must follow these general steps to ensure compliance with stormwater regulations:

1. Discuss requirements during a pre-application meeting with staff from the Environmental Affairs Department.
2. Review the instructions in this SUSMP before preparing preliminary site plans or maps, drainage plans, and landscaping plans.
3. Prepare the Project Submittal, which is typically made with the application for development approvals.
4. Create a detailed project design, incorporating the features described in the Project Submittal.
5. In a table on the construction plans, list each stormwater compliance feature and facility and the plan sheet where it appears.
6. Prepare and submit a draft Stormwater Facility Operation and Maintenance Plan.
7. Maintain stormwater facilities during construction and following construction in accordance with required warranties.
8. Following construction, ensure that responsibility for maintenance is properly transferred to the owner.
9. The owner must periodically verify stormwater facilities are properly maintained.

Preparation of a complete and detailed Project Submittal is the key to cost-effective stormwater compliance and expeditious project review. Instructions for preparing the Project Submittal are in Chapter 3.

Policies and Procedures

There are several policies and procedures which determine if and how the proposed development project must comply with stormwater quality requirements several of which are discussed below.

Phased Projects

When determining whether SUSMP requirements apply, a “project” should be defined consistent with the CEQA definitions of “project.” That is, the “project” is the whole of an action which has the potential for adding or replacing or resulting in the addition or replacement of roofs, pavement, or other impervious surfaces and thereby resulting in increased flows and stormwater pollutants. “Whole of an action” means the project may not be segmented or piecemealed into small parts if the effect is to reduce the quantity of impervious area for any part to below the SUSMP thresholds.

For phased projects, Environmental Affairs Department staff may request a conceptual or master Project Submittal which describes and illustrates, in broad outline, how the drainage for the project will comply with the SUSMP requirements. The level of detail in the conceptual or master Project Submittal should be consistent with the scope and level of detail of the development approval being considered. The conceptual or master Project Submittal should specify that a more detailed Project Submittal for each later phase or portion of the project will be submitted with subsequent applications for approval of various project components.

A Low Impact Development Design Procedure

The Municipal Permit requires that LID practices be incorporated into all development projects to minimize runoff pollutant loads and to control the peak flow and runoff duration. To assist the land development community, to streamline project reviews, and to maximize cost-effective environmental benefits, the updated Model SUSMP incorporated a unified LID design procedure. This design procedure integrates site planning and design measures with engineered, small-scale Integrated Management Practices (IMPs) such as bioretention. By following the procedure outlined here in the Authority SUSMP (which is again based upon the Model SUSMP), applicants can develop a single integrated design which complies with the complex and overlapping Municipal Permit LID requirements, stormwater treatment requirements, and any applicable runoff peak-and-duration-control (hydromodification management) requirements. Low Impact Development is an integrated site design methodology that uses small-scale detention and retention to minimize pollutants conveyed by runoff and to mimic pre-project site hydrological conditions.

Along with the detailed design procedures incorporated from the Model SUSMP, this updated Authority SUSMP includes design information and criteria for dispersal of runoff to landscaped areas and for pervious pavements, bioretention facilities, flow-through planters, dry wells, infiltration basins, and cisterns. Where feasible and where allowed, water in cisterns may be directed to non-potable uses, augmenting water supplies. Bioretention facilities and planter boxes can be designed with an impermeable barrier so that runoff does not saturate native soils; instead, runoff is filtered through an engineered soil mix before being captured in an underdrain and conveyed to off-site storm drains. Such a configuration may be needed here at the airport where groundwater is high, may be contaminated, or where increasing soil moisture may present a hazard to foundations.

The updated Authority SUSMP requires that runoff be infiltrated or else treated by bioretention facilities, planter boxes, and filters. Although the Model SUSMP envisions the use of settling ponds and/or constructed wetlands, such facilities would not likely be allowed at the airport since they are generally wildlife/bird attractants which could present hazards to aircraft. In some special circumstances (such as retrofit of existing drainage systems, some pedestrian-oriented developments, roadway widening, some parking lot pavement, and airfield pavement projects) where it can be demonstrated it is not be feasible to construct any of the infiltration and/or bioretention facilities, higher-rate surface biofilters or higher-rate vault based filtration units may be used.

The design approach is detailed in Chapter 4. General instructions for preparing a complete Project Submittal are in Chapter 3, and specific local submittal requirements are available from Environmental Affairs Department staff.

Applicants for development project approvals may choose not to use the unified LID design procedure; in such cases, however, they will still need to demonstrate compliance with the applicable LID criteria, and stormwater treatment criteria. These criteria are described in Chapter 4 and in the Municipal Permit.

Requirements for All Development Projects

All development projects must include control measures to reduce the discharge of stormwater pollutants to the maximum extent practicable.

In general, for projects that are not “Priority Development Projects,” this will include:

- Implementation of source control BMPs as listed in the Appendix B.
- Inclusion of some LID features that conserve natural features, set back development from natural water bodies, minimize imperviousness, maximize infiltration, and retain and slow runoff.
- Compliance with requirements for construction-phase controls on sediment and other pollutants.

Please note that Environmental Affairs Department staff may determine that additional stormwater treatment controls are also required for the project. LID treatment controls such as infiltration or bioretention are generally preferred (see “Selection of Treatment Facilities” in Chapter 2). If treatment facilities are included, provisions must be made to ensure their long-term maintenance.

Additional Requirements for Priority Development Projects

The Municipal Permit requires that more specific runoff treatment controls be incorporated into Priority Development Projects. There are several factors used to define a Priority Development

Project, namely, the stormwater pollutant generation capacity of the project, the type of development, and the project footprint. Each of these factors is further discussed below.

► POLLUTANT GENERATING PROJECTS WHICH DISTURB ONE ACRE OR MORE OF LAND

Projects that generate pollutants at levels greater than background levels and disturb one acre or more of land are considered Priority Development Projects. Environmental Affairs Department staff should be consulted in determining the applicability of this definition to a project. However, in most cases, linear pathway projects that are for infrequent vehicle use (such as emergency or maintenance access) or for pedestrian use are not considered pollutant generating above background levels if they are built with pervious surfaces or if they allow runoff to sheet flow to surrounding pervious surfaces.

► NEW DEVELOPMENT

Projects on undeveloped land are Priority Development Projects if they are in one or more of the categories listed in Table 1-2. While the Municipal Permit also includes a few new development categories that do not appear in Table 1-2, those few categories (such as Hillside Development) are not applicable at San Diego International Airport. If any of the definitions in Table 1-2 apply, then the project is a Priority Development Project. Note some thresholds are defined by square footage of impervious area created; others by the total area of the development. If a project feature such as a parking lot falls into one of these Priority Development Project categories, then the entire project footprint is subject to Priority Project requirements.

► PREVIOUSLY DEVELOPED SITES

Projects on previously developed sites (“redevelopment projects”) are Priority Development Projects if they create, add, or replace 5,000 square feet or more of impervious surface and are also listed in one of the categories in Table 1-2.

THE “50% RULE” FOR PREVIOUSLY DEVELOPED PROJECT SITES: Projects on previously developed sites may also need to retrofit drainage of ALL impervious areas of the ENTIRE project site. For projects creating or replacing more than 5,000 square feet of impervious area:

- If the new project results in an increase of, or replacement of, 50% or more of the previously existing impervious surface, and the existing development was not subject to SUSMP requirements, then the entire project must be included in the treatment measure design.
- If less than 50% of the previously impervious surface is to be affected, only that portion must be included in the treatment measure design.

If a redevelopment project feature such as a parking lot falls into a Priority Development Project category, then the entire project footprint is subject to Priority Project requirements.

TABLE 1-2. PRIORITY DEVELOPMENT PROJECT CATEGORIES APPLICABLE AT SAN DIEGO INTERNATIONAL AIRPORT

Priority Development Project Categories
<p>Commercial — greater than one acre. Any development other than heavy industry or residential. Examples: hospitals; laboratories and other medical facilities; educational institutions; recreational facilities; municipal facilities; commercial nurseries; multi-apartment buildings; car wash facilities; mini-malls and other business complexes; shopping malls; hotels; office buildings; public warehouses; automotive dealerships; airfields; and other light industrial facilities.</p>
<p>Heavy industry — greater than one acre. Examples: manufacturing plants, food processing plants, metal working facilities, printing plants, and fleet storage areas (bus, truck, etc.).</p>
<p>Automotive repair shops. A facility categorized in any one of Standard Industrial Classification (SIC) codes 5013, 5014, 5541, 7532-7534, or 7536-7539 (See Appendix C for descriptions of SIC codes).</p>
<p>Restaurants. Any facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812), where the land area for development is greater than 5,000 square feet. Restaurants where land development is less than 5,000 square feet shall meet all SUSMP requirements except for structural treatment BMP and numeric sizing criteria requirements and hydromodification requirements.</p>
<p>Environmentally Sensitive Areas (ESAs). All development located within or directly adjacent to or discharging directly to an ESA (where discharges from the development or redevelopment will enter receiving waters within the ESA), which either creates 2,500 square feet of impervious surface on a proposed project site or increases the area of imperviousness of a proposed project site to 10% or more of its naturally occurring condition. “Directly adjacent” means situated within 200 feet of the ESA. “Discharging directly to” means outflow from a drainage conveyance system that is composed entirely of flows from the subject development or redevelopment site, and not commingled with flows from adjacent lands.</p>
<p>Parking lots: 5,000 square feet or more or with 15 or more parking spaces and potentially exposed to urban runoff.</p>
<p>Street, Roads, Highways, and Freeways. Any paved surface that is 5,000 square feet or greater used for the transportation of automobiles, trucks, motorcycles, and other vehicles.</p>
<p>Retail Gasoline Outlets (RGOs): that are: (a) 5,000 square feet or more or (b) a projected Average Daily Traffic (ADT) of 100 or more vehicles per day.</p>

► **EXCEPTIONS TO THE RULES**

The following project types (listed in Table 1-3) are not subject to the SUSMP treatment control requirements: redevelopment projects which are limited to interior remodels; routine maintenance or repair; roof or exterior surface replacement; resurfacing and reconfiguring surface parking lots and existing roadways; new sidewalk construction or pedestrian ramps; bike lanes on existing roads; and routine replacement of damaged pavement, such as pothole repair. Nonetheless, the project is still obligated to meet the requirements for All Development Projects outlined above and must also incorporate any applicable source control requirements.

Also note that Environmental Affairs Department staff may choose to designate a project that is not defined within any of the categories in Table 1-2 as Priority Development Project, based on the project's potential impacts to stormwater quality.

TABLE 1-3. PROJECTS TYPES FOR WHICH TREATMENT CONTROL REQUIREMENTS DO NOT APPLY*

Project Type
<ul style="list-style-type: none"> ▪ Redevelopment projects limited to interior remodeling. ▪ Routine maintenance or repair. ▪ Roof or exterior surface replacement. ▪ Any resurfacing and reconfiguring of surface parking lots and existing roadways. ▪ New sidewalk or pedestrian ramp construction. ▪ Construction of bike-lanes on existing roads. ▪ Replacement of damaged pavement or impervious surfaces as part of routine maintenance activities. ▪ Application of asphalt overlay to existing pavement. ▪ Projects (except mandatory categories above) that create less than 2,500 square feet of impervious surfaces or do not increase the area of imperviousness of a project site to 10% or more of its naturally occurring condition.

* Note: the project is still obligated to meet the requirements for All Development Projects and must incorporate any applicable source control requirements. Refer to the SUSMP definitions and Model SUSMP for more information as necessary.

Compliance with Flow-Control Requirements

Changes to downstream erosion conditions and stream habitat caused by development are referred to as hydromodification. Applicants for approval of Priority Development Projects (defined herein) must comply with the hydromodification management criteria in Provision D.1.g of the Municipal Permit and design projects such that runoff rates and durations are controlled to maintain or reduce pre-project downstream erosion conditions and protect stream habitat. The Copermittees developed, and the RWQCB approved, a Hydromodification Management Plan (HMP) that has been incorporated into the Model SUSMP.

Both the Municipal Permit and the Model SUSMP allow for exemptions to the hydromodification requirements in the HMP under the following conditions relevant to the jurisdiction of the Authority:

1. The project would discharge directly into San Diego Bay; or
2. The project would discharge to a stabilized conveyance system that extends to San Diego Bay; or
3. The contributing watershed area to which the project discharges has an impervious area percentage greater than 70%.

Given the location of the airport, the urban environment surrounding the airport, and that San Diego Bay is the receiving water for stormwater runoff from the airport, every project proposed at the airport and within the jurisdiction of the Authority is exempt from hydromodification requirements. Nonetheless, the Authority does have the authority to require a project to implement applicable HMP requirements even if the project might typically be exempt.

Projects determined to be exempt from HMP flow control requirements are still required to implement the LID and water quality treatment control requirements of the Municipal Permit and the Authority SUSMP.

Waivers from Numeric Sizing Criteria

The Municipal Permit allows for a project to be waived from numeric sizing criteria for stormwater treatment only if all available treatment facilities have been considered and found infeasible. Environmental Affairs Department staff must inform the Water Board within 5 days of granting a waiver. Other SUSMP requirements — including site designs to minimize imperviousness and source control BMPs — will still apply.

Experience has shown implementation of LID facilities, as described in Chapter 4, is feasible on nearly all development sites. However, the use of LID to retrofit existing drainage systems, to manage runoff from sites smaller than one acre in pedestrian-oriented developments, or to manage runoff from widened portions of roadways, sometimes presents special challenges. In these special situations, applicants should see the discussion of “Selection of Stormwater Treatment Facilities” in Chapter 2 and, in consultation with staff from the Environmental Affairs Department staff, evaluate the options described in order in that section. All the options listed meet the numeric sizing criteria in the Municipal Permit.

If infeasibility of all these options can be established, Environmental Affairs Department staff will determine the eligibility of the project for a waiver.

Conflicts With Other Regulations

The Authority knows of no apparent conflicts between the Model SUSMP requirements and established Authority codes or ordinances. If an apparent conflict is identified by a project proponent, it should be brought to the attention of the Authority Project Architect for tenant projects or the Authority Environmental Affairs Department for capital projects.

References and Resources:

RWQCB Order R9-2007-0001 (Municipal Permit)

Model SUSMP

Project Clean Water

Chapter 2 – CONCEPTS AND CRITERIA

Municipal Permit Provision D.1.d. requires Copermittees to regulate projects in specific categories (Table 1-1) to:

1. Reduce discharges of pollutants to the maximum extent practicable.
2. Prevent runoff discharges from causing or contributing to a violation of water quality standards.

The Copermittees have created a Low Impact Development (LID) design procedure (Chapter 4) that ensures consistent and thorough implementation of the Municipal Permit requirements. This chapter explains the technical background of the LID approach and how it was derived.

The previous permit, issued in 2001, included a requirement to control the post-development peak storm water runoff rates and velocities to maintain or reduce pre-development downstream erosion and protect stream habitat. The 2007 permit includes, in addition to this ongoing requirement, a new requirement to develop a hydromodification management plan (HMP) to identify and define a methodology and performance criteria to ensure flow rates and durations do not exceed pre-project runoff where increased runoff could cause erosion or other significant adverse impacts to beneficial uses.

As required by the Municipal Permit, the Copermittees have adopted final hydromodification criteria. See Chapter 1.

Water-Quality Regulations

Provision D.1 of the Municipal Permit requires the Copermittees to condition development approvals on incorporation of specified stormwater controls.

Provision D.1 requires new developments and redevelopments to:

- Design the site to conserve natural areas, existing trees and vegetation and soils, to maintain natural drainage patterns, to minimize imperviousness, to detain runoff, and to infiltrate runoff where feasible
- Cover or control sources of stormwater pollutants
- Treat runoff prior to discharge. Provision E.10 of the Municipal Permit states: “Urban runoff treatment and/or mitigation must occur prior to the discharge of urban runoff into a receiving water. Federal regulations at 40 CFR 131.10(a) state that in no case shall a state adopt waste transport or waste assimilation as a designated use for any waters of the U.S.”

CHAPTER 2: CONCEPTS AND CRITERIA

- Ensure runoff does not exceed pre-project peaks and durations where increases could affect downstream habitat or other beneficial uses
- Maintain treatment and flow-control facilities

The Authority maintains a database to track approved installations of treatment facilities and to verify facilities are maintained. In an annual report to the RWQCB, the Authority includes a list of development projects subject to SUSMP conditions and descriptions of those projects that:

- Received a waiver from SUSMP criteria;
- Used hydrologic controls used to meet HMP requirements, including a description of the controls;
- Have an area of 50 acres or greater, and are thus subject to the IHC.

The Authority must also annually report the number of violations and enforcement actions taken upon development projects. The Authority's program is subject to audit by the RWQCB.

The Authority is charged with ensuring development projects comply with the Municipal Permit D.1 requirements. RWQCB staff may review stormwater controls and hydromodification impacts in connection with applications for Clean Water Act Section 401 water-quality certification, which is required for projects that involve work, such as dredging or placement of fill, within waters of the US.

► MAXIMUM EXTENT PRACTICABLE

Clean Water Act Section 402(p)(3)(iii) sets the standard for stormwater controls as “maximum extent practicable,” but doesn't define that term. As implemented, “maximum extent practicable” is ever-changing and varies with conditions.

Many stormwater controls, including LID facilities, have proven to be practicable in most site development projects. To achieve fair and effective implementation, criteria, guidance, and requirements for controls must be detailed and specific—while also offering the right amount of flexibility or exceptions for special cases. The Municipal Permit includes various standards, including hydrologic criteria, which comprise the “maximum extent practicable” standard. The Model SUSMP, upon which the Authority SUSMP is based, will be continuously improved and refined based on the experience of land use and municipal planners and engineers, with input from land developers and development professionals. By following the Model SUSMP (and in turn, the Authority SUSMP), applicants can ensure their project design meets the “maximum extent practicable” standard.

► BEST MANAGEMENT PRACTICES

Clean Water Act Section 402(p) and USEPA regulations (40 CFR 122.26) specify a municipal program of “management practices” to control stormwater pollutants. **Best Management Practice (BMP)** refers to any kind of procedure, activity or device designed to minimize the quantity of pollutants that enter the storm drain system. BMPs are typically used in place of

assigning numeric effluent limits. The criteria for source control BMPs and treatment and flow-control facilities are crafted to fulfill “maximum extent practicable.”

The Authority SUSMP refers to stormwater management/treatment “facilities,” “features,” or “controls” interchangeably; all of these are considered to be BMPs.

Pollutants of Concern

Municipal Permit Provision D.1.d.(3) requires each Copermittee to develop and implement a procedure for pollutants of concern to be identified for each Priority Development Project. The Copermittees have considered this requirement jointly and have determined the LID design procedures described in Chapters 3 and 4 of the Authority SUSMP fully address the need to identify pollutants of concern insofar as that identification may affect the selection of source control BMPs and treatment facilities.

Documentation of the approach to identifying pollutants of concern and selecting BMPs and facilities follows.

► GROUPING OF POTENTIAL POLLUTANTS OF CONCERN

Urban runoff from a developed site has the potential to contribute pollutants, including oil and grease, suspended solids, metals, gasoline, pesticides, and pathogens to the storm water conveyance system and receiving waters. For the purposes of identifying pollutants of concern and associated storm water BMPs, pollutants are grouped in nine general categories as follows:

- **Sediments** are soils or other surficial materials eroded and then transported or deposited by the action of wind, water, ice, or gravity. Sediments can increase turbidity, clog fish gills, reduce spawning habitat, lower young aquatic organisms survival rates, smother bottom dwelling organisms, and suppress aquatic vegetation growth.
- **Nutrients** are inorganic substances, such as nitrogen and phosphorus. They commonly exist in the form of mineral salts that are either dissolved or suspended in water. Primary sources of nutrients in urban runoff are fertilizers and eroded soils. Excessive discharge of nutrients to water bodies and streams can cause excessive aquatic algae and plant growth. Such excessive production, referred to as cultural eutrophication, may lead to excessive decay of organic matter in the water body, loss of oxygen in the water, release of toxins in sediment, and the eventual death of aquatic organisms.
- **Metals** are raw material components in non-metal products such as fuels, adhesives, paints, and other coatings. Primary sources of metal pollution in storm water are typically commercially available metals and metal products. Metals of concern include cadmium, chromium, copper, lead, mercury, and zinc. Lead and chromium have been used as corrosion inhibitors in primer coatings and cooling tower systems. At low concentrations naturally occurring in soil, metals are not toxic. However, at higher

concentrations, certain metals can be toxic to aquatic life. Humans can be impacted from contaminated groundwater resources, and bioaccumulation of metals in fish and shellfish. Environmental concerns, regarding the potential for release of metals to the environment, have already led to restricted metal usage in certain applications.

- **Organic compounds** are carbon-based. Commercially available or naturally occurring organic compounds are found in pesticides, solvents, and hydrocarbons. Organic compounds can, at certain concentrations, indirectly or directly constitute a hazard to life or health. When rinsing off objects, toxic levels of solvents and cleaning compounds can be discharged to storm drains. Dirt, grease, and grime retained in the cleaning fluid or rinse water may also adsorb levels of organic compounds that are harmful or hazardous to aquatic life.
- **Trash** (such as paper, plastic, polystyrene packing foam, and aluminum materials) and biodegradable organic matter (such as leaves, grass cuttings, and food waste) are general waste products on the landscape. The presence of trash & debris may have a significant impact on the recreational value of a water body and aquatic habitat. Excess organic matter can create a high biochemical oxygen demand in a stream and thereby lower its water quality. Also, in areas where stagnant water exists, the presence of excess organic matter can promote septic conditions resulting in the growth of undesirable organisms and the release of odorous and hazardous compounds such as hydrogen sulfide.
- **Oxygen-Demanding Substances** includes biodegradable organic material as well as chemicals that react with dissolved oxygen in water to form other compounds. Proteins, carbohydrates, and fats are examples of biodegradable organic compounds. Compounds such as ammonia and hydrogen sulfide are examples of oxygen-demanding compounds. The oxygen demand of a substance can lead to depletion of dissolved oxygen in a water body and possibly the development of septic conditions.
- Primary sources of **oil and grease** are petroleum hydrocarbon products, motor products from leaking vehicles, esters, oils, fats, waxes, and high molecular-weight fatty acids. Introduction of these pollutants to the water bodies are very possible due to the wide uses and applications of some of these products in municipal, residential, commercial, industrial, and construction areas. Elevated oil and grease content can decrease the aesthetic value of the water body, as well as the water quality.
- **Bacteria and Viruses** are ubiquitous microorganisms that thrive under certain environmental conditions. Their proliferation is typically caused by the transport of animal or human fecal wastes from the watershed. Water, containing excessive bacteria and viruses can alter the aquatic habitat and create a harmful environment for humans and aquatic life. Also, the decomposition of excess organic waste causes increased growth of undesirable organisms in the water.

- **Pesticides** (including herbicides) are chemical compounds commonly used to control nuisance growth or prevalence of organisms. Excessive application of a pesticide may result in runoff containing toxic levels of its active component.

► **IDENTIFYING POLLUTANTS OF CONCERN BASED ON LAND USES**

Table 2-1 associates pollutants with the Priority Development Project categories described in Table 1-2. Pollutants associated with any hazardous material sites that have been remediated or are not threatened by the proposed project are not considered a pollutant of concern.

TABLE 2-1. ANTICIPATED AND POTENTIAL POLLUTANTS GENERATED BY LAND USE TYPE AT SAN DIEGO INTERNATIONAL AIRPORT.

Priority Project Categories	General Pollutant Categories								
	Sediment	Nutrients	Heavy Metals	Organic Compounds	Trash & Debris	Oxygen Demanding Substances	Oil & Grease	Bacteria & Viruses	Pesticides
Commercial Development >one acre	P(1)	P(1)	X	P(2)	X	P(5)	X	P(3)	P(5)
Heavy Industry	X		X	X	X	X	X		
Automotive Repair Shops			X	X(4)(5)	X		X		
Restaurants					X	X	X	X	P(1)
Parking Lots	P(1)	P(1)	X		X	P(1)	X		P(1)
Retail Gasoline Outlets			X	X	X	X	X		
Streets, Highways & Freeways	X	P(1)	X	X(4)	X	P(5)	X	X	P(1)
X = anticipated P = potential (1) A potential pollutant if landscaping exists on-site. (2) A potential pollutant if the project includes uncovered parking areas. (3) A potential pollutant if land use involves food or animal waste products. (4) Including petroleum hydrocarbons. (5) Including solvents.									

► WATERSHEDS WITH SPECIAL POLLUTANT CONCERNS

Local receiving water quality conditions may require specialized attention. There are two water quality issues in the vicinity of the airport that should be considered, namely:

- 303(d) listed waters; and
- Waters with established TMDLs.

The Municipal Permit identifies several receiving waters as impaired for constituents or water quality effects pursuant to **Section 303(d)** of the Clean Water Act. Placement of a water onto the list requires the RWQCB to make further analysis of the impairment and development of total maximum daily loads (TMDLs) for addressing the impairment. The 303(d) listing in itself does not demand that a project proponent select BMPs on the basis of the impairment; however, the project proponent should be cognizant of the impairment and the future implications a TMDL might have upon the proposed land use.

Once a TMDL is established it may impose conditions on development either through an implementation plan and schedule for the listed water, or through special conditions required of the jurisdiction affected by the numeric criteria of the TMDL. At this time, several 303(d) listings in San Diego County are at various stages of TMDL development with only four TMDLs having been adopted by the RWQCB. However, there are approximately 190 pending TMDLs in the county.

The **adopted TMDLs** in the San Diego region include:

- Diazinon for Chollas Creek;
- Nitrogen and phosphorous for Rainbow Creek;
- Dissolved copper for Shelter Island Yacht Basin;
- Copper, lead, and zinc for Chollas Creek, and
- Indicator bacteria for beaches and creeks in the San Diego Region.

Chollas Creek, Shelter Island Yacht Basin and the airport all lie within the Pueblo San Diego hydrologic unit (908.00) of the RWQCB San Diego Basin Plan (1994). However, the airport is more specifically located in the San Diego Mesa hydrologic area (908.20), and Lindbergh hydrologic sub-area (HAS 908.21), while Chollas Creek is located in the Chollas hydrologic sub-area (HAS 908.22) and Shelter Island Yacht Basin is located in the Point Loma hydrologic area (HA 908.10). Project proponents should meet with staff from the Environmental Affairs Department to determine if any project characteristics or watershed characteristics affect the selection and design of BMPs. Except in rare circumstances, the use of the LID Design Guide (Chapter 4) and the Stormwater Pollutant Sources/Source Control Checklist (Appendix B) will ensure the project complies with all stormwater requirements.

Selection of Permanent Source Control BMPs

Based on identification of potential pollutants of concern associated with various types of facilities, the Copermittees have developed a Stormwater Pollutant Sources/Source Control Checklist (Appendix B) of “maximum extent practicable” source controls associated with each facility type. This approach ensures appropriate BMPs are applied to potential sources of each pollutant of concern.

Selection of Stormwater Treatment Facilities

As in the Model SUSMP, the Authority SUSMP groups pollutants of concern by how easily they are removed by various treatment processes (see Table 2-2).

Table 2-3 presents a general comparison of how various types of treatment facilities perform for each group of pollutants.

TABLE 2-2. GROUPING OF POTENTIAL POLLUTANTS OF CONCERN BY FATE DURING STORMWATER TREATMENT

Pollutant	Coarse Sediment and Trash	Pollutants that tend to associate with fine particles during treatment	Pollutants that tend to be dissolved following treatment
Sediment	X	X	
Nutrients		X	X
Heavy Metals		X	
Organic Compounds		X	
Trash & Debris	X		
Oxygen Demanding		X	
Bacteria		X	
Oil & Grease		X	
Pesticides		X	

TABLE 2-3. GROUPS OF POLLUTANTS AND RELATIVE EFFECTIVENESS OF TREATMENT FACILITIES

Pollutants of Concern	Bioretention Facilities (LID)	Settling Basins (Dry Ponds)	Wet Ponds and Constructed Wetlands	Infiltration Facilities or Practices (LID)	Media Filters	Higher-rate biofilters*	Higher-rate media filters*	Trash Racks & Hydro-dynamic Devices	Vegetated Swales
Coarse Sediment and Trash	High	High	High	High	High	High	High	High	High
Pollutants that tend to associate with fine particles during treatment	High	High	High	High	High	Medium	Medium	Low	Medium
Pollutants that tend to be dissolved following treatment	Medium	Low	Medium	High	Low	Low	Low	Low	Low

*See text for further discussion of selection of treatment facilities in special situations.

The following types of facilities are appropriate for treatment of runoff potentially containing most pollutants of concern. These types of facilities can be used for stormwater treatment for all land uses in all watersheds, except where site-specific constraints make them infeasible.

- Infiltration facilities or practices, including dry wells, infiltration trenches, infiltration basins, and other facilities that infiltrate runoff to native soils (sized to detain and infiltrate a volume equivalent to the 85th percentile 24-hour event).
- Bioretention facilities and media filters that detain stormwater and filter it slowly through soil or sand (sized with a surface area at least 0.04 times the effectively impervious tributary area).
- Extended detention basins, wet ponds, and wetlands or other facilities using settling (sized to detain a volume equivalent to runoff from the tributary area generated by the 85th percentile 24-hour event). As noted in Chapter 1, such facilities would not likely be allowed at the airport since they are generally wildlife/bird attractants which could present hazards to aircraft.

The recommended design procedure in Chapter 4 integrates LID practices—optimizing the site design, using pervious surfaces, and dispersing of runoff to adjacent pervious areas—with the use of infiltration facilities and practices and bioretention facilities to meet Municipal Permit LID requirements, treatment requirements, and flow-control requirements in a cost-effective, unified design.

Oil/water separators (“water quality inlets”), storm drain inlet filters, and hydrodynamic separators, including vortex separators and continuous deflection separators (“CDS units”), are less effective means of stormwater treatment, although they may be used in series with more effective facilities.

Underground vaults typically lack the detention time required for settling of fine particles associated with stormwater pollutants. They also require frequent maintenance and may retain stagnant water, potentially providing harborage for mosquitoes. Because vaults may be “out of sight, out of mind,” experience has shown that the required maintenance may not always occur.

Lack of space, in itself, is not a suitable justification for using a less-effective treatment on a development site, because the uses of the site and the site design can be altered as needed to accommodate bioretention facilities or planter boxes. In most cases, these effective facilities can be fit into required landscaping setbacks, easements, or other unbuildable areas.

Where possible, drainage to inlets, and drainage away from overflows and underdrains, should be by gravity. Where site topography makes it infeasible to accommodate gravity-fed facilities in the project design, the design flow may be captured in a vault or sump and pumped via force main to an effective facility.

The following situations sometimes present special challenges:

- Portions of sites which are not being developed or redeveloped, but which must be retrofit to meet treatment requirements in accordance with Municipal Permit Provision D.1.d.(1)(a) which states in part: “Where redevelopment results in an increase of, or replacement of, more than fifty percent of the impervious surface of a previously existing development, the numeric sizing criteria applies to the entire development.”
- Sites smaller than one acre approved for development or redevelopment as part of a jurisdiction’s stated objective to preserve or enhance a pedestrian-oriented “smart-growth” type of urban design. Such objectives are not currently listed in the Authority’s Airport Master Plan.
- Roadway widening projects.

In these special situations, the following types of facilities should be evaluated in priority order (or as determined by the Environmental Affairs Department) until a feasible design is found.

1. Bioretention areas or planter boxes fed by gravity.
2. Capture of the design flow in a vault or sump and pumping to bioretention areas or planter boxes.
3. A subsurface sand or media filter with a maximum design surface loading rate of 5 inches per hour and a minimum media depth of 18 inches. The sand surface must be made accessible for periodic inspection and maintenance (for example, via a removable grating).

4. A higher-rate surface biofilter, such as a tree-pit-style unit. The grading and drainage design should minimize the area draining to each unit and maximize the number of discrete drainage areas and units.
5. A higher-rate vault-based filtration unit (for example, vaults with replaceable cartridge filters filled with inorganic media).

Many proprietary stormwater treatment devices are currently marketed, and new devices will no doubt be introduced in the future. Applicants and applicants' engineers and design professionals should review any proposals for using proprietary devices for stormwater treatment with Environmental Affairs Department staff before they commence work on preliminary site layout, drainage plans, grading plans, or landscape plans.

Hydrology for NPDES Compliance

► IMPERVIOUSNESS

Schueler (1995) proposed **imperviousness** as a “unifying theme” for the efforts of planners, engineers, landscape architects, scientists, and local officials concerned with urban watershed protection. Schueler argued (1) that imperviousness is a useful indicator linking urban land development to the degradation of aquatic ecosystems, and (2) imperviousness can be quantified, managed, and controlled during land development.

Imperviousness has long been understood as the key variable in urban hydrology. Peak runoff flow and total runoff volume from small urban catchments is usually calculated as a function of the ratio of impervious area to total area (**rational method**). The ratio correlates to the runoff factor, usually designated as “C”. Increased flows resulting from urban development tend to increase the frequency of small-scale flooding downstream.

Imperviousness links urban land development to degradation of aquatic ecosystems in two ways. First, the combination of paved surfaces and piped runoff efficiently collects urban pollutants and transports them, in suspended or dissolved form, to surface waters. These pollutants may originate as airborne dust, be washed from the atmosphere during rains, or may be generated by automobiles and outdoor work activities.

Second, increased peak flows and runoff durations typically cause erosion of stream banks and beds, transport of fine sediments, and disruption of aquatic habitat. Measures taken to control stream erosion, such as hardening banks with riprap or concrete, may permanently eliminate habitat. By reducing infiltration to groundwater, imperviousness may also reduce dry-weather stream flows.

Imperviousness has two major components: rooftops and transportation corridors (and associated facilities, including streets, highways, and parking areas). The transportation component is usually larger and is more likely to be **directly connected** to the storm drain system.

The effects of imperviousness can be mitigated by disconnecting impervious areas from the drainage system and by encouraging detention and retention of runoff near the point where it is generated. Detention and retention reduce peak flows and volumes and allow pollutants to settle out or adhere to soils before they can be transported downstream.

► **LOW IMPACT DEVELOPMENT REQUIREMENTS**

The Municipal Permit requires LID be used on all projects to minimize directly connected impervious area and promote infiltration. For Priority Development Projects, the minimum standards are:

- Drain a portion of impervious areas into pervious areas, if any.
- Design and construct pervious areas, if any, to effectively receive and infiltrate runoff from impervious areas, taking into account soil conditions, slope, and other pertinent factors.
- Construct a portion of paved areas with low traffic and appropriate soil conditions with permeable surfaces.

The LID design procedure in Chapter 4 incorporates these requirements into an integrated design which also meets sizing requirements for stormwater treatment facilities.

► **SIZING REQUIREMENTS FOR STORMWATER TREATMENT FACILITIES**

The guidance in Chapter 4 was crafted to ensure LID facilities comply with the Municipal Permit requirements for hydraulic sizing of stormwater treatment facilities and flow-control facilities. The technical background follows.

Most runoff is produced by frequent storms of small or moderate intensity and duration. Treatment facilities are designed to treat smaller storms and the first flush of larger storms—approximately 80% of average annual runoff.

The Municipal Permit identifies two types of treatment facilities—volume-based and flow-based.

Volume-based facilities must be designed to infiltrate, filter, or treat the volume of runoff produced from a 24-hour 85th percentile storm event as determined from the County of San Diego's 85th Percentile Precipitation Isopluvial Map. As shown on the map, rainfall depths vary from about 0.55" to 1.55".

For **flow-based** facilities, the Municipal Permit specifies the rational method be used to determine flow. The rational method uses the equation

$$Q = CiA$$

where Q = flow

C = weighted runoff factor between 0 and 1

i = rainfall intensity

A = area

The permit identifies two alternatives for calculating rainfall intensity:

1. the 85th percentile rainfall intensity times two, or
2. 0.2 inches per hour.

It is typically found that both methods yield similar results. The 0.2 inches per hour rainfall intensity should generally be used for sizing flow-based treatment facilities within the Authority's jurisdiction.

The 0.2 inches per hour criterion is the basis for a **consistent countywide sizing factor** for bioretention facilities when used for stormwater treatment only (i.e., not for flow control). The factor is based on maintaining a minimum percolation rate of 5 inches per hour through the engineered soil mix. The sizing factor is the ratio of the design intensity of rainfall on tributary impervious surfaces (0.2 inches/hour) to the design percolation rate in the facility (5 inches/hour), or **0.04** (dimensionless).

Criteria for Infiltration Devices

The Municipal Permit restricts the design and location of “infiltration devices” that, as designed, may bypass filtration through surface soils before reaching groundwater. These devices include:

- Infiltration basins.
- Infiltration trenches (includes French drains).
- Unlined retention basins (i.e., basins with no outlets).
- Unlined or open-bottomed vaults or boxes installed below grade (dry wells).

To protect groundwater quality, Section D.1.d.(12) of the Municipal Permit requires that each Copermittee “apply restrictions to the use of treatment control BMPs that are designed to primarily function as centralized infiltration devices (such as large infiltration trenches and infiltration basins). Such restrictions shall be designed so that the use of such infiltration treatment control BMPs shall not cause or contribute to an exceedance of groundwater quality objectives. At a minimum, each treatment control BMP designed to primarily function as a centralized infiltration device shall meet the restrictions below, unless it is demonstrated that a restriction is not necessary to protect groundwater quality. The Copermittees may collectively or individually develop alternative restrictions on the use of treatment control BMPs which are designed to primarily function as centralized infiltration devices. Alternative restrictions developed by the Copermittees can partially or wholly replace the restrictions listed below. The restrictions are not intended to be applied to small infiltration systems dispersed throughout a development project.

- (a) Urban runoff shall undergo pretreatment such as sedimentation or filtration prior to infiltration;

- (b) All dry weather flows containing significant pollutant loads shall be diverted from infiltration devices;
- (c) Pollution prevention and source control BMPs shall be implemented at a level appropriate to protect groundwater quality at sites where infiltration treatment control BMPs are to be used;
- (d) Infiltration treatment control BMPs shall be adequately maintained so that they remove pollutants to the MEP;
- (e) The vertical distance from the base of any infiltration treatment control BMP to the seasonal high groundwater mark shall be at least 10 feet. Where groundwater basins do not support beneficial uses, this vertical distance criteria may be reduced, provided groundwater quality is maintained;
- (f) The soil through which infiltration is to occur shall have physical and chemical characteristics (such as appropriate cation exchange capacity, organic content, clay content, and infiltration rate) which are adequate for proper infiltration durations and treatment of urban runoff for the protection of groundwater beneficial uses;
- (g) Infiltration treatment control BMPs shall not be used for areas of industrial or light industrial activity; areas subject to high vehicular traffic (25,000 or greater average daily traffic on main roadway or 15,000 or more average daily traffic on any intersecting roadway); automotive repair shops; car washes; fleet storage areas (bus, truck, etc.); nurseries; and other high threat to water quality land uses and activities as designated by each Permittee; and
- (h) Infiltration treatment control BMPs shall be located a minimum of 100 feet horizontally from any water supply wells.”

In regards to Municipal Permit Section D.1.d.(12)(e) above and the requirement that “the vertical distance from the base of any infiltration treatment control BMP to the seasonal high groundwater mark shall be at least 10 feet [except w]here groundwater basins do not support beneficial uses [in which case] this vertical distance criteria may be reduced, provided groundwater quality is maintained,” it should be noted that groundwater at San Diego International Airport does not support beneficial uses (Water Quality Control Plan for the San Diego Basin, 1994/1995 with amendments effective prior to April 25,2007). As such, the vertical distance from the base of any infiltration treatment control BMP to the seasonal high groundwater mark at the San Diego International Airport may be less than 10 feet, provided groundwater quality is maintained and the remaining restrictions of Municipal Permit Section D.1.d.(12) are met.

In addition, infiltration devices are generally not recommended where:

- The infiltration device would receive drainage from areas where chemicals are used or stored, where vehicles or equipment are washed, or where refuse or wastes are handled.

- Surface soils or groundwater are polluted.
- The facility could receive sediment-laden runoff from disturbed areas or unstable slopes.
- Increased soil moisture could affect the stability of slopes of foundations.
- Soils are insufficiently permeable to allow the device to drain within 72 hours.

► MOST LID FEATURES AND FACILITIES ARE NOT INFILTRATION DEVICES

Self-treating and self-retaining areas, pervious pavements, bioretention facilities, and planter boxes are not considered to be infiltration devices.

Bioretention facilities work by percolating runoff through 18 inches or more of engineered soil. This removes most pollutants before the runoff is allowed to seep into native soils below. Further pollutant removal typically occurs in the unsaturated (vadose) zone before moisture reaches groundwater.

Where there is concern about the effects of increased soil moisture on slopes or foundations, an impermeable barrier may be added so the facility is “flow through” and all treated runoff is underdrained away from the facility. See the design sheets for Bioretention Facilities and Flow-Through Planters in Chapter 4.

References and Resources:

RWQCB Order R9-2007-0001 (Stormwater Municipal Permit)

County of San Diego Low Impact Development Handbook

Clean Water Act Section 402(p)

40 CFR 122.26

San Diego Regional Water Quality Control Board—TMDLs

State Water Resources Control Board—Ocean Standards

Site Planning for Urban Stream Protection (Scheuler, 1995).

“Application of Water-Quality Engineering Fundamentals to the Assessment of Stormwater Treatment Devices” (Salvia, 2000).

Chapter 3 – THE PROJECT SUBMITTAL

A properly prepared SUSMP Project Submittal should demonstrate that the project complies with all applicable requirements in the stormwater Municipal Permit—to minimize imperviousness, retain or detain stormwater, slow runoff rates, incorporate required source controls, treat stormwater prior to discharge, control runoff rates and durations, and provide for operation and maintenance of treatment and flow-control facilities.

Typically, the Project Submittal must be coordinated with the application for discretionary approvals and must have sufficient detail to ensure the stormwater design, site plan, and landscaping plan are congruent. A complete and thorough SUSMP Project Submittal will facilitate quick review and perhaps fewer cycles of review. The Authority requires a submittal for each development project. Be sure to obtain specific submittal requirements from the Authority. The SUSMP Project Submittal may consist of a report and an exhibit. Environmental Affairs Department staff use the following checklist to evaluate the SUSMP Project Submittal.

Step by Step

Plan and design the stormwater controls integrally with the site planning and landscaping for the project. After start with general project requirements and preliminary site design concepts, then simultaneously prepare the detailed site design, landscape design, and stormwater control design. This will help ensure that the site plan, landscape plan, and Project Submittal are congruent.

The following step-by-step procedure should optimize the design by identifying the best opportunities for stormwater controls early in the design process. The recommended steps are:

1. Assemble needed information.
2. Identify site opportunities and constraints.
3. Follow the LID design guidance in Chapter 4 to analyze the project for LID and to develop and document the drainage design.
4. Specify source controls using the sources/source control checklist in the Appendix B.
5. Plan for ongoing maintenance of treatment and flow-control facilities.
6. Complete the Project Submittal.

Environmental Affairs Department staff recommend that a preliminary site design be submitted prior to formally applying for project approvals. The preliminary site design should incorporate a conceptual plan for site drainage, including self-treating and self-retaining areas and the location and approximate sizes of any treatment facilities. This additional up-front design effort will likely save time and avoid potential delays later in the review process.

SUSMP PROJECT SUBMITTAL CHECKLIST

CONTENTS OF EXHIBIT

Show all of the following on drawings:

- ☐ Existing natural hydrologic features (depressions, watercourses, floodplains, relatively undisturbed areas) and significant natural resources. (Step 1 in the following step-by-step instructions)
- ☐ Soil types and depth to groundwater. (Step 1)
- ☐ Existing and proposed site drainage network and connections to drainage off-site. (Step 3)
- ☐ Proposed design features and surface treatments used to minimize imperviousness. (Step 3)
- ☐ Entire site divided into separate drainage areas, with each area identified as self-treating, self-retaining (zero-discharge), draining to a self-retaining area, or draining to an IMP. (Step 3)
- ☐ For each drainage area, types of impervious area proposed (roof, plaza/sidewalk, and streets/parking) and area of each. (Step 3)
- ☐ Proposed locations and sizes of treatment or flow-control facilities. (Step 3)
- ☐ Potential pollutant source areas, including refuse areas, outdoor work and storage areas, etc. listed in the Appendix B and corresponding required source controls. (Step 4)

CONTENTS OF REPORT

Include all of the following in a report:

- ☐ Narrative analysis or description of site features and conditions that constrain, or provide opportunities for, stormwater control. (Step 2)
- ☐ Narrative description of site design characteristics that protect natural resources. (Step 3)
- ☐ Narrative description and/or tabulation of site design characteristics, building features, and pavement selections that reduce imperviousness of the site. (Step 3)
- ☐ Tabulation of proposed pervious and impervious area, showing self-treating areas, self-retaining areas, and areas tributary to each treatment or flow-control facility. (Step 3)
- ☐ Preliminary designs, including calculations, for each infiltration, treatment, or flow-control facility. Elevations should show sufficient hydraulic head for each. (Step 3)
- ☐ A table of identified pollutant sources and for each source, the source control measure(s) used to reduce pollutants to the maximum extent practicable. See worksheet in the Appendix B. (Step 4)
- ☐ General maintenance requirements for infiltration, treatment, and flow-control facilities (Step 5)
- ☐ Means by which facility maintenance will be financed and implemented in perpetuity. (Step 5)
- ☐ Identification of any conflicts with codes or requirements or other anticipated obstacles to implementing the proposed facilities in the submittal (Step 6).
- ☐ Construction Plan SUSMP Checklist (Step 6).
- ☐ Certification by a civil engineer, architect, and landscape architect (Step 6).

Step 1: Assemble Needed Information

To select types and locations of treatment facilities, the designer needs to know the following site characteristics:

- **Existing natural hydrologic features** and natural resources, including any contiguous natural areas, wetlands, watercourses, seeps, or springs.
- **Existing site topography**, including contours of any slopes of 4% or steeper, general direction of surface drainage, local high or low points or depressions, any outcrops or other significant geologic features.
- **Zoning**, including requirements for **setbacks** and **open space**.
- **Public Works Standards** or applicable other local codes governing minimum street widths, sidewalk construction, allowable pavement types, and drainage. Note that these codes may conflict with proposed project stormwater management controls designed to meet the Low Impact Development objectives of minimizing imperviousness and maintaining or restoring natural site hydrology. Such conflicts should be resolved by the project proponents where it is possible to do so.
- Soil types (including **hydrologic soil groups**) and depth to groundwater, which may determine whether infiltration is a feasible option for managing site runoff. Depending on site location and characteristics, and on the selection of treatment and flow-control facilities, site-specific information (e.g. from boring logs or geotechnical studies) may be required.
- **Existing site drainage**. For undeveloped sites, this should be obtained by inspecting the site and examining topographic maps and survey data. For previously developed sites, site drainage and connection to the Authority's storm drain system can be located from site inspection, storm drain maps, and plans for previous development.
- Existing **vegetative cover** and **impervious areas**, if any.

References and Resources

- *Site Planning for Urban Stream Protection* (Scheuler 1995).
- *Start at the Source* (BASMAA 1999), p. 36

Step 2: Identify Constraints & Opportunities

Review the information collected in Step 1. Identify the principal constraints on site design and selection of treatment and flow-control facilities as well as opportunities to reduce imperviousness and incorporate facilities into the site and landscape design. For example, **constraints** might include impermeable soils, high groundwater, groundwater pollution or contaminated soils, steep slopes, geotechnical instability, high-intensity land use, heavy pedestrian or vehicular traffic, restricted right-of-way, or safety concerns. **Opportunities** might include existing natural areas, low areas, oddly configured or otherwise unbuildable parcels, easements and landscape amenities including open space and buffers (which can double as locations for bioretention facilities), and differences in elevation (which can provide hydraulic head).

Prepare a brief **narrative** describing site opportunities and constraints. This narrative will help applicants proceed with LID design and help explain the design decisions to others.

Step 3: Prepare and Document the LID Design

Use the Low Impact Development Design Guide (Chapter 4) to analyze the project for LID, design and document drainage, and specify preliminary design details for integrated management practices. **Follow the detailed instructions in Chapter 4 to ensure the project complies with Municipal Permit LID requirements (Provision D.1.d.(4)) as well as stormwater treatment requirements in Provision D.1.d.(6)).** The LID Design Guide has been designed so that hydromodification management requirements are also met via this unified design procedure. Chapter 4 includes calculation procedures and formats for presenting the calculations.

As shown in the SUSMP Project Submittal Checklist, the Submittal should include a drawing showing:

- The entire site divided into separate drainage management areas(DMAs), with each area identified as one of the following: self-treating, self-retaining, draining to a self-retaining area, or draining to an IMP. Each area should be clearly marked with a unique identifier.
- For each drainage area, the types of impervious area proposed, and the area of each.
- Proposed locations and sizes of treatment facilities. Each facility should be clearly marked with a unique identifier.

The SUSMP Project Submittal should include:

- Tabulation of proposed self-treating areas, self-retaining areas, areas draining to self-retaining areas, and areas draining to IMPs, and the corresponding IMPs identified on the Exhibit.

- Calculations, in the format shown in Chapter 4, showing the minimum square footage required and proposed square footage for each IMP.
- Preliminary designs for each IMP. The design sheets and accompanying drawings in Chapter 4 may be used or adapted for this purpose.

The following information is also required to assist the Environmental Affairs Department in understanding the basis of the design:

- A narrative overview of the design and how the design decisions optimize the site layout, use pervious surfaces, disperse runoff from impervious surfaces, and drain impervious surfaces to engineered IMPs (see Chapter 4).
- A narrative briefly describing each **drainage management area** (DMA), its drainage, and where drainage will be directed.
- A narrative briefly describing each IMP. Include any special characteristics or features distinct from the design sheets in Chapter 4.

References and Resources

- Chapter 4
- County of San Diego Low Impact Development Handbook
- Airport Master Plan
- Low Impact Development Manual (Prince George's County, Maryland, 1999).
- Bioretention Manual (Prince George's County, Maryland, rev. 2002)
- Site Planning for Urban Stream Protection (Schueler, 1995b).
- Low Impact Development Technical Guidance Manual for Puget Sound (Puget Sound Action Team, 2005)
- LID for Big Box Retailers (Low Impact Development Center, 2006)

Step 4. Specify Source Control BMPs

Some everyday activities – such as trash recycling/disposal and washing vehicles and equipment – generate pollutants that tend to find their way into storm drains. These pollutants can be minimized by applying **source control BMPs**.

Source control BMPs include **permanent**, structural features that must be incorporated into the project plans and **operational** BMPs, such as regular sweeping and “housekeeping,” that must be implemented by the site's occupant or user. The maximum extent practicable standard typically requires both types of BMPs. In general, operational BMPs cannot be substituted for a feasible and effective permanent BMP.

Use the following procedure to specify source control BMPs for the project/site:

► **IDENTIFY POLLUTANT SOURCES**

Review the first column in the **Pollutant Sources/Source Control Checklist** (Appendix B). Check off the potential sources of pollutants that apply to the project/site.

► **NOTE LOCATIONS ON SUBMITTAL DRAWING**

Note the corresponding requirements listed in Column 2 of the Pollutant Sources/Source Control Checklist (Appendix B). Show the location of each pollutant source and each permanent source control BMP in the submittal drawing.

► **PREPARE A TABLE AND NARRATIVE**

Check off the corresponding requirements listed in Column 3 in the Pollutant Sources/Source Control Checklist (Appendix B). Now, create a table using the format in Table 3-1. In the left column, list each potential source on the site (from Appendix B, Column 1). In the middle column, list the corresponding **permanent, structural BMPs** (from Columns 2 and 3, Appendix B) used to prevent pollutants from entering runoff. Accompany this table with a narrative that explains any special features, materials, or methods of construction that will be used to implement these permanent, structural BMPs.

► **IDENTIFY OPERATIONAL SOURCE CONTROL BMPs**

Table 3-1. **FORMAT FOR TABLE OF PERMANENT AND OPERATIONAL SOURCE CONTROL MEASURES.**

<i>Potential source of runoff pollutants</i>	<i>Permanent source control BMPs</i>	<i>Operational source control BMPs</i>

To complete the table, refer once again to the Pollutant Sources/Source Control Checklist (Appendix B, Column 4). List in the right column of the table the operational BMPs that should be implemented as long as the anticipated activities continue at the site. The same BMPs may also be required as a condition of a use permit or other revocable discretionary approval for use of the site.

References and Resources

- Appendix B: Stormwater Pollutant Sources/Source Control Checklist
- RWQCB Order R9-2007-0001, Provision D.1.d.(5)
- Start at the Source, Section 6.7: Details, Outdoor Work Areas
- California Stormwater Industrial/Commercial Best Management Practice Handbook
- Urban Runoff Quality Management (WEF/ASCE, 1998) Chapter 6: Source Controls

Step 5: Stormwater Facility Maintenance

As required by Municipal Permit Provision D.1.c.(5), the Environmental Affairs Department will require submittal of proof of a mechanism under which ongoing long-term maintenance of stormwater treatment and flow-control facilities will be conducted. The Environmental Affairs Department may also require submittal of a detailed plan that sets forth a maintenance schedule for each of the treatment and flow-control facilities built on the site.

Details of these requirements, and instructions for preparing a detailed operation and maintenance plan, are in Chapter 5.

References and Resources

- *Chapter 5*
- Operation, Maintenance, and Management of Stormwater Management Systems (Watershed Management Institute, 1997)

Step 6: Complete the SUSMP Project Submittal

Environmental Affairs Department staff will provide specific instructions for the content and format of the SUSMP Project Submittal. The SUSMP Project Submittal should document the information gathered and decisions made in Steps 1-5. A clear, complete, well-organized Project Submittal will make it possible to confirm the design meets the minimum requirements of the Municipal Permit, the Authority's ordinances, and the Authority SUSMP.

► COORDINATION WITH SITE, ARCHITECTURAL, AND LANDSCAPING PLANS

Before completing the SUSMP Project Submittal, ensure the stormwater control design is fully coordinated with the site plan, grading plan, and landscaping plan being proposed for the site.

Information submitted and presentations to design review and/or planning committees and other decision-making bodies must incorporate relevant aspects of the stormwater design. In particular, ensure:

- Curb elevations, elevations, grade breaks, and other features of the drainage design are consistent with the delineation of DMAs.
- The top edge (overflow) of each bioretention facility is level all around its perimeter—this is particularly important in parking lot medians.
- The resulting grading and drainage design is consistent with the design for parking and circulation.

CHAPTER 3: THE PROJECT SUBMITTAL

- Bioretention facilities and other IMPs do not create conflicts with pedestrian access between parking and building entrances.
- Vaults and utility boxes can be accommodated outside bioretention facilities and will not be placed within bioretention facilities.
- The visual impact of stormwater facilities, including planter boxes at building foundations and any terracing or retaining walls required for the stormwater control design, is shown in renderings and other architectural drawings.
- Landscaping plans, including planting plans, show locations of bioretention facilities, and the plant requirements are consistent with the engineered soils and conditions in the bioretention facilities.
- Renderings and representation of street views incorporate any stormwater facilities located in street-side buffers and setbacks

► CONSTRUCTION PLAN SUSMP CHECKLIST

When construction plans are submitted for Environmental Affairs Department review and approval, Department staff will compare that submittal with the earlier SUSMP Project Submittal. Preparation and submittal of a Construction Plan SUSMP Checklist for the project, will facilitate comparisons and likely speed review of the project.

TABLE 3-2. FORMAT FOR CONSTRUCTION PLAN SUSMP CHECKLIST.

<i>SUSMP Page #</i>	<i>BMP Description</i>	<i>See Plan Sheet #s</i>

Here's how:

1. Create a table similar to Table 3-2. Number and list each measure or BMP specified in the Project Submittal in Columns 1 and 2 of the table. Leave Column 3 blank. Incorporate the table into the Project Submittal.
2. When submitting construction plans, duplicate the table (by photocopy or electronically). Now fill in Column 3, identifying the plan sheets where the BMPs are shown. List all plan sheets on which the BMP appears. Submit the updated table with the construction plans.

Note that the updated table—or Construction Plan SUSMP Checklist—is **only a reference tool** to facilitate comparison of the construction plans to the Project Submittal. Environmental Affairs Department staff can advise applicants about the process required to propose changes to the approved Project Submittal.

► **CERTIFICATION**

The Authority requires that the Project Submittal be certified by an architect, landscape architect, or civil engineer licensed to practice in the State of California.

The certification should state: “The selection, sizing, and preliminary design of stormwater treatment and other control measures in this plan meet the requirements of Regional Water Quality Control Board Order R9-2007-0001 and subsequent amendments.”

► **SUSMP PROJECT SUBMITTAL OUTLINE AND CONTENTS**

The following outline and content list describes the information to present in a SUSMP Project Submittal. Check with Environmental Affairs Department staff regarding any requirements that may be specific to a particular project/project type/project site.

- I. Project Setting
 - A. Project Name, Location, Description
 - B. Existing site features and conditions
 - C. Opportunities and constraints for stormwater control
- II. Low Impact Development Design Strategies
 - A. Optimization of site layout
 - (1) Limitation of development envelope
 - (2) Preservation of natural drainage features
 - (3) Setbacks from creeks, wetlands, and riparian habitats
 - (4) Minimization of imperviousness
 - (5) Using drainage as a design element
 - B. Use of permeable pavements
 - C. Dispersal of runoff to pervious areas
 - D. Use of Integrated Management Practices
- III. Documentation of Drainage Design
 - A. Drainage Management Areas
 - (1) Tabulation
 - (2) Descriptions

CHAPTER 3: THE PROJECT SUBMITTAL

- B. Integrated Management Practices
 - (1) Tabulation and Sizing Calculations
 - (2) Descriptions
 - IV. Source Control Measures
 - A. Description of site activities and potential sources of pollutants
 - B. Table showing sources, permanent source controls, and operational source controls
 - V. Facility Maintenance Requirements
 - A. Ownership and responsibility for maintenance in perpetuity.
 - B. Summary of maintenance requirements for each stormwater facility.
 - VI. Construction Plan SUSMP Checklist
 - VII. Certifications
- Attachment: SUSMP Exhibit

► EXAMPLE PROJECT SUBMITTALS

Example Project Submittals may be available from the Environmental Affairs Department. Any particular submittal will reflect the unique character of that particular project and should meet the requirements identified in the Authority SUSMP. Environmental Affairs Department staff can assist in determining how specific requirements apply to a project.

Chapter 4 – LOW IMPACT DEVELOPMENT DESIGN GUIDE

This chapter provides guidance for designing and documenting the LID site drainage, stormwater treatment facilities, and flow-control facilities. Follow the Low Impact Development (LID) design in this *SUSMP* to achieve compliance with the stormwater treatment requirements as well as the LID requirements in the stormwater Municipal Permit. This will require careful documentation of:

- Pervious and impervious areas in the planned project.
- Drainage from each of these areas.
- Locations, sizes, and types of proposed treatment facilities.

The Project Submittal must include calculations showing the site drainage and proposed LID treatment facilities meet the criteria in this *SUSMP*.

This Low Impact Development Design Guide outlines how to:

- **Analyze the project** and identify and select options for implementing LID techniques to meet runoff treatment requirements—and flow-control requirements, if they apply.
- **Design and document drainage** for the whole site and document how that design meets this *SUSMP*'s stormwater treatment criteria.
- **Specify preliminary design details** and integrate the LID drainage design with the paving and landscaping design.

It is important to remember that not all LID techniques discussed in this chapter will be appropriate for projects at San Diego International Airport. Consult with Environmental Affairs Department staff first on any options being considering for the project. Alternatives to LID design are discussed in the final section of this chapter.

Analyze the Project for LID

Conceptually, there are four LID strategies for managing runoff from buildings and paving:

1. **Optimize the site layout** by preserving natural drainage features and designing buildings and circulation to minimize the amount of roofs and paving.

2. **Use pervious surfaces** such as turf, gravel, or pervious pavement—or use surfaces that retain rainfall, such as vegetated roofs. All drainage from these surfaces is considered to be “self-retained” (a detailed definition corresponding to this concept is on page 47). No further management of runoff is necessary. An emergency overflow should be provided for extreme events.
3. **Disperse runoff** from impervious surfaces on to adjacent pervious surfaces (e.g., direct a roof downspout to disperse runoff onto a lawn).
4. Drain impervious surfaces to engineered **Integrated Management Practices** (IMPs), such as bioretention facilities, planter boxes, cisterns, or dry wells. IMPs infiltrate runoff to groundwater and/or percolate runoff through engineered soil and allow it to drain away slowly. Depending on site conditions and local regulations, it may be possible to harvest and reuse rainwater in conjunction with IMPs.

A combination of two or more strategies may work best for the project. With forethought in design, the four strategies can provide multiple, complementary benefits to the development. Pervious surfaces reduce heat island effects and temperature extremes. Landscaping improves air quality, creates a better place to live or work, and upgrades value for rental or sale. Retaining natural hydrology helps preserve and enhance the natural character of the area. LID drainage design can also conserve water and reduce the need for drainage infrastructure.

Table 4-1 includes ideas for applying LID strategies to site conditions and types of development.

► OPTIMIZE THE SITE LAYOUT

To minimize stormwater-related impacts, apply the following design principles to the layout of newly developed and redeveloped sites.

Conserve natural areas, soils, and vegetation. Define the development envelope and protected areas, identifying areas that are most suitable for development and areas that should be left undisturbed. Use the following guideline to determine the least sensitive areas of the site, in order of increasing sensitivity:

1. Areas devoid of vegetation, including previously graded areas and agricultural fields.
2. Areas of non-native vegetation, disturbed habitats and eucalyptus woodlands where receiving waters are not present.
3. Areas of chamise or mixed chaparral, and non-native grasslands.
4. Areas containing coastal scrub communities.
5. All other upland communities.
6. Occupied habitat of sensitive species and all wetlands (as defined by the Authority).

Within each category, hillside areas should be considered more sensitive than flatter areas.

Table 4-1. IDEAS FOR RUNOFF MANAGEMENT

<i>Site Features and Design Objectives</i>	<i>Vegetated Roof</i>	<i>Self-retaining Areas</i>	<i>Pervious Pavement</i>	<i>Bioretention Facility</i>	<i>Flow-through Planter</i>	<i>Dry Well</i>	<i>Cistern or vault with bioretention</i>
Clayey native soils	✓			✓	✓		✓
Permeable native soils	✓		✓	✓	✓	✓	
Shallow groundwater	✓				✓		
Avoid saturating subsurface soils	✓		✓		✓		
Connect to roof downspouts		✓		✓	✓	✓	✓
Parking lots/islands and medians			✓	✓		✓	
Sites with extensive landscaping		✓	✓	✓			
Densely developed sites with limited space/landscape	✓		✓		✓	✓	✓
Fit IMPs into landscape and setback areas				✓			✓
Make drainage a design feature		✓		✓			✓
Convey as well as treat stormwater				✓			

Where possible, conform the site layout along natural landforms, avoid excessive grading and disturbance of vegetation and soils, and replicate the site's natural drainage patterns. Set back development from creeks, wetlands, and riparian habitats. Preserve significant trees, especially native trees and shrubs, and identify locations for planting additional native or drought tolerant

trees and large shrubs. Concentrate development on portions of the site with less permeable soils, and preserve areas that can promote infiltration.

For all types of development, **limit overall coverage** of paving and roofs. Where allowed by local zoning and design standards—and provided public safety and a walkable environment are not compromised—this can be accomplished by designing compact, taller structures, narrower and shorter streets and sidewalks, smaller parking lots (fewer stalls, smaller stalls, and more efficient lanes), and indoor or underground parking. Examine site layout and circulation patterns and identify areas where landscaping can be substituted for pavement.

Detain and retain runoff throughout the site. On flatter sites, it typically works best to intersperse landscaped areas and IMPs among the buildings and paving. On hillside sites, drainage from upper areas may be collected in conventional catch basins and piped to landscaped areas and IMPs in lower areas.

Use drainage as a design element. Use depressed landscape areas, vegetated buffers, and bioretention areas as amenities and focal points within the site and landscape design. Bioretention areas can be almost any shape and should be located at low points. Bioretention areas shaped as swales can detain and treat low runoff flows and also convey higher flows.

► USE PERVIOUS SURFACES

Consider a vegetated roof. Although not yet widely used in California, vegetated or “green” roofs are growing in popularity. Potential benefits include longer roof life, lower heating and cooling costs, and better sound insulation, in addition to air quality and water quality benefits. For SUSMP compliance purposes, vegetated roofs are considered not to produce increased runoff or runoff pollutants (i.e., any runoff from a vegetated roof requires no further treatment or detention). For more information on vegetated roofs, see www.greenroofs.org.

Consider permeable pavements and surface treatments. Inventory paved areas on the preliminary site plan. Identify where permeable pavements, such as crushed aggregate, turf block, unit pavers, pervious concrete, or pervious asphalt could be substituted for impervious concrete or asphalt paving.

► DISPERSE RUNOFF TO ADJACENT PERVIOUS AREAS

Look for opportunities to direct runoff from impervious areas to adjacent landscaping. The design, including slopes and soils, must reflect a reasonable expectation that an inch of rainfall will soak into the soil and produce no runoff. For example, a lawn or garden depressed 3-4" below surrounding walkways or driveways provides a simple but functional landscape design element.

For sites subject to stormwater treatment requirements only, a 2:1 maximum ratio of impervious to pervious area is acceptable. Be sure soils will drain adequately.

Under some circumstances, it may be allowable to direct runoff from impervious areas to pervious pavement (for example, from roof downspouts to a parking lot paved with crushed aggregate or turf block). The pore volume of pavement and base course must be sufficient to

retain an inch of rainfall, including runoff from the tributary area. The slopes and soils must be compatible with infiltrating that volume without producing runoff.

► DIRECT RUNOFF TO INTEGRATED MANAGEMENT PRACTICES

As mentioned at the beginning of this chapter, some IMPs will have limited applicability at the Airport due to the unique features of an airport environment. Consult with Environmental Affairs Department staff for appropriate options. The Copermittees have developed design criteria for the following IMPs:

- **Bioretention facilities**, which can be configured as swales, free-form areas, or planters to integrate with the landscape design.
- **Flow-through planters**, which can be used near building foundations and other locations where infiltration to native soils is not desired.
- **Dry wells** and other infiltration facilities, which can be used only where soils are permeable.
- **Cisterns or vaults**, in combination with a bioretention facility.

The design sheets are featured near the end of this chapter.

It may be possible to create a site-specific design that uses cisterns to achieve stormwater flow control, stormwater treatment, and rainwater reuse for irrigation or indoor uses (**water harvesting**). Such a design could expand the multiple benefits of LID to include water conservation. Keep in mind:

- Facilities must meet criteria for capturing and treating the volume specified by Equation 4-8 below. This volume must be allowed to empty within 24 hours so runoff from additional storms, which may follow, is also captured and treated. Additional volume may be required if the system also stores runoff for longer periods for reuse.
- Storage of water for longer than 48 hours creates the potential for mosquito harborage. Cisterns must be designed to prevent entry by mosquitoes.
- Indoor uses of non-potable water may be restricted or prohibited. Check with Environmental Affairs Department staff.

Some references and resources for water harvesting appear at the end of this chapter.

Finding the right location for treatment facilities on the site involves a careful and creative integration of several factors:

- To make the most efficient use of the site and to maximize aesthetic value, **integrate IMPs with site landscaping**. Many local zoning codes may require landscape setbacks or buffers, or may specify that a minimum portion of the site be landscaped.

It may be possible to locate some or all of the site's treatment and flow-control facilities within this same area, or within utility easements or other non-buildable areas.

- Planter boxes and bioretention areas must be **level or nearly level** all the way around. Bioretention areas configured as swales may be gently sloped in the linear direction, but opposite sides must be at the same elevation.
- For effective, low-maintenance operation, **locate facilities so drainage into and out of the device is by gravity flow**. Pumped systems are feasible, but are expensive, require more maintenance, are prone to untimely failure, and can cause mosquito control problems. Most IMPs require 3 feet or more of head.
- If the property is being subdivided now or in the future, the facility should be in a **common, accessible area**. Even if the facility will serve only one site owner or operator, make sure the facility is located for ready access by inspectors from the the Authority and local mosquito control agency.
- The facility must be accessible to equipment needed for its maintenance. **Access requirements for maintenance** will vary with the type of facility selected. Planter boxes and bioretention areas will typically need access for the same types of equipment used for landscape maintenance.

To complete the analysis, if required by the Authority, include in the SUSMP Project Submittal a brief **narrative** documenting the site layout and site design decisions that have been made. This will provide background and context for how the design meets the quantitative LID design criteria.

Develop and Document the Drainage Design

The **design documentation procedure** begins with careful delineation of pervious areas and impervious areas (including roofs) throughout the site. The procedure accounts for how runoff from each delineated area is managed. For areas draining to IMPs, the procedure ensures each IMP is appropriately sized.

The procedure results in a space-efficient, cost-efficient LID design for meeting SUSMP requirements on most commercial/industrial developments. The procedure arranges documentation of drainage design and IMP sizing in a consistent format for presentation and review.

This procedure is intended to facilitate, not substitute for, creative interplay among site design, landscape design, and drainage design. **Several iterations may be needed** to optimize the drainage design as well as aesthetics, circulation, and use of available area for the site.

Complete the needed calculations using only the project's site development plan.

► STEP 1: DELINEATE DRAINAGE MANAGEMENT AREAS

This is the key first step: divide the **entire project area** into individual, discrete Drainage Management Areas (DMAs). Typically, lines delineating DMAs follow grade breaks and roof ridge lines. The Exhibit, tables, text, and calculations in the Project Submittal will illustrate, describe, and account for runoff from each of these areas.

Use separate DMAs for each surface type (e.g., landscaping, pervious paving, or roofs). Each DMA must be assigned a single hydrologic soil group. Assign each DMA an identification number and determine its size in square feet.

► STEP 2: CLASSIFY DMAS AND DETERMINE RUNOFF FACTORS

Next, determine how drainage from each DMA will be handled. Each DMA will be one of the following four types:

1. Self-treating areas.
2. Self-retaining areas (also called “zero-discharge” areas).
3. Areas that drain to self-retaining areas.
4. Areas that drain to IMPs.

Self-treating areas are landscaped or turf areas that do not drain to IMPs, but rather drain directly off site or to the storm drain system. Examples include upslope undeveloped areas which are ditched and drained around a development and grassed slopes which drain off-site to a street or storm drain. In general, self-treating areas include no impervious areas, unless the impervious area is very small (5% or less) in relationship to the receiving pervious area and slopes are gentle enough to ensure runoff will be absorbed into the vegetation and soil. Criteria for self-treating areas are in the design sheet “Self Treating and Self-Retaining Areas” at the end of this chapter.

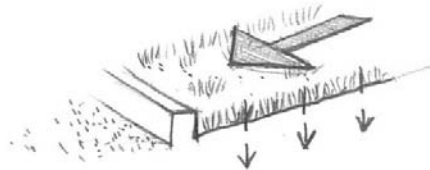


FIGURE4-1. Self-treating areas are entirely pervious and drain directly off-site or to the storm drain system.

Self-retaining areas are designed to retain the first one inch of rainfall without producing any runoff. The technique works best on flat, heavily landscaped sites. It may be used on mild slopes if there is a reasonable expectation that a one-inch rainfall event would produce no runoff.

To create self-retaining turf and landscape areas in flat areas or on terraced slopes, berm the area or depress the grade into a concave cross-section so that these areas will retain the first inch of rainfall. Specify slopes, if any, toward the center of the pervious area. Inlets of area drains, if any, should be set 3 inches above the low point to allow ponding.

Criteria for self-retaining areas are presented in the design sheet entitled “Self Treating and Self-Retaining Areas” found later in this chapter.

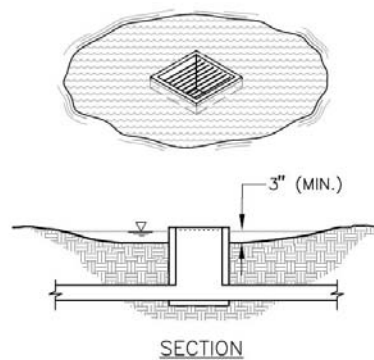


FIGURE 4-2. Self-retaining areas. Berm or depress the grade to retain at least an inch of rainfall and set inlets of any area drains at least 3 inches above low point to allow ponding.

Areas draining to self-retaining areas. Runoff from impervious or partially pervious areas can be managed by routing it to self-retaining pervious areas. For example, roof downspouts can be directed to lawns, and driveways can be sloped toward landscaped areas. The maximum ratio is 2 parts impervious area for every 1 part pervious area.

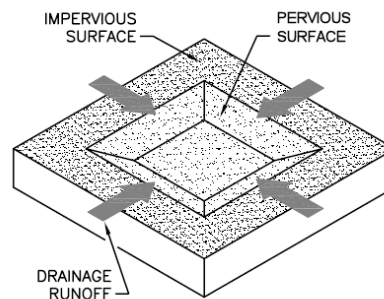


FIGURE 4-3. Relationship of impervious to pervious area for self-retaining areas. Ratio: *pervious* $\geq \frac{1}{2}$ *impervious*

The drainage from the impervious area must be directed to and dispersed within the pervious area, and the entire area must be designed to retain an inch of rainfall without flowing off-site. For example, if the maximum ratio of 2 parts impervious area into 1 part pervious area is used, then the pervious area must absorb 3 inches of water over its surface before overflowing to an off-site drain.

A partially pervious area may be drained to a self-retaining area. For example, a driveway composed of unit pavers may drain to an adjacent lawn. In this case, the maximum ratios are:

$$(\text{Runoff factor}) \times (\text{tributary area}) \leq 2 \times (\text{self-retaining area}) \quad \text{Equation 4-1}$$

Use the runoff factors in Table 4-2.

TABLE 4-2. RUNOFF FACTORS FOR SURFACES DRAINING TO IMPS.

Surface	Factor
Roofs	1.0
Concrete	1.0
Pervious Concrete	0.1
Porous Asphalt	0.1
Grouted Unit Pavers	1.0
Solid Unit Pavers on granular base, min. 3/16 inch joint space	0.2
Crushed Aggregate	0.1
Turfblock	0.1
Amended, mulched soil	0.1
Landscape	0.1

Prolonged ponding is a potential problem at higher impervious/pervious ratios. In the design, ensure that the pervious area soils can handle the additional run-on and are sufficiently drained.

Under some circumstances, pervious pavement (e.g., crushed stone, pervious asphalt, or pervious concrete) can be self-retaining. Adjacent roofs or impervious pavement may drain on to the pervious pavement in the same maximum ratios as described above.

To design a pervious pavement to be a self-treating area, ensure:

- The gravel base course is a minimum of four or more inches deep.
- The base course is not to be underdrained.
- A qualified engineer has been consulted regarding infiltration rates, pavement stability, and suitability for the intended traffic.

Runoff from self-treating and self-retaining areas does not require any further treatment or flow control.

Areas draining to IMPs are multiplied by a sizing factor to calculate the required size of the IMP. On most densely developed sites—such as commercial and mixed-use developments—most DMAs will drain to IMPs.

More than one drainage area can drain to the same IMP. However, because the minimum IMP sizes are determined by ratio to drainage area size, a drainage area may not drain to more than one IMP. See Figures 4-4 and 4-5.

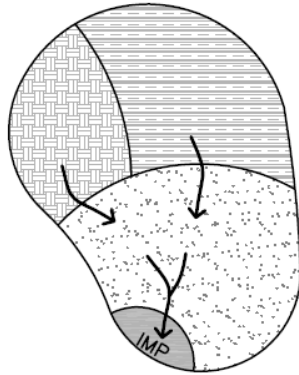


FIGURE 4-4. MORE THAN ONE
Drainage Management Area can drain to a single
IMP.

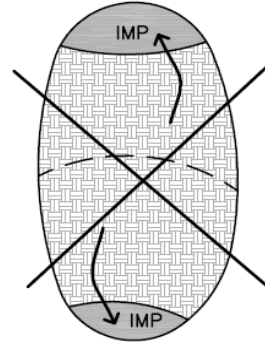


FIGURE 4-5. ONE DRAINAGE
Management Area cannot drain to more than one IMP.
Use a grade break to divide the DMA.

Where possible, design site drainage so **only impervious roofs and pavement** drain to IMPs. This yields a simpler, more efficient design and also helps protect IMPs from becoming clogged by sediment.

If it is necessary to include turf, landscaping, or pervious pavements within the area draining to an IMP, list each surface as a separate DMA. A runoff factor (similar to a “C” factor used in the rational method) is applied to account for the reduction in the quantity of runoff. For example, when a turf or landscaped drainage management area drains to an IMP, the resulting increment in IMP size is:

$$\Delta (\text{Area}) = (\text{pervious area}) \times (\text{runoff factor}) \times (\text{sizing factor}).$$

Use the runoff factors in Table 4-2.

► STEP 3: TABULATE DRAINAGE MANAGEMENT AREAS

- Tabulate self-treating areas in the format shown in Table 4-3.
- Tabulate self-retaining areas in the format shown in Table 4-4.
- Tabulate areas draining to self-retaining areas in the format shown in Table 4-5.
Check to be sure the total product of (square feet of tributary area × runoff factor)

for all DMAs draining to a receiving self-retaining area is no greater than a 2:1 ratio to the square footage of the receiving self-retaining area itself.

- Compile a list of DMAs draining to IMPs. Proceed to Step 4 to check the sizing of the IMPs.

TABLE 4-3. FORMAT FOR TABULATING SELF-TREATING AREAS

<i>DMA Name</i>	<i>Area (square feet)</i>

TABLE 4-4. FORMAT FOR TABULATING SELF-RETAINING AREAS

<i>DMA Name</i>	<i>Area (square feet)</i>

TABLE 4-5. FORMAT FOR TABULATING AREAS DRAINING TO SELF-RETAINING AREAS

<i>DMA Name</i>	<i>Area (square feet)</i>	<i>Post-project surface type</i>	<i>Runoff factor</i>	<i>Receiving self- retaining DMA</i>	<i>Receiving self- retaining DMA Area (square feet)</i>

► STEP 4: SELECT AND LAY OUT IMPs ON SITE PLAN

As mentioned at the beginning of this chapter, some IMPs will have limited applicability at the Airport due to the unique features of an airport environment. Consult with Environmental Affairs Department staff for appropriate options from the list of IMPs in Table 6-6. Illustrations, designs, and design criteria for the IMPs are in the “IMP Design Details and Criteria” at the end of this chapter.

Once the IMPs have been laid out, calculate the square footage that has been set aside on the site plan for each IMP.

► **STEP 5: REVIEW SIZING FOR EACH IMP**

For each of the IMPs, use the appropriate sizing from Table 4-6.

TABLE 4-6. IMP SIZING FACTORS

Bioretention Facilities	Sizing Factor for Area = 0.04
Flow-through Planters	Sizing Factor for Area = 0.04
Dry Well or Infiltration Basin	See Step 6 to Calculate Min. Volume
Cistern or Vault with Bioretention	See Step 6 to Calculate Min. Volume of Cistern; then use 0.04 to calculate minimum size of bioretention area

► **STEP 6: CALCULATE MINIMUM AREA AND VOLUME OF EACH IMP**

The minimum area of bioretention facilities and flow-through planters is found by summing up the contributions of each tributary DMA and multiplying by the adjusted sizing factor for the IMP.

Equation 4-7

$$\text{Min. IMP Area} = \sum \left(\frac{\text{DMA Area}}{\text{Footage}} \times \frac{\text{DMA Runoff}}{\text{Factor}} \right) \times \left(\frac{\text{IMP Sizing}}{\text{Factor}} \right)$$

Use the format of Table 4-7 to present the calculations of the required minimum area and volumes for **bioretention areas** and **planter boxes**:

Table 4-7. FORMAT FOR PRESENTING CALCULATIONS OF MINIMUM IMP AREAS FOR BIORETENTION AREAS AND PLANTER BOXES.

DMA Name	DMA Area (square feet)	Post-project surface type	DMA Runoff factor	DMA Area x runoff factor	Soil Type:	IMP Name		
					IMP Sizing factor	Minimum Area	Proposed Area	
Total					0.04			IMP Area

To size **dry wells, infiltration basins, or infiltration trenches**, use the following procedure:

1. Use the County of San Diego's 85th Percentile Isopluvial Map to determine the minimum unit volume.
2. Determine the weighted runoff factor ("C" factor) for the area tributary to the facility. The factors in Table 4-2 may be used.
3. Multiply the weighted runoff factor times the tributary area times the minimum unit volume.

Equation 4-8

$$\text{Volume} = [\text{Tributary Area}] \times [\text{weighted runoff factor}] \times [\text{unit volume}]$$

4. Select a facility depth.
5. Determine the required facility area. Dry wells may be designed as an open vault or with rock fill. If rock fill is used, assume a porosity of 40%.
6. Ensure the facility can infiltrate the entire volume within 72 hours.

To size a **cistern or vault in series with a bioretention facility**:

1. Use Equation 4-8 to calculate the required cistern volume.
2. Design a discharge orifice for a drawdown time of 24 hours.
3. Determine the maximum discharge from the orifice.
4. The minimum area of the bioretention facility must treat this flow based on a percolation rate of 5" per hour through the engineered soil.

► **STEP 7: DETERMINE IF AVAILABLE SPACE FOR IMP IS ADEQUATE**

Sizing and configuring IMPs may be an iterative process. After computing the minimum IMP area using Steps 1 – 6, review the site plan to determine if the reserved IMP area is sufficient. If so, the planned IMPs will meet the SUSMP sizing requirements. If not, revise the plan accordingly. Revisions may include:

- Reducing the overall imperviousness of the project site.
- Changing the grading and drainage to redirect some runoff toward other IMPs which may have excess capacity.
- Making tributary landscaped DMAs self-treating or self-retaining.
- Expanding IMP surface area.

► STEP 8: COMPLETE THE SUMMARY REPORT

Present the IMP sizing calculations in tabular form, by adapting the format of Table 4-8, as appropriate. Coordinate the presentation of DMAs and calculation of minimum IMP sizes with the Project Submittal drawing (labeled to show delineation of DMAs and locations of IMPs). It is also helpful to incorporate a brief description of each DMA and each IMP.

Sum the total area of all DMAs and IMPs listed to prove is equal to the total project area. This step may include adjusting the square footage of some DMAs to account for area used for IMPs.

Table 4-8. FORMAT FOR PRESENTING SUMMARY CALCULATIONS OF IMP AREAS.

Project Name:							
Project Location:							
APN or Subdivision Number:							
Total Project Area (square feet):							
Mean Annual Precipitation at Project Site:							
I. Self-treating areas:							
<i>DMA Name</i>		<i>Area (square feet)</i>					
II. Self-retaining areas:							
<i>DMA Name</i>		<i>Area (square feet)</i>					
III. Areas draining to self-retaining areas:							
<i>DMA Name</i>	<i>Post-project surface type</i>	<i>Runoff factor</i>	<i>Area (square feet)</i>	<i>Receiving self-retaining DMA</i>	<i>Receiving self-retaining DMA Area (square feet)</i>		
IV. Areas draining to IMPs (repeat for each IMP):							
<i>DMA Name</i>	<i>DMA Area (square feet)</i>	<i>Post-project surface type</i>	<i>DMA Runoff factor</i>	<i>DMA Area × runoff factor</i>	<i>Soil Type:</i>	<i>IMP Name</i>	
					<i>IMP Sizing factor</i>	<i>Minimum Area or Volume</i>	<i>Proposed Area or Volume</i>
<i>Total</i>							<i>IMP Area</i>

Specify Preliminary Design Details

In the SUSMP Project Submittal, describe the IMPs in sufficient detail to demonstrate the area, volume, and other criteria of each can be met within the constraints of the site. As mentioned at the beginning of this chapter, some IMPs will have limited applicability at the Airport due to the unique features of an airport environment. Consult with Environmental Affairs Department staff for appropriate options.

Ensure these details are consistent with preliminary site plans, landscaping plans, and architectural plans submitted with the application for planning and zoning approvals.

Following are design sheets for:

- Self-treating and self-retaining areas
- Pervious pavements
- Bioretention facilities
- Flow-through planter
- Dry wells and infiltration basins
- Cistern with bioretention facility

These design sheets include recommended configurations and details, and example applications, for these IMPs. **The information in these design sheets must be adapted and applied to the conditions specific to the development project such as unstable slopes or the lack of available head. Not all IMPs are applicable to every project. Environmental Affairs Department staff have final review and approval authority over the project design.**

Proper functional design of the IMP is the responsibility of the applicant. Effective operation of the IMP throughout the project's lifetime will be the responsibility of the property owner.

Alternatives to Integrated LID Design

If the design of features and facilities described above is infeasible for the development site, consult with Environmental Affairs Department staff before preparing an alternative design for stormwater treatment and LID compliance.

For all alternative designs, the applicant must prepare a complete Project Submittal, including a drawing showing the entire site divided into discrete Drainage Management Areas, text and tables showing how drainage is routed from each DMA to a treatment facility, and calculations demonstrating the design achieves the applicable design criteria for each stormwater treatment facility. Alternative treatment facilities are limited to the circumstances and selection criteria identified in Chapter 2.

► DESIGN OF ALTERNATIVE TREATMENT FACILITIES

Here are criteria and design considerations for some alternative treatment facilities:

Sand Filters. To ensure effectiveness is not compromised by compacting or clogging of the filter surface, sand filters must be maintained frequently.

The following criteria apply to sand filters:

- Calculate the design flow using the rational method with an intensity of 0.2"/hour and the "C" factors for "treatment only" from Table 4-2.
- To determine the required filter surface area, divide the design flow by an allowable design surface loading rate of 5"/hour.
- The minimum depth of filter media is 18". The media should be washed sand, with gradation similar to that specified for fine aggregate in ASTM C-33.
- The entire filter area must be accessible for easy maintenance without the need to enter a confined space.

A typical filter design includes a gravel drain layer and a perforated pipe underdrain. Filter fabric may be used to prevent the filter media from entering the gravel layer.

The design should not include any permanent pool or other standing water. Instead of including a pretreatment basin, consider the following features in the area tributary to the filter to reduce the potential for filter clogging:

- Limit the size of the Drainage Management Area.
- Include only impervious areas in the DMA.
- Stabilize slopes and eliminate sources of sediment in the DMA.
- Provide screens for trash and leaves at storm drain inlets (if allowed by the Environmental Affairs Department).

For additional design considerations and details, see *Design of Stormwater Filtering Systems* by Richard A. Claytor and Thomas R. Schueler, The Center for Watershed Protection, 1996, and *California Stormwater BMP Handbooks* Fact Sheet TC-40, Media Filter.

Extended ("Dry") Detention Basins. The required detention volume is based on the 85th percentile 24-hour storm depth. The steps to calculate the required detention volume are:

1. Use the County of San Diego's 85th Percentile Isopleth Map to determine the unit basin volume.
2. Determine the weighted runoff factor ("C" factor) for the area tributary to the basin. The factors in Table 4-2 may be used.

3. Multiply the weighted runoff factor times the tributary area times the unit basin volume.

For maximum effectiveness the basin should not be sized substantially larger than this volume.

For design considerations and details, see the *California Stormwater Best Management Practice Handbooks*, Fact Sheet TC-22, “Extended Detention Basins.” The basin outlet should be designed for a 24-hour drawdown time.

As noted in Fact Sheet TC-22, “dry” detention basins may not be practicable for drainage areas less than 5 acres. The potential for mosquito harborage is a concern. In the design, do not create any areas that will hold standing water for time periods in excess of the maximum vector control detention time (96 hours for the County of San Diego).

“Wet” Detention Ponds and Constructed Wetlands. The required detention volume is determined as with a “dry” detention basin. Before proceeding with design, contact the local mosquito control agency to coordinate the design and plan ongoing inspection and maintenance of the facility for mosquito control. For design considerations and details, see the *California Stormwater Best Management Practices Handbooks*, Fact Sheet TC-20, “Wet Ponds,” and Fact Sheet TC-21, “Constructed Wetlands.”

Vegetated Swales. Design recommendations for conventional vegetated swales are in the *California Stormwater Best Management Practices Handbooks*. The conventional swale design uses available on-site soils and does not include an underdrain system. Where soils are clayey, there is little infiltration. Treatment occurs as runoff flows through grass or other vegetation before exiting at the downstream end. Recommended detention times are on the order of 10 minutes.

Conventional vegetated swales may be used to meet Municipal Permit treatment requirements and LID requirements. The following should be incorporated in the design:

- Determine the weighted runoff factor (“C” factor) for the area tributary to the swale. The factors in Table 4-2 may be used.
- Calculate the design flow by multiplying the weighted runoff factor times the tributary area times either (1) 0.2 inches of rainfall per hour, or (2) twice the 85th percentile hourly rainfall intensity.
- When sizing the swale, use a value of 0.25 for Manning’s “n”.
- Ensure that all flow enters the swale near its highest point and that no flow short-circuits treatment by entering the swale along its length.
- The swale should be a minimum 100 feet in length.
- Longitudinal slopes should not exceed 2.5%; on flatter slopes, incorporate measures to avoid prolonged surface ponding.

Consider using linear-shaped bioretention areas in place of conventional vegetated swales because:

- Conventional swale design has resulted in standing water and associated nuisances.
- Conventional swales often don't obtain even the design residence time because of the length required and because proper design requires runoff enter the swale at the upstream end rather than at various locations along its length, and
- Bioretention areas provide a more flexible drainage design, more effective practicable treatment, and more effective flow control within the same footprint.

► TREATMENT FACILITIES FOR SPECIAL CIRCUMSTANCES

Higher-rate surface filters and vault-based proprietary filters can only be used in the circumstances described in Chapter 2 and when sand filters, extended “dry” detention basins, and “wet” detention ponds or constructed wetlands have been found infeasible.

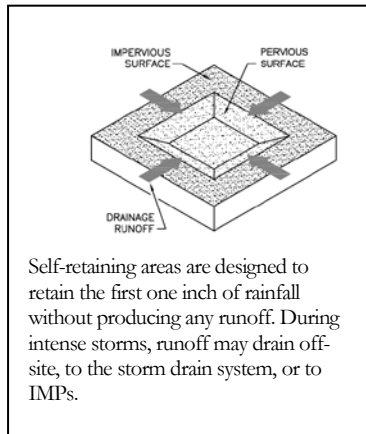
For surface filters, the grading and drainage design should minimize the area draining to each unit and maximize the number of discrete drainage areas and units. Proprietary facilities should be installed consistent with the manufacturer's instructions.

References and Resources:

- RWQCB Order R9-2007-0001 (Stormwater Municipal Permit)
- Low Impact Development Center
- County of San Diego Low Impact Development Handbook
- California Best Management Practices Handbooks
- Design of Stormwater Filtering Systems (Claytor and Scheuler, 1996)
- American Rainwater Catchment Systems Association
- Water Conservation Alliance of Southern Arizona
- Rainwater Harvesting for Drylands and Beyond
- The Texas Manual on Rainwater Harvesting
- Managing Wet Weather With Green Infrastructure: Municipal Handbook, Rainwater Harvesting Policies (Low Impact Development Center, 2008)

Self-Treating and Self-Retaining Areas

► CRITERIA



LID design seeks to manage runoff from roofs and paving so effects on water quality and hydrology are minimized. Runoff from landscaping, however, does not need to be managed the same way.

Runoff from landscaping can be managed by creating self-treating and self-retaining areas.

Self-treating areas are natural, landscaped, or turf areas that drain directly off site or to the storm drain system. Examples include upslope undeveloped areas that are ditched and drained around a development and grassed slopes that drain offsite to a street or storm drain. Self-treating areas may not drain on to adjacent paved areas.

Where a landscaped area is upslope from or surrounded by paved areas, a **self-retaining area** (also called a zero-discharge area) may be created. Self-retaining areas are designed to retain the first one inch of rainfall without producing any runoff. The technique works best on flat, heavily landscaped sites. It may be used on mild slopes if there is a reasonable expectation that the first inch of rainfall would produce no runoff.

To create self-retaining turf and landscape areas in flat areas or on terraced slopes, berm the area or depress the grade into a concave cross-section so that these areas will retain the first inch of rainfall. Inlets of area drains, if any, should be set 3 inches above the low point to allow ponding.

Areas draining to self retaining areas. Drainage from roofs and paving can be directed to self-retaining areas and allowed to infiltrate into the soil. The maximum allowable ratio is 2 parts impervious: 1 part pervious.

The self-retaining area must be bermed or depressed to retain an inch of rainfall including the flow from the tributary impervious area.

Best Uses

- Heavily landscaped sites

Advantages

- No maintenance verification requirement
- Complements site landscaping

Limitations

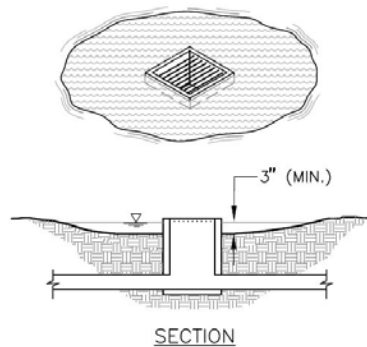
- Requires substantial square footage
- Grading requirements must be coordinated with landscape design

► DETAILS

Drainage from self-treating areas must flow to off-site streets or storm drains without flowing on to paved areas.

Pavement within a self-treating area cannot exceed 5% of the total area.

In self-retaining areas, overflows and area drain inlets should be set high enough to ensure ponding over the entire surface of the self-retaining area.



Set overflows and area drain inlets high enough to ensure ponding (3" deep) over the surface of the self-retaining area.

Self-retaining areas should be designed to promote even distribution of ponded runoff over the area.

Leave enough reveal (from pavement down to landscaped surface) to accommodate buildup of turf or mulch.

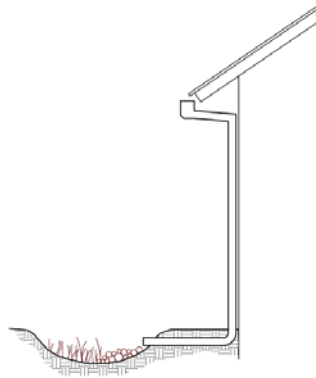
► APPLICATIONS

Lawn or landscaped areas adjacent to streets can be considered self-treating areas.

Self-retaining areas can be created by depressing lawn and landscape below surrounding sidewalks and plazas.

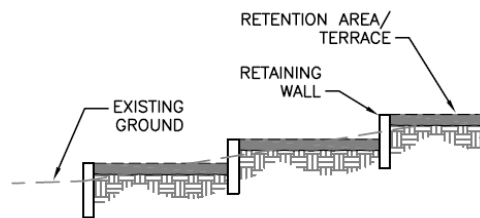
Runoff from walkways or driveways in parks and park-like areas can sheet-flow to self-retaining areas.

Roof leaders can be connected to self-retaining areas by piping beneath plazas and walkways. If necessary, a “bubble-up” can be used.



Connecting a roof leader to a self-retaining area. The head from the eave height makes it possible to route roof drainage some distance away from the building.

Self-retaining areas can be created by terracing mild slopes. The elevation difference promotes subsurface drainage.



Mild slopes can be terraced to create self-retaining areas.

► **DESIGN CHECKLIST FOR SELF-TREATING AREAS**

- ☐ The self-treating area is at least 95% lawn or landscaping (not more than 5% impervious).
- ☐ Re-graded or re-landscaped areas have amended soils, vegetation, and irrigation as may be required to maintain soil stability and permeability.
- ☐ Runoff from the self-treating area does not enter an IMP or another drainage management area, but goes directly to the storm drain system.

► **DESIGN CHECKLIST FOR SELF-RETAINING AREAS**

- ☐ Area is bermed all the way around or graded concave.
- ☐ Slopes do not exceed 4%.
- ☐ Entire area is lawn, landscaping, or pervious pavement (see criteria in Chapter 4).
- ☐ Area has amended soils, vegetation, and irrigation as may be required to maintain soil stability and permeability.
- ☐ Any area drain inlets are at least 3 inches above surrounding grade.

► **DESIGN CHECKLIST FOR AREAS DRAINING TO SELF-RETAINING AREAS**

- ☐ Ratio of tributary impervious area to self-retaining area is not greater than 2:1.
- ☐ Roof leaders collect runoff and route it to the self-retaining area.
- ☐ Paved areas are sloped so drainage is routed to the self-retaining area.
- ☐ Inlets are designed to protect against erosion and distribute runoff across the area.

Pervious Pavements

► CRITERIA

Impervious roadways, driveways, and parking lots account for much of the hydrologic impact of land development. In contrast, pervious pavements allow rainfall to collect in a gravel or sand base course and infiltrate into native soil.

Pervious pavements are designed to transmit rainfall through the surface to storage in a base course. For example, a 4-inch-deep base course provides approximately 1.6 inches of storage. Runoff stored in the base course infiltrates to native soils over time. Except in the case of solid pavers, the surface course provides additional storage.

Areas with the following pervious pavements may be regarded as “self-treating” and require no additional treatment or flow control if they drain off-site (not to an IMP).

- Pervious concrete
- Porous asphalt
- Crushed aggregate (gravel)
- Open pavers with grass or plantings
- Open pavers with gravel
- Artificial turf

Areas with these pervious pavements can also be **self-retaining areas** and may receive runoff from impervious areas if they are bermed or depressed to retain the first one inch of rainfall, including runoff from the tributary impervious area.

Solid unit pavers—such as bricks, stone blocks, or precast concrete shapes—are considered to reduce runoff compared to impervious pavement, when the unit pavers are set in sand or gravel with gaps between the pavers. Joints must be filled with an open-graded aggregate free of fines.

When draining pervious pavements to an IMP, use the runoff factors in Table 4-2.

Best Uses

- Areas with permeable native soils
- Low-traffic areas
- Where aesthetic quality can justify higher cost

Advantages

- No maintenance verification requirement
- Variety of surface treatments can complement landscape design

Limitations

- Initial cost
- Placement requires specially trained crews
- Geotechnical concerns, especially in clay soils
- Concerns about pavement strength and surface integrity
- Some municipalities do not allow in public right of way

► DETAILS

Permeable pavements can be used in clay soils; however, special design considerations, including an increased depth of base course, typically apply and will increase the cost of this option. Geotechnical fabric between the base course and underlying clay soil is recommended.

Pavement strength and durability typically determines the required depth of base course. If underdrains are used, the outlet elevation must be a minimum of 3 inches above the bottom elevation of the base course.

Pervious concrete and porous asphalt must be installed by crews with special training and tools. Industry associations maintain lists of qualified contractors.

Parking lots with crushed aggregate or unit pavers may require signs or bollards to organize parking.

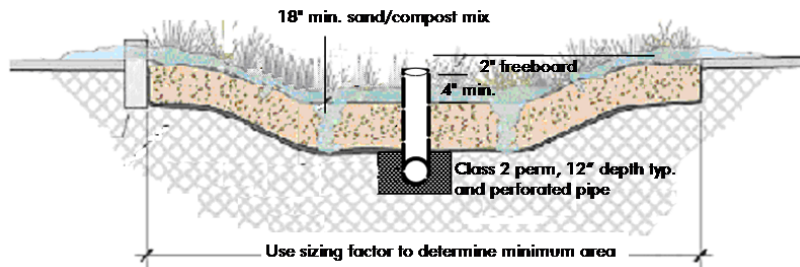
► DESIGN CHECKLIST FOR PERVIOUS PAVEMENTS

- ☐ No erodible areas drain on to pavement.
- ☐ Subgrade is uniform. Compaction is minimal.
- ☐ Reservoir base course is of open-graded crushed stone. Base depth is adequate to retain rainfall and support design loads.
- ☐ If a subdrain is provided, outlet elevation is a minimum of 3 inches above bottom of base course.
- ☐ Subgrade is uniform and slopes are not so steep that subgrade is prone to erosion.
- ☐ Rigid edge is provided to retain granular pavements and unit pavers.
- ☐ Solid unit pavers are installed with open gaps filled with open-graded aggregate free of fines.
- ☐ Permeable pavements are installed by industry-certified professionals according to vendor's recommendations.
- ☐ Selection and location of pavements incorporates Americans with Disabilities Act requirements, site aesthetics, and uses.

Resources

- Southern California Concrete Producers www.concreteresources.net.
- California Asphalt Pavement Association
<http://www.californiapavements.org/stormwater.html>
- Interlocking Concrete Pavement Institute
<http://www.icpi.org/>
- *Start at the Source Design Manual for Water Quality Protection*, pp. 47-53. www.basmaa.org
- *Porous Pavements*, by Bruce K. Ferguson. 2005. ISBN 0-8493-2670-2.

Bioretention Facilities



Bioretention facility configured for treatment-only requirements. Bioretention facilities can be rectangular, linear, or nearly any shape.

Bioretention detains runoff in a surface reservoir, filters it through plant roots and a biologically active soil mix, and then infiltrates it into the ground. Where native soils are less permeable, an underdrain conveys treated runoff to storm drain or surface drainage.

Bioretention facilities can be configured in nearly any shape. When configured as linear **swales**, they can convey high flows while percolating and treating lower flows.

Bioretention facilities can be configured as in-ground or above-ground planter boxes, with the bottom open to allow infiltration to native soils underneath. If infiltration cannot be allowed, use the sizing factors and criteria for the Flow-Through Planter.

► CRITERIA

For development projects subject only to runoff treatment requirements, the following criteria apply:

Parameter	Criterion
Soil mix depth	18 inches minimum
Soil mix minimum percolation rate	5 inches per hour minimum sustained (10 inches per hour initial rate recommended)
Soil mix surface area	0.04 times tributary impervious area (or equivalent)

Best Uses

- Commercial areas
- Residential subdivisions
- Industrial developments
- Roadways
- Parking lots
- Fit in setbacks, medians, and other landscaped areas

Advantages

- Can be any shape
- Low maintenance
- Can be landscaped

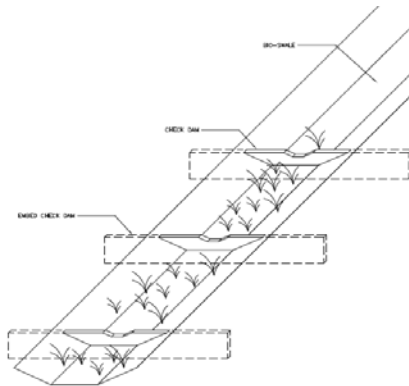
Limitations

- Require 4% of tributary impervious square footage
- Typically requires 3-4 feet of head
- Irrigation typically required

Parameter	Criterion
Surface reservoir depth	6 inches minimum; may be sloped to 4 inches where adjoining walkways.
Underdrain	Required in Group “C” and “D” soils. Perforated pipe embedded in gravel (“Class 2 permeable” recommended), connected to storm drain or other accepted discharge point.

► DETAILS

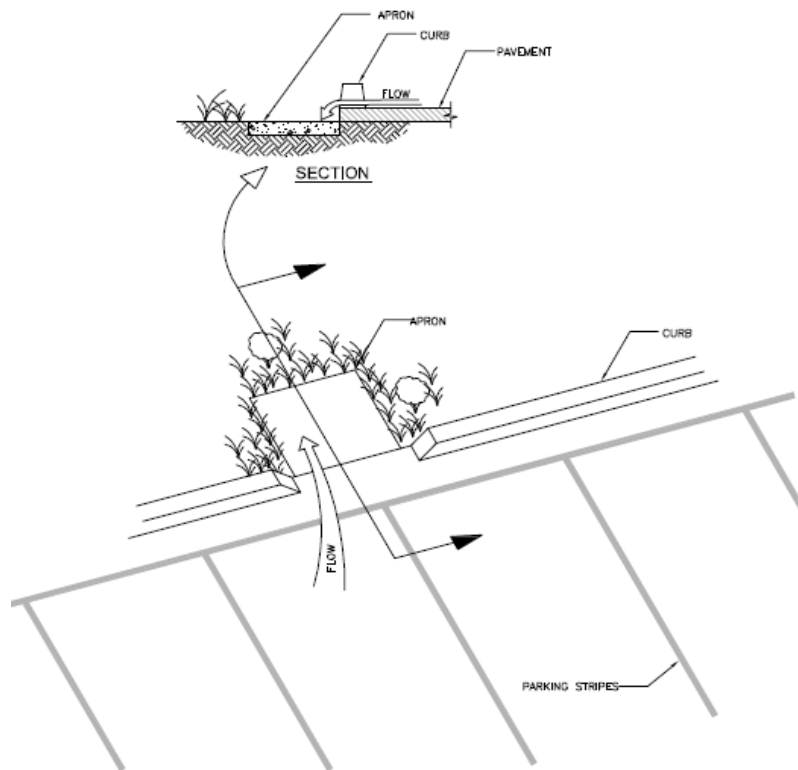
Plan. On the surface, a bioretention facility should be one level, shallow basin—or a series of basins. As runoff enters each basin, it should flood and fill throughout before runoff overflows to the outlet or to the next downstream basin. This will help prevent movement of surface mulch and soil mix.



Use check dams for linear bioretention facilities (swales) on a slope.

In a linear swale, check dams should be placed so that the lip of each dam is at least as high as the toe of the next upstream dam. A similar principle applies to bioretention facilities built as terraced roadway shoulders.

Inlets. Paved areas draining to the facility should be graded, and inlets should be placed, so that runoff remains as sheet flow or as dispersed as possible. Curb cuts should be wide (12" is recommended) to avoid clogging with leaves or debris. Allow for a minimum reveal of 4"-6" between the inlet and soil mix elevations to ensure turf or mulch buildup does not block the inlet. In addition, place an apron of stone or concrete, a foot square or larger, inside each inlet to prevent vegetation from growing up and blocking the inlet.



Recommended design details for bioretention facility inlets (see text).

Where runoff is collected in pipes or gutters and conveyed to the facility, protect the landscaping from high-velocity flows with energy-dissipating rocks. In larger installations, provide cobble-lined channels to better distribute flows throughout the facility.

Upturned pipe outlets can be used to dissipate energy when runoff is piped from roofs and upgradient paved areas.

Soil mix. The required soil mix is similar to a loamy sand. It must maintain a minimum percolation rate of 5" per hour throughout the life of the facility, and it must be suitable for maintaining plant life. Typically, on-site soils will not be suitable due to clay content.

Storage and drainage layer. "Class 2 permeable," Caltrans specification 68-1.025, is recommended. Open-graded crushed rock, washed, may be used, but requires 4"-6" washed pea gravel be substituted at the top of the crushed rock gravel layers. **Do not use filter fabric** to separate the soil mix from the gravel drainage layer or the gravel drainage layer from the native soil.

Underdrains. No underdrain is required where native soils beneath the facility are Hydrologic Soil Group A or B. For treatment-only facilities where native soils are Group C or D, a perforated pipe must be bedded in the gravel layer and must terminate at a storm drain or other approved discharge point.

Outlets. In treatment-only facilities, outlets must be set high enough to ensure the surface reservoir fills and the entire surface area of soil mix is flooded before the outlet elevation is reached. In swales, this can be achieved with appropriately placed check dams.

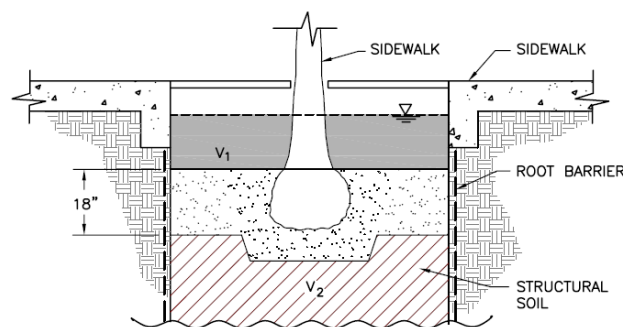
The outlet should be designed to exclude floating mulch and debris.

Vaults, utility boxes and light standards. It is best to locate utilities outside the bioretention facility—in adjacent walkways or in a separate area set aside for this purpose. If utility structures are to be placed within the facility, the locations should be anticipated and adjustments made to ensure the minimum bioretention surface area and volumes are achieved. Leaving the final locations to each individual utility can produce a haphazard, unaesthetic appearance and make the bioretention facility more difficult to maintain.

Emergency overflow. The site grading plan should anticipate extreme events and potential clogging of the overflow and route emergency overflows safely.

Trees. Bioretention areas can accommodate small or large trees. There is no need to subtract the area taken up by roots from the effective area of the facility. Extensive tree roots maintain soil permeability and help retain runoff. Normal maintenance of a bioretention facility should not affect tree lifespan.

The bioretention facility can be integrated with a tree pit of the required depth and filled with structural soil. If a root barrier is used, it can be located to allow tree roots to spread throughout the bioretention facility while protecting adjacent pavement. Locations and planting elevations should be selected to avoid blocking the facility's inlets and outlets.



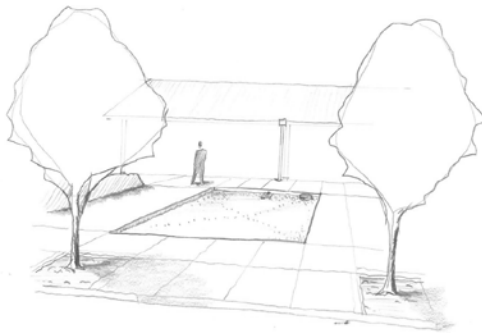
Bioretention facility configured as a tree well.
The root barrier is optional.

► APPLICATIONS

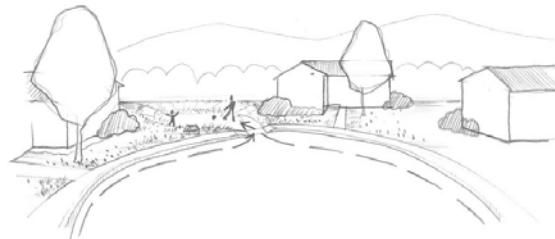
Multi-purpose landscaped areas. Bioretention facilities are easily adapted to serve multiple purposes. The loamy sand soil mix will support turf or a plant palette suitable to the location and a well-drained soil.

Example landscape treatments:

- Lawn with sloped transition to adjacent landscaping.
- Swale in setback area
- Swale in parking median
- Lawn with hardscaped edge treatment
- Decorative garden with formal or informal plantings
- Traffic island with low-maintenance landscaping
- Raised planter with seating
- Bioretention on a terraced slope



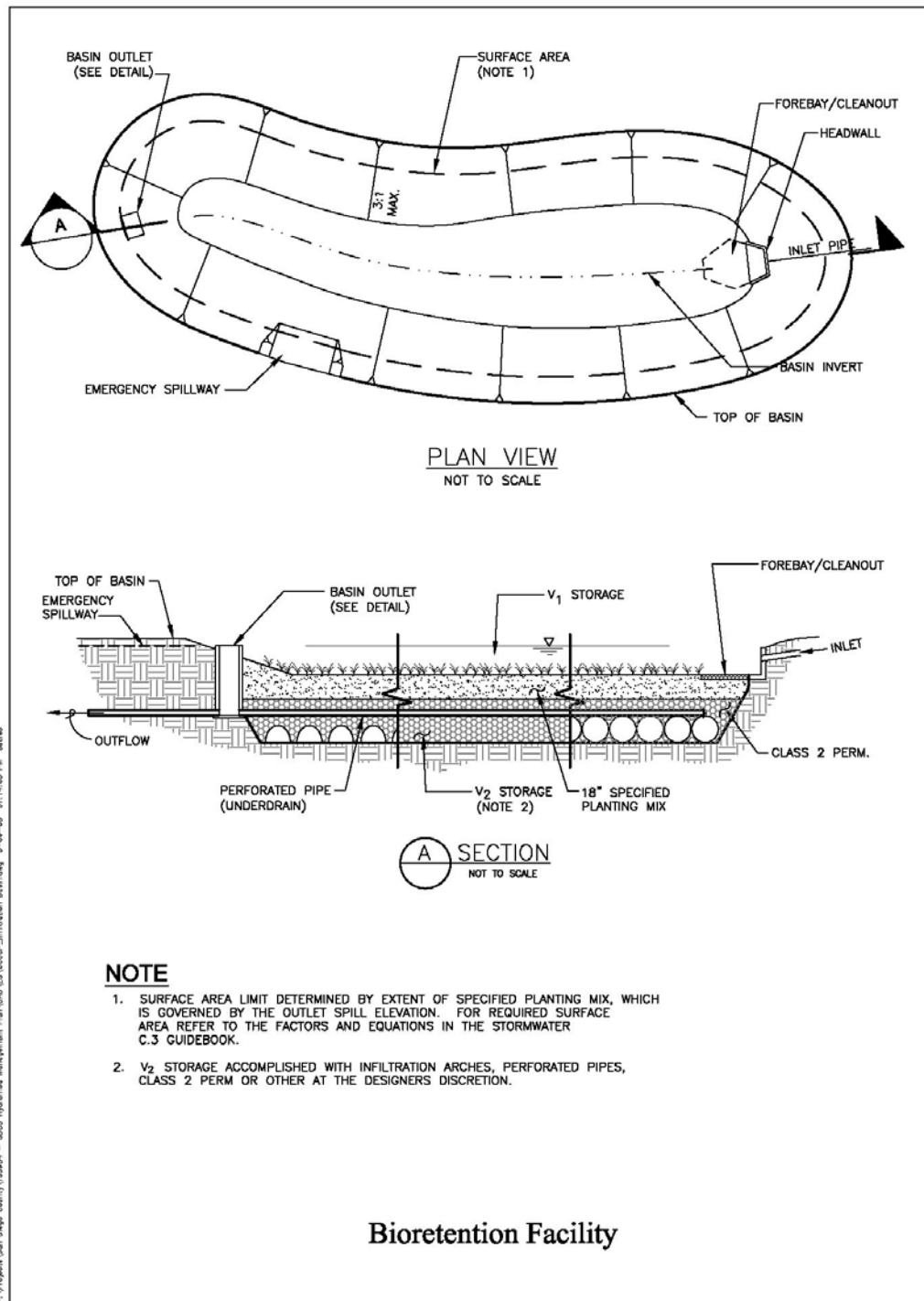
Bioretention facility configured as a recessed decorative lawn with hardscaped edge.



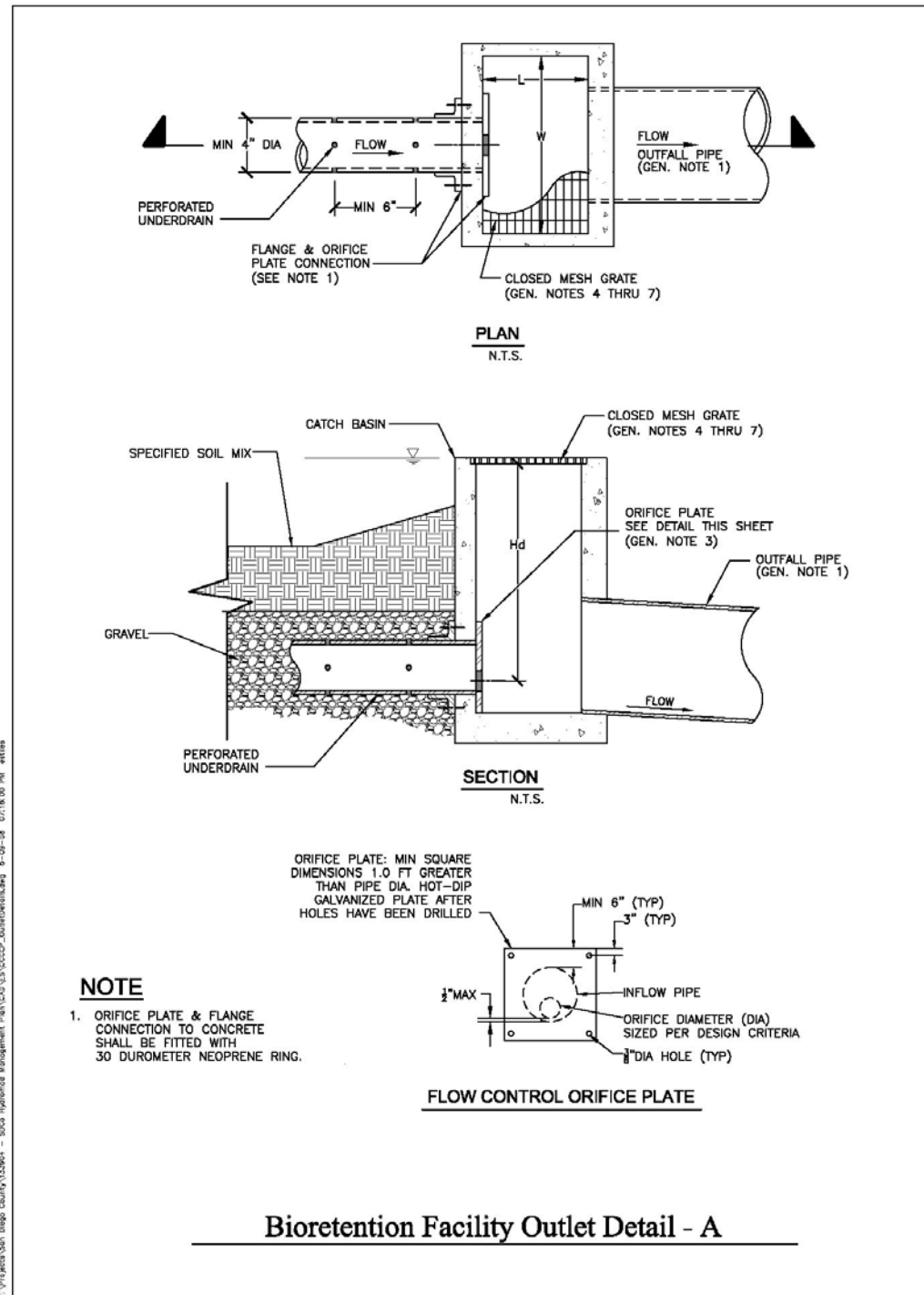
Bioretention facility configured and planted as a lawn/ play area.

Design Checklist for Bioretention

- ☐ Volume or depth of surface reservoir meets or exceeds minimum.
- ☐ 18" depth "loamy sand" soil mix with minimum long-term percolation rate of 5"/hour.
- ☐ Area of soil mix meets or exceeds minimum.
- ☐ Perforated pipe underdrain bedded in "Class 2 perm" with connection and sufficient head to storm drain or discharge point (except in "A" or "B" soils).
- ☐ No filter fabric.
- ☐ Underdrain has a clean-out port consisting of a vertical, rigid, non-perforated PVC pipe, with a minimum diameter of 6 inches and a watertight cap.
- ☐ Location and footprint of facility are shown on site plan and landscaping plan.
- ☐ Bioretention area is designed as a basin (level edges) or a series of basins, and grading plan is consistent with these elevations. If facility is designed as a swale, check dams are set so the lip of each dam is at least as high as the toe of the next upstream dam.
- ☐ Inlets are 12" wide, have 4"-6" reveal and an apron or other provision to prevent blockage when vegetation grows in, and energy dissipation as needed.
- ☐ Overflow connected to a downstream storm drain or approved discharge point.
- ☐ Emergency spillage will be safely conveyed overland.
- ☐ Plantings are suitable to the climate and a well-drained soil.
- ☐ Irrigation system with connection to water supply.
- ☐ Vaults, utility boxes, and light standards are located outside the minimum soil mix surface area.
- ☐ When excavating, avoid smearing of the soils on bottom and side slopes. Minimize compaction of native soils and "rip" soils if clayey and/or compacted. Protect the area from construction site runoff.



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Flow-through Planter



Portland 2004 Stormwater Manual

Flow-through planters treat and detain runoff without allowing seepage into the underlying soil. They can be used next to buildings and on slopes where stability might be affected by adding soil moisture.

Flow-through planters typically receive runoff via downspouts leading from the roofs of adjacent buildings. However, they can also be set in-ground and receive sheet flow from adjacent paved areas.

Pollutants are removed as runoff passes through the soil layer and is collected in an underlying layer of gravel or drain rock. A perforated-pipe underdrain is typically connected to a storm drain or other discharge point. An overflow inlet conveys flows which exceed the capacity of the planter.

► CRITERIA

Treatment only. For development projects subject only to runoff treatment requirements, the following criteria apply:

Parameter	Criterion
Soil mix depth	18 inches minimum
Soil mix minimum percolation rate	5 inches per hour minimum sustained (10 inches per hour initial rate recommended)

Best Uses

- Management of roof runoff
- Next to buildings
- Dense urban areas
- Where infiltration is not desired

Advantages

- Can be used next to structures
- Versatile
- Can be any shape
- Low maintenance

Limitations

- Can be used for flow-control only on sites with “C” and “D” soils
- Requires underdrain
- Requires 3-4 feet of head

Parameter	Criterion
Soil mix surface area	0.04 times tributary impervious area (or equivalent)
Surface reservoir depth	6" minimum; may be sloped to 4" where adjoining walkways.
Underdrain	Typically used. Perforated pipe embedded in gravel ("Class 2 permeable" recommended), connected to storm drain or other accepted discharge point.

► DETAILS

Configuration. The planter must be level. To avoid standing water in the subsurface layer, set the perforated pipe underdrain and orifice as nearly flush with the planter bottom as possible.

Inlets. Protect plantings from high-velocity flows by adding rocks or other energy-dissipating structures at downspouts and other inlets.

Soil mix. The required soil mix is similar to a loamy sand. It must maintain a minimum percolation rate of 5" per hour throughout the life of the facility, and it must be suitable for maintaining plant life. Typically, on-site soils will not be suitable due to clay content.

Gravel storage and drainage layer. "Class 2 permeable," Caltrans specification 68-1.025, is recommended. Open-graded crushed rock, washed, may be used, but requires 4"-6" of washed pea gravel be substituted at the top of the crushed rock layer. **Do not use filter fabric** to separate the soil mix from the gravel drainage layer.

Emergency overflow. The planter design and installation should anticipate extreme events and potential clogging of the overflow and route emergency overflows safely.

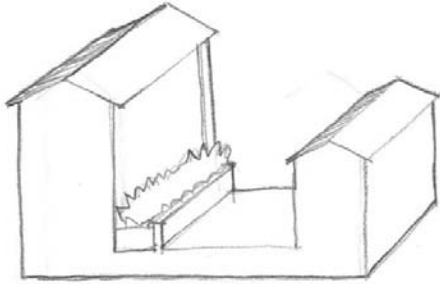
► APPLICATIONS

Adjacent to buildings. Flow-through planters may be located adjacent to buildings, where the planter vegetation can soften the visual effect of the building wall. A setback with a raised planter box may be appropriate even in some neo-traditional pedestrian-oriented urban streetscapes.

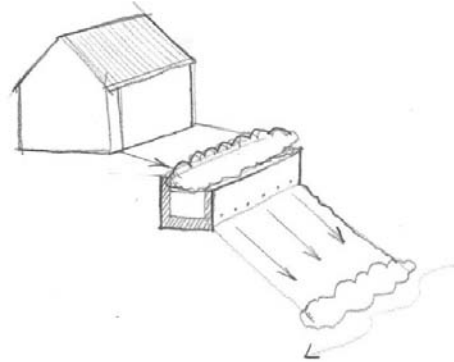
At plaza level. Flow-through planters have been successfully incorporated into podium-style developments, with the planters placed on the plaza level and receiving runoff from the tower roofs above. Runoff from the plaza level is typically managed separately by additional flow-through planters or bioretention facilities located at street level.

Steep slopes. Flow-through planters provide a means to detain and treat runoff on slopes that cannot accept infiltration from a bioretention facility. The planter can be built into the slope similar to a retaining wall. The design should consider the need to access the planter for periodic

maintenance. Flows from the planter underdrain and overflow must be directed in accordance with local requirements. It is sometimes possible to disperse these flows to the downgradient hillside.



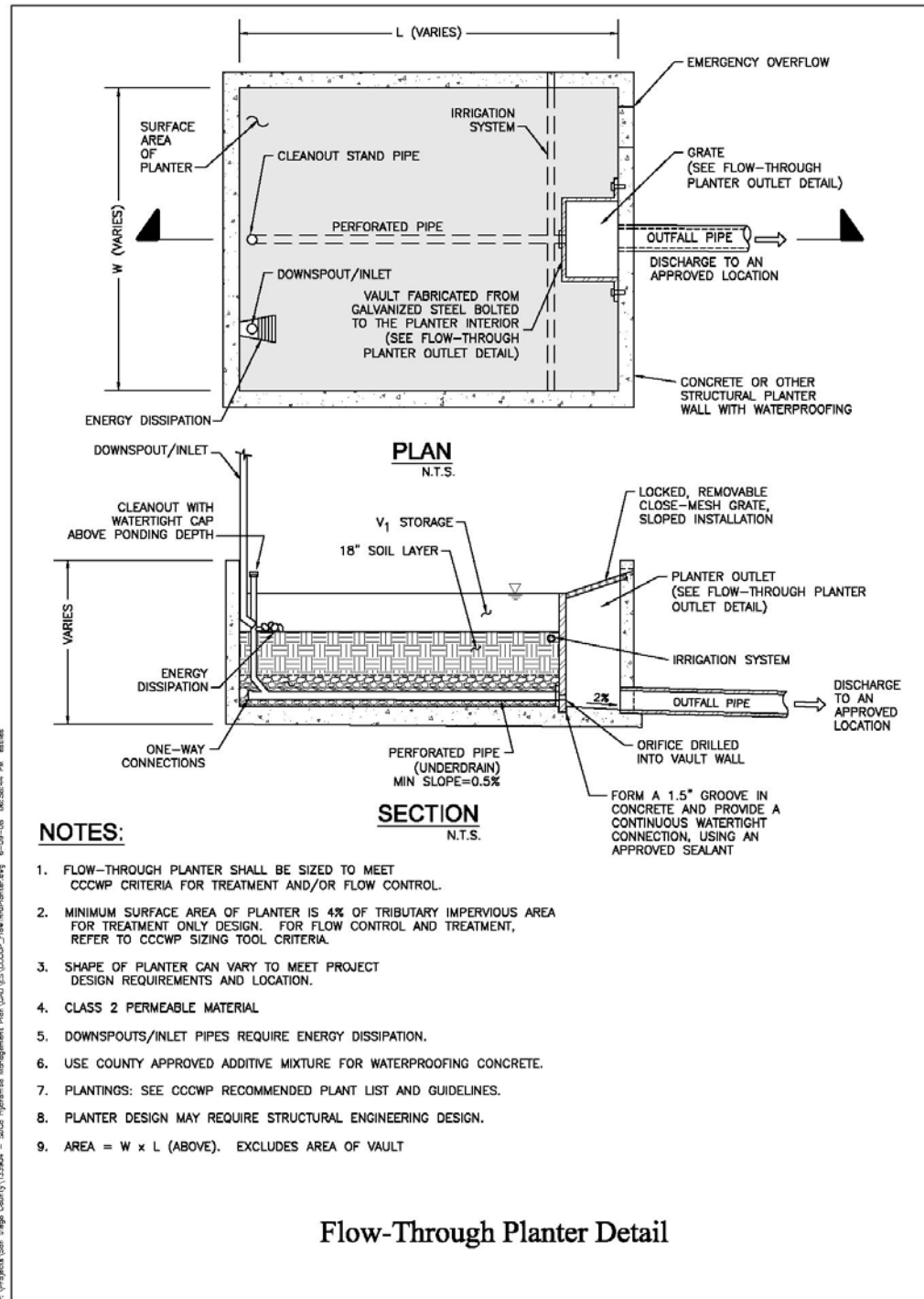
Flow-through planter on the plaza level of a podium-style development.

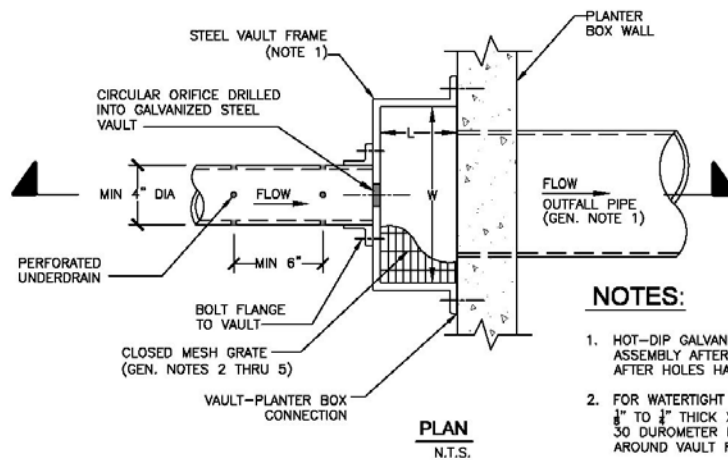


Flow-through planter built into a hillside. Flows from the underdrain and overflow must be directed in accordance with local requirements.

Design Checklist for Flow-through Planter

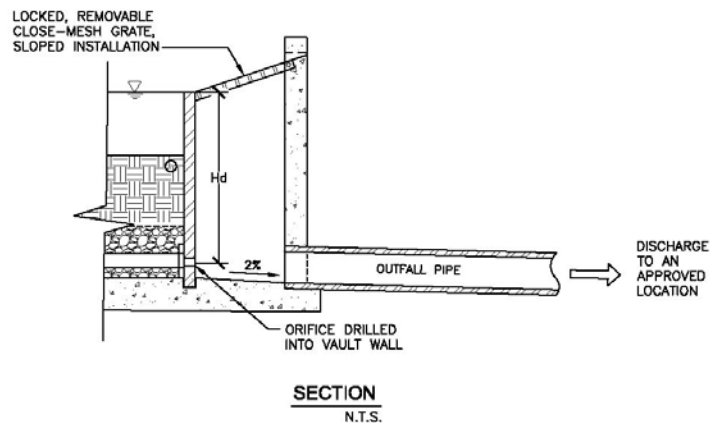
- ☐ Reservoir depth is 4-6" minimum.
- ☐ 18" depth "loamy sand" soil mix with minimum long-term infiltration rate of 5"/hour.
- ☐ Area of soil mix meets or exceeds minimum.
- ☐ "Class 2 perm" drainage layer.
- ☐ No filter fabric.
- ☐ Perforated pipe underdrain with outlet located flush or nearly flush with planter bottom. Connection with sufficient head to storm drain or discharge point.
- ☐ Underdrain has a clean-out port consisting of a vertical, rigid, non-perforated PVC pipe, with a minimum diameter of 6 inches and a watertight cap.
- ☐ Overflow connected to a downstream storm drain or approved discharge point.
- ☐ Location and footprint of facility are shown on site plan and landscaping plan.
- ☐ Planter is set level.
- ☐ Emergency spillage will be safely conveyed overland.
- ☐ Plantings are suitable to the climate and a well-drained soil.
- ☐ Irrigation system with connection to water supply.





NOTES:

1. HOT-DIP GALVANIZE ENTIRE FRAME ASSEMBLY AFTER FABRICATION AND AFTER HOLES HAVE BEEN DRILLED.
2. FOR WATERTIGHT CONNECTION, INSTALL $\frac{3}{8}$ " TO $\frac{1}{2}$ " THICK X 2" WIDE CONTINUOUS 30 DUROMETER NEOPRENE GASKET, ALL AROUND VAULT FRAME.



GENERAL OUTLET DETAIL NOTES:

1. OUTFALL PIPE SHALL BE SIZED TO CONVEY DESIGN STORM PER CCCWP DESIGN CRITERIA.
2. GRATE SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE AND PROVIDED WITH HINGED AND LOCKABLE OR BOLTABLE ACCESS PANELS.
3. GRATE SHALL BE STAINLESS STEEL, ALUMINUM OR STEEL. STEEL GRATES SHALL BE HOT DIP GALVANIZED AND MAY BE HOT POWDER PAINTED AFTER GALVANIZING.
4. GRATE SHALL BE DESIGNED SUCH THAT THE DIAGONAL DIMENSION OF EACH OPENING IS SMALLER THAN THE DIAMETER OF THE OUTFALL PIPE.
5. STRUCTURAL DESIGN OF GRATE SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF GRATE.

Flow-Through Planter Outlet Detail

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Dry Wells and Infiltration Basins

The typical dry well is a prefabricated structure, such as an open-bottomed vault or box, placed in an excavation or boring. The vault may be empty (for maximum space efficiency) or filled with rock.

An infiltration basin has the same functional components—a volume to store runoff and sufficient area to infiltrate that volume into the native soil—but is open rather than covered.

► CRITERIA

Dry wells and infiltration basins must be designed with the minimum volume calculated by Equation 4-8 using a unit volume based on the County of San Diego's 85th Percentile Isopluvial Map.

Consult with an Authority engineer and the Environmental Affairs Department regarding the need to verify soil permeability and other site conditions are suitable for dry wells and infiltration basins. Some proposed criteria are on pages 5-12 of Caltrans' 2004 BMP Retrofit Pilot Study Final Report (CTSW-RT-01-050).

The infiltration rate and infiltrative area must be sufficient to drain a full facility within 72 hours.

► DETAILS

Dry wells should be sited to allow for the potential future need for removal and replacement.

In locations where native soils are coarser than a medium sand, the area directly beneath the facility should be over-excavated by two feet and backfilled with sand as a groundwater protection measure.

Design Checklist for Dry Well

- ☐ Volume and infiltrative area meet or exceed minimum.
- ☐ Overflow connected to a downstream storm drain or approved discharge point.
- ☐ Emergency spillage will be safely conveyed overland.
- ☐ Depth from bottom of the facility to seasonally high groundwater elevation is ≥ 10 feet*.
- ☐ Areas tributary to the facility do not include automotive repair shops; car washes; fleet storage areas (Bus, truck, etc.); nurseries, or other uses that may present an exceptional threat to groundwater quality.
- ☐ Underlying soils are in Hydrologic Soil Group A or B. Infiltration rate is sufficient to ensure a full basin will drain completely within 72 hours. Soil infiltration rate has been confirmed.
- ☐ Set back from structures 10' or as recommended by structural or geotechnical engineer.

* References to 10 feet of separation between bottom of facility and seasonally high groundwater elevation are standard Copermittee language. See page 28 for applicability.

Best Uses

- Alternative to bioretention in areas with permeable soils

Advantages

- Compact footprint
- Can be installed in paved areas

Limitations

- Can be used only on sites with "A" and "B" soils
- Requires minimum of 10' from bottom of facility to seasonal high groundwater*
- Not suitable for drainage from some industrial areas or arterial roads
- Must be maintained to prevent clogging.

Cistern with Bioretention Facility

A cistern in series with a bioretention facility can meet treatment requirements where space is limited. In this configuration, the cistern is equipped with a flow-control orifice and the bioretention facility is sized to treat a trickle outflow from the cistern.

► CRITERIA

Cistern. The cistern must detain the volume calculated by Equation 4-8 and must include an orifice or other device designed for a 24-hour drawdown time.

Bioretention facility. See the design sheet for bioretention facilities. The area of the bioretention facility must be sized to treat the maximum discharge flow, assuming a percolation rate of 5" per hour through the engineered soil.

Use with sand filter. A cistern in series with a sand filter can meet treatment requirements. See the discussion of treatment facility selection in Chapter 2 and the design guidance for sand filters in Chapter 4.

► DETAILS

Flow-control orifice. The cistern must be equipped with an orifice plate or other device to limit flow to the bioretention area.

Preventing mosquito harborage. Cisterns should be designed to drain completely, leaving no standing water. Drains should be located flush with the bottom of the cistern. Alternatively—or in addition—all entry and exit points, should be provided with traps or sealed or screened to prevent mosquito entry. Note mosquitoes can enter through openings $\frac{1}{16}$ " or larger and will fly for many feet through pipes as small as $\frac{1}{4}$ ".

Exclude debris. Provide leaf guards and/or screens to prevent debris from accumulating in the cistern.

Ensure access for maintenance. Design the cistern to allow for cleanout. Avoid creating the need for maintenance workers to enter a confined space. Ensure the outlet orifice can be easily accessed for cleaning and maintenance.

Best Uses

- In series with a bioretention facility to meet treatment requirement in limited space.
- Management of roof runoff
- Dense urban areas

Advantages

- Storage volume can be in any configuration

Limitations

- Somewhat complex to design, build, and operate
- Requires head for both cistern and bioretention facility

► APPLICATIONS

Shallow ponding on a flat roof. The “cistern” storage volume can be designed in any configuration, including storing rainfall on the roof where it falls and draining it away slowly. See the County of San Diego’s 85th percentile isopluvial diagrams for required average depths.

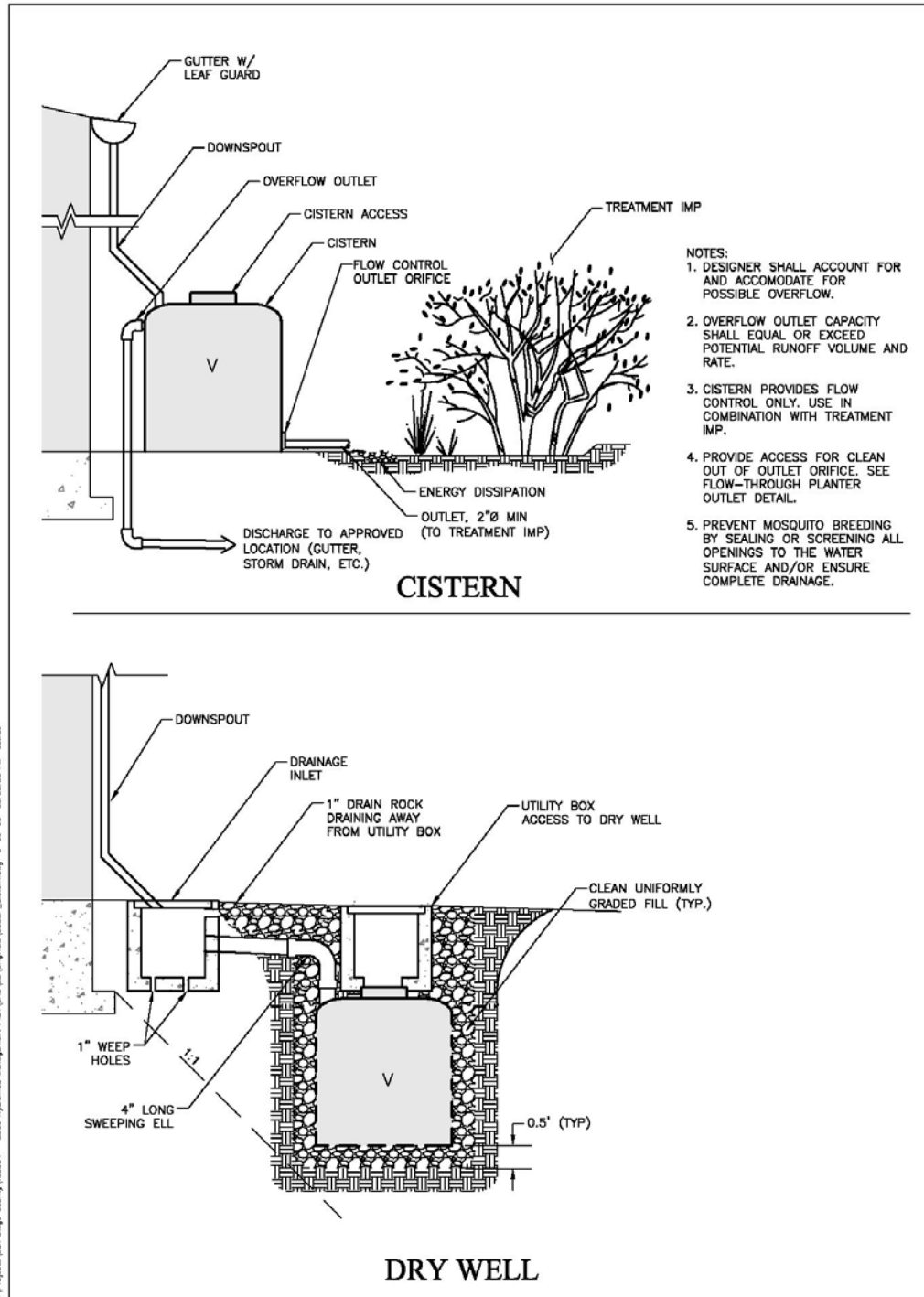
Cistern attached to a building and draining to a planter. This arrangement allows a planter box to be constructed with a smaller area.

Vault with pumped discharge to bioretention facility. In this arrangement, runoff from a parking lot and/or building roofs can be captured and detained underground and then pumped to a bioretention facility on the surface. Alternatively, treatment can be accomplished with a sand filter. See the discussion of selection of stormwater treatment facilities in Chapter 2.

Water harvesting or graywater reuse. It may be possible to create a site-specific design that uses cisterns to achieve stormwater flow control, stormwater treatment, and rainwater reuse for irrigation or indoor uses (**water harvesting**). Facilities must meet criteria for capturing and treating the volume specified by Equation 4-8. This volume must be allowed to empty within 24 hours so runoff from additional storms, which may follow, is also captured and treated. Additional volume may be required if the system also stores runoff for longer periods for reuse. Indoor uses of non-potable water may be restricted or prohibited. Check with Environmental Affairs Department staff.

Design Checklist for Cistern

- ☐ Volume meets or exceeds minimum.
- ☐ Outlet with orifice or other flow-control device restricts flow and is designed to provide a 24-hour drawdown time.
- ☐ Outlet is piped to a bioretention facility designed to treat the maximum discharge from the cistern orifice.
- ☐ Cistern is designed to drain completely and/or sealed to prevent mosquito harborage.
- ☐ Design provides for exclusion of debris and accessibility for maintenance.
- ☐ Overflow connected to a downstream storm drain or approved discharge point.
- ☐ Emergency spillage will be safely conveyed overland.



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Chapter 5 – OPERATION & MAINTENANCE OF STORMWATER FACILITIES

The stormwater Municipal Permit requires that the Authority verify all treatment and flow-control facilities are adequately maintained. Facilities installed as part of the project will be verified for effectiveness and proper performance. The Authority will also verify the ongoing function of stormwater management features that are not treatment or flow control facilities, such as permeable pavements and limitations on impervious area. This chapter describes how to prepare a customized Stormwater Maintenance Plan for the treatment BMPs on the project site.

For projects within the Authority jurisdiction, storm water BMP maintenance will be provided by the Authority for capital projects (i.e., public entity maintenance) and will be provided by individual tenants for tenant projects (i.e., through lease provisions). As part of project review for both capital and tenant priority projects that include interim or permanent structural BMPs, the Authority will verify that appropriate mechanisms are in-place. Maintenance requirements identified in below are required by the Municipal Permit and the Model SUSMP.

Maintenance Mechanisms

The maintenance mechanisms below apply to Authority projects:

1. Public entity maintenance: The Authority will provide storm water BMP maintenance for its capital projects. Funding will be provided on an on-going basis through the inclusion of maintenance costs in annual operating budgets for any departments having BMP maintenance responsibility.
1. Lease provisions: The Authority will assure storm water BMP maintenance, repair and replacement of tenant projects through conditions in tenant leases.
2. Other Mechanisms: On a case-by-case basis, the Authority may consider other mechanisms for treatment BMP maintenance such as inclusion of maintenance conditions in a use permit; or alternative mechanisms, subject to Environmental Affairs approval.

Verification Mechanisms

For discretionary projects, storm water BMP maintenance requirements shall be incorporated into the project plan approval conditions, and shall be consistent with permits issued by resource agencies, before decision-maker approval of discretionary permits. For projects requiring ministerial approvals, storm water BMP maintenance requirements will be incorporated into the lease conditions or conditions of approval before the issuance of the approval.

Sample conditions included in Project Plan Approval Letters for tenant projects are provided in Attachment D.

For capital projects requiring structural treatment BMPs, the Authority will establish a method of storm water BMP maintenance prior to the commencement of construction.

In all instances, the project proponent shall provide proof of execution of an Authority-approved method of maintenance repair and replacement before the issuance of construction approvals.

Maintenance Requirements

1. Operation & Maintenance (O&M) Plan – The Authority will require that a copy of a satisfactory Operation & Maintenance (O&M) plan, prepared by the tenant/project proponent is included with the USWMP prior to construction. The O&M Plan must describe the designated responsible party to manage the storm water BMP(s), any necessary employee training and duties, operating schedule, maintenance frequency, specific maintenance activities, copies of resource agency permits, and any other necessary activities. At a minimum, the O&M Plan shall require the inspection and servicing of all structural BMPs on an annual basis. The tenant shall document all maintenance requirements and shall retain records for at least 5 years. These documents shall be made available to the Authority for inspection upon request at any time. O&M Plans will also be prepared for capital projects that include structural BMPs.
2. Access Easement/Agreement: The Authority maintains rights to access tenant properties as part of lease provisions. These rights extend to any access required related to structural BMPs.

Maintenance Plans

The staged process for the operation and maintenance of stormwater facilities is detailed below:

Stage 1: General Maintenance Requirements

Include in the Project Submittal a general description of anticipated facility maintenance requirements. This will help ensure that:

- Ongoing costs of maintenance have been considered in the facility selection and design.
- Site and landscaping plans provide for access for inspections and by maintenance equipment.
- Landscaping plans incorporate irrigation requirements for facility plantings.
- Initial maintenance and replacement of facility plantings is incorporated into landscaping contracts and guarantees.

Fact sheets available on the Project Clean Water website describe general maintenance requirements for the types of stormwater facilities featured in the LID Design Guide (see Chapter 4). This information can be used to specify general maintenance requirements in the Project Submittal.

Maintenance fact sheets for conventional stormwater facilities are available in the California Stormwater BMP Handbooks.

Stage 2: Detailed Maintenance Plan

Prepare a detailed maintenance plan and submit it as required by the Authority. The Authority may require a detailed maintenance plan be included with the initial Project Submittal; or may wish that the detailed maintenance plan incorporate solutions to any problems or changes that occurred during project construction.

The detailed maintenance plan should be kept on-site for use by maintenance personnel and during site inspections. It is also recommended that a copy of the initial Project Submittal be kept onsite as a reference.

► THE DETAILED MAINTENANCE PLAN: STEP BY STEP

The following step-by-step guidance will help in the preparation of the detailed maintenance plan.

Preparation of the plan will require familiarity with the stormwater facilities as they have been or will be constructed and a fair amount of “thinking through” plans for their operation and maintenance.

CHAPTER 5: OPERATION & MAINTENANCE OF STORMWATER FACILITIES

► STEP 1: DESIGNATE RESPONSIBLE INDIVIDUALS

To begin creating the detailed maintenance plan, designate and identify:

- The individual who will have direct responsibility for the maintenance of stormwater controls. This individual should be the designated contact with Authority inspectors and should sign self-inspection reports and any correspondence with the Authority regarding verification inspections.
- Employees or contractors who will report to the designated contact and are responsible for carrying out BMP operation and maintenance.
- The corporate officer authorized to negotiate and execute any contracts that might be necessary for future changes to operation and maintenance or to implement remedial measures if problems occur.
- The designated respondent to problems, such as clogged drains or broken irrigation mains, that would require immediate response should they occur during off-hours.

Updated contact information must be provided to the Authority immediately whenever a lease is transferred and whenever designated individuals or contractors change.

Draw or sketch an **organization chart** to show the relationships of authority and responsibility between the individuals responsible for maintenance. This need not be elaborate, particularly for smaller organizations.

Describe how **funding for BMP operation and maintenance** will be assured, including sources of funds, budget category for expenditures, process for establishing the annual maintenance budget, and process for obtaining authority should unexpected expenditures for major corrective maintenance be required.

Describe how the organization will accommodate initial **training** of staff or contractors regarding the purpose, mode of operation, and maintenance requirements for the stormwater facilities on the site. Also, describe how the organization will ensure ongoing training as needed and in response to staff changes.

► STEP 2: SUMMARIZE DRAINAGE AND BMPS

Incorporate the following information from the Project Submittal into the maintenance plan:

- Figures delineating and designating pervious and impervious areas.
- Figures showing locations of stormwater facilities on the site.
- Tables of pervious and impervious areas served by each facility.

Review the Project Submittal narrative, if any, that describes each facility and its tributary drainage area and update the text to incorporate any changes that may have occurred during plan review, permit reviews, or construction. Incorporate the updated text into the maintenance plan.

► **STEP 3: DOCUMENT FACILITIES “AS BUILT”**

Include the following information from final construction drawings:

- Plans, elevations, and details of all facilities. Annotate if necessary with designations used in the initial Project Submittal.
- Design information or calculations submitted in the detailed design phase (i.e., not included in the initial Project Submittal.)
- Specifications of construction for facilities, including sand or soil, compaction, pipe materials and bedding.

In the maintenance plan, note field changes to design drawings, including changes to any of the following:

- Location and layouts of inflow piping, flow splitter boxes, and piping to off-site discharge
- Depths and layering of soil, sand, or gravel
- Placement of filter fabric or geotextiles
- Changes or substitutions in soil or other materials.
- Natural soils encountered (e.g., sand or clay lenses)

► **STEP 4: PREPARE MAINTENANCE PLANS FOR EACH FACILITY**

Prepare a maintenance plan, schedule, and inspection checklists (routine, annual, and after major storms) for each facility. Plans and schedules for two or more similar facilities on the same site may be combined.

Use the following resources to prepare the customized maintenance plan, schedule, and checklists.

- Specific information noted in Steps 2 and 3, above.
- Other input from the facility designer, Authority staff, or other sources.
- Operation and Maintenance Fact Sheets (available on the Project Clean Water website).

Note any particular characteristics or circumstances that could require attention in the future, and include any troubleshooting advice.

Also include manufacturer’s data, operating manuals, and maintenance requirements for any:

- Pumps or other mechanical equipment.
- Proprietary devices used as BMPs.

CHAPTER 5: OPERATION & MAINTENANCE OF STORMWATER FACILITIES

Manufacturers' publications should be referenced in the text (including models and serial numbers where available). Copies of the manufacturers' publications should be included as an attachment in the back of the maintenance plan or as a separate document.

► STEP 5: COMPILE MAINTENANCE PLAN

The following general outline is provided as an example. Check with the Environmental Affairs Department for specific requirements.

- I. Inspection and Maintenance Log
- II. Updates, Revisions and Errata
- III. Introduction
 - A. Narrative overview describing the site; drainage areas, routing, and discharge points; and treatment facilities.
- IV. Responsibility for Maintenance
 - A. General
 - (1) Name and contact information for responsible individual(s).
 - (2) Organization chart or charts showing organization of the maintenance function and location within the overall organization.
 - (3) Reference to Operation and Maintenance Agreement (if any). A copy of the agreement should be attached.
 - (4) Maintenance Funding
 - (1) Sources of funds for maintenance
 - (2) Budget category or line item
 - (3) Description of procedure and process for ensuring adequate funding for maintenance
 - B. Staff Training Program
 - C. Records
 - D. Safety
- V. Summary of Drainage Areas and Stormwater Facilities
 - A. Drainage Areas
 - (1) Drawings showing pervious and impervious areas (from initial Project Submittal).
 - (2) Designation and description of each drainage area and how flow is routed to the corresponding facility.

- B. Treatment and Flow-Control Facilities
 - (1) Drawings showing location and type of each facility
 - (2) General description of each facility (Consider a table if more than two facilities)
 - (1) Area drained and routing of discharge.
 - (2) Facility type and size
- VI. Facility Documentation
 - A. “As-built” drawings of each facility (design drawings in the draft Plan)
 - B. Manufacturer’s data, manuals, and maintenance requirements for pumps, mechanical or electrical equipment, and proprietary facilities (include a “placeholder” in the draft plan for information not yet available).
 - C. Specific operation and maintenance concerns and troubleshooting
- VII. Maintenance Schedule or Matrix
 - A. Maintenance Schedule for each facility with specific requirements for:
 - (1) Routine inspection and maintenance
 - (2) Annual inspection and maintenance
 - (3) Inspection and maintenance after major storms
 - B. Service Agreement Information

Assemble and make copies of the maintenance plan. One copy must be submitted to the Environmental Affairs Department, and at least one copy kept on-site. Here are some suggestions for formatting the maintenance plan:

- Format plans to 8½" x 11" to facilitate duplication, filing, and handling.
- Include the revision date in the footer on each page.
- Scan graphics and incorporate with text into a single electronic file. Keep an electronic backed-up file in case the hard copy is lost or damaged.

► **STEP 6: UPDATES**

The maintenance plan will be **a living document**.

The maintenance plan should be updated when operation and maintenance personnel change; mechanical equipment may be replaced, or additional maintenance procedures are added.

Updates may be transmitted to the Environmental Affairs Department at any time. However, at a minimum, updates to the maintenance plan must accompany the annual inspection report.

Stage 3: Interim Maintenance

Applicants will typically be required to warranty stormwater facilities against lack of performance due to flaws in design or construction. The warranty may need to be secured by a bond or other financial instrument.

Stage 4: Transfer Responsibility

As part of the detailed maintenance plan, note the expected date when responsibility for operation and maintenance will be transferred. Notify the Authority when this transfer of responsibility takes place.

Stage 5: Operation & Maintenance Verification

The Authority implements an operation and maintenance verification program, including periodic site inspections.

Contact the Environmental Affairs Department staff to determine the frequency of inspections, whether self-inspections are allowed, and applicable fees, if any.

References and Resources

- *Urban Runoff Quality Management* (WEF/ASCE, 1998). pp 186-189.
- *Stormwater Management Manual* (Portland, 2004). Chapter 3.
- *California Storm Water Best Management Practice Handbooks* (CASQA, 2003).
- *Best Management Practices Guide* (Public Telecommunications Center for Hampton Roads, 2002).
- Operation, Maintenance, and Management of Stormwater Management Systems (Watershed Management Institute, 1997)

Bibliography

BASMAA. 1999. Bay Area Stormwater Management Agencies Association. *Start at the Source: Design Guidance Manual for Stormwater Quality*. Tom Richman and Associates. 154 pp. plus appendix.

BASMAA. 2003. *Using Site Design Techniques to Meet Development Standards for Stormwater Quality*. www.basmaa.org

CASQA. 2003. California Stormwater Quality Association. *California Stormwater BMP Handbooks*. Four Handbooks: *New Development and Redevelopment, Construction, Municipal, and Industrial/Commercial*. www.cabmphandbooks.org

County of San Diego. 2007. *Low Impact Development Handbook: Stormwater Management Strategies*.

Federal Interagency Stream Restoration Working Group. 1998. *Stream Restoration: Principles, Processes, and Practices*. http://www.nrcs.usda.gov/technical/stream_restoration/

Hampton Roads, VA. 2002. *Best Management Practices Guide*. Public Telecommunications Center. <http://www.hrstorm.org/BMP.shtml>

Low Impact Development Center. 2006. *LID for Big-Box Retailers*. 75 pp. <http://lowimpactdevelopment.org/bigbox/>

Maryland. 2000. State of Maryland. *Maryland Stormwater Design Manual*. www.mde.state.md.us/Programs/WaterPrograms/SedimentandStormwater/stormwater_design/index.asp

Portland. City of Portland, OR. 2004. *Stormwater Management Manual*. <http://www.portlandonline.com/bes/index.cfm?c=35117>

Prince George's County, Maryland. 1999. *Low-Impact Development Design Strategies: An Integrated Design Approach*. Department of Environmental Resources, Programs and Planning Division. June 1999. 150 pp. <http://www.epa.gov/owow/nps/lid/>

Prince George's County, Maryland. 2002. *Bioretention Manual*. Department of Environmental Resources, Programs and Planning Division.

<http://www.goprincegeorgescounty.com/Government/AgencyIndex/DER/ESD/Bioretenention/bioretention.asp>

Puget Sound Action Team. 2005. *Low Impact Development Technical Guidance Manual for Puget Sound*. http://www.psat.wa.gov/Publications/LID_tech_manual05/lid_index.htm

Riley, Ann. 1998. *Restoring Streams in Cities*. Island Press, Washington, DC. 425 pp. www.islandpress.org/books/detail.html?SKU=1-55963-042-6

RWQCB. 2007. California Regional Water Quality Control Board for the San Diego Region. Order R9-2007-0001 (Stormwater Municipal Permit) www.waterboards.ca.gov/sandiego/

Salvia, Samantha. 2000. "Application of Water-Quality Engineering Fundamentals to the Assessment of Stormwater Treatment Devices." Santa Clara Valley Urban Runoff Pollution Prevention Program. Tech. Memo, 15 pp. www.scvurppp-w2k.com/pdfs/9798/SC18.02finalTM.pdf

Schueler, Tom. 1995. *Site Planning for Urban Stream Protection*. Environmental Land Planning Series. Metropolitan Washington Council of Governments. 232 pp. www.cwp.org/SPSP/TOC.htm

Washington Department of Ecology. 2001. *Stormwater Management Manual for Western Washington*. www.ecy.wa.gov/biblio/9911.html

Watershed Management Institute. 1997. *Operation, Maintenance, and Management of Stormwater Management Systems*.

WEF/ASCE. 1998. Water Environment Foundation/American Society of Civil Engineers. *Urban Runoff Quality Management*. WEF Manual of Practice No. 23, ASCE Manual and Report on Engineering Practice No. 87. ISBN 1-57278-039-8 ISBN 0-7844-0174-8. 259 pp. Access: Order from WEF or ASCE, www.wef.org or www.asce.org.

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APPENDIX A—GLOSSARY

Best Management Practice (BMP)	Any procedure or device designed to minimize the quantity of pollutants that enter the storm drain system.
California Association of Stormwater Quality Agencies (CASQA)	Publisher of the California Stormwater Best Management Practices Handbooks, available at www.cabmphandbooks.com . Successor to the Storm Water Quality Task Force (SWQTF).
California BMP Method	A method for determining the required volume of stormwater treatment facilities. Described in Section 5.5.1 of the California Stormwater Best Management Practice Manual (New Development) (CASQA, 2003).
Conditions of Approval (COAs)	Requirements a jurisdiction may adopt for a project in connection with a discretionary action (e.g., adoption of an EIR or negative declaration or issuance of a use permit). COAs may include features to be incorporated into the final plans for the project and may also specify uses, activities, and operational measures that must be observed over the life of the project.
Continuous Simulation Modeling	A method of hydrological analysis in which a set of rainfall data (typically hourly for 30 years or more) is used as input, and runoff rates are calculated on the same time step. The output is then analyzed statistically for the purposes of comparing runoff patterns under different conditions (for example, pre- and post-development-project).
Copermittees	See Dischargers .
Detention	The practice of holding stormwater runoff in ponds, vaults, within berms, or in depressed areas and letting it discharge slowly to the storm drain system. See definitions of infiltration and retention .
Direct Discharge	Connection of project site runoff to an exempt receiving water body, which could include an exempt river reach, reservoir or lagoon. To qualify as a direct discharge, the discharge elevation from the project site outfall must be below the elevations detailed in the HMP Applicability section of this Model SUSMP.
Direct Infiltration	Infiltration via methods or devices, such as infiltration facilities or infiltration trenches, designed to bypass unsaturated surface soils and transmit runoff directly to groundwater.
Directly Connected Impervious Area	Any impervious surface which drains into a catch basin, area drain, or other conveyance structure without first allowing flow across pervious areas (e.g. lawns).
Dischargers	The agencies named in the stormwater NPDES permit (see definition): the County of San Diego; the Cities of Carlsbad, El Cajon, La Mesa, Poway, Solana Beach, Chula Vista, Encinitas, Lemon Grove, San Diego, Vista, Coronado, Escondido, National City, San Marcos, Del Mar, Imperial Beach, Oceanside, and Santee; the San Diego Unified Port District, and the San Diego County Regional Airport Authority.
Drainage Management Areas	Areas delineated on a map of the development site showing how drainage is detained, dispersed, or directed to Integrated Management Practices . There are four types of Drainage Management Areas, and specific criteria apply to each type of area. See Chapter 4.

Drawdown time	The time required for a stormwater detention or infiltration facility to drain and return to the dry-weather condition. For detention facilities, drawdown time is a function of basin volume and outlet orifice size. For infiltration facilities, drawdown time is a function of basin volume and infiltration rate.
Environmentally Sensitive Areas	Areas that include but are not limited to all Clean Water Act Section 303(d) impaired water bodies; areas designated as Areas of Special Biological Significance by the State Water Resources Control Board (Water Quality Control Plan for the San Diego Basin (1994) and amendments); water bodies designated with the RARE beneficial use by the State Water Resources Control Board (Water Quality Control Plan for the San Diego Basin (1994) and amendments); areas designated as preserves or their equivalent under the Multi Species Conservation Program within the Cities and County of San Diego; and any other equivalent environmentally sensitive areas which have been identified by the Copermittees.
Flow Control	Control of runoff rates and durations as required by the Hydromodification Management Plan.
Head	In hydraulics, energy represented as a difference in elevation. In slow-flowing open systems, the difference in water surface elevation, e.g., between an inlet and outlet.
Higher-Rate Biofilter	A biofilter with a design surface loading rate higher than the 5 inches per hour rate specified in this document for bioretention facilities and planter boxes.
Hydrograph	Runoff flow rate plotted as a function of time.
Hydromodification Management Plan (HMP)	A Plan implemented by the dischargers so that post-project runoff shall not exceed estimated pre-project rates and/or durations, where increased runoff would result in increased potential for erosion or other adverse impacts to beneficial uses. Also see definition for flow control .
Hydrologic Soil Group	Classification of soils by the Natural Resources Conservation Service (NRCS) into A, B, C, and D groups according to infiltration capacity.
Impervious surface	Any material that prevents or substantially reduces infiltration of water into the soil. See discussion of imperviousness in Chapter Two.
Infeasible	As applied to best management practices, impossible to implement because of technical constraints specific to the site.
Infiltration	Seepage of runoff into soils underlying the site. See definition of retention.
Infiltration Device	Any structure, such as a dry well, that is designed to infiltrate stormwater into the subsurface and, as designed, bypasses the natural groundwater protection afforded by surface or near-surface soil. See definition for direct infiltration.
Integrated Management Practice (IMP)	A facility (BMP) that provides small-scale treatment, retention, and/or detention and is integrated into site layout, landscaping and drainage design. See Low Impact Development.

Integrated Pest Management (IPM)	An approach to pest management that relies on information about the life cycles of pests and their interaction with the environment. Pest control methods are applied with the most economical means and with the least possible hazard to people, property, and the environment.
Jurisdictional Urban Runoff Management Plan (JURMP)	A written description of the specific jurisdictional urban runoff management measures and programs that each Copermitee implements to comply with the stormwater Municipal Permit and ensure pollutant discharges are reduced to the MEP and do not cause or contribute to a violation of water quality standards. See Stormwater Pollution Prevention Program.
Lead Agency	The public agency that has the principal responsibility for carrying out or approving a project. (CEQA Guidelines §15367).
Low Impact Development	An integrated site design methodology that uses small-scale detention and retention (Integrated Management Practices, or IMPs) to mimic pre-existing site hydrological conditions.
Maximum Extent Practicable (MEP)	Standard, established by the 1987 amendments to the Clean Water Act, for the implementation of municipal stormwater pollution prevention programs (see definition). According to the Act, municipal stormwater NPDES Permits “shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.”
Municipal Permit	As used in this document, NPDES Permit No. CAS0108758 reissued in January 2007 by the California Regional Water Quality Control Board for the San Diego Region (RWQCB) as RWQCB Order No. R9-2007-0001, and any future modifications to or reissuances of which requires, supports, or justifies this SUSMP document.
National Pollutant Discharge Elimination System (NPDES)	As part of the 1972 Clean Water Act, Congress established the NPDES Permitting system to regulate the discharge of pollutants from municipal sanitary sewers and industries. The NPDES was expanded in 1987 to incorporate permits for stormwater discharges as well.
Numeric Criteria	Sizing requirements for stormwater treatment facilities established in Provision D.1.d.(6)(c) of the Municipal Permit.
Operation and Maintenance (O&M)	Refers to requirements in the Municipal Permit to inspect treatment BMPs and implement preventative and corrective maintenance in perpetuity. See Chapter 5.
Parking Lot	A land area or facility for the temporary parking or storage of motor vehicles used personally, for business, or for commerce.
Permeable Pavements	Pavements for roadways, sidewalks, or plazas that are designed to infiltrate a portion of rainfall, including pervious concrete, pervious asphalt, unit-pavers-on-sand, and crushed gravel.

Priority Development Project	A project subject to SUSMP requirements. Defined in Stormwater Municipal Permit Provision D.1.d.(1). See Chapter 1.
Project Area	The entire project area comprises all areas to be altered or developed by the project, plus any additional areas that drain on to areas to be altered or developed.
Project Submittal	Documents submitted to a jurisdiction in connection with an application for development approval and demonstrating compliance with Stormwater NPDES Permit requirements for the project. Specific requirements vary from jurisdiction to jurisdiction.
Proprietary	A proprietary device is one marketed under legal right of the manufacturer.
Redevelopment	<p>The creation, addition, and or replacement of impervious surface on an already developed site. Examples include the expansion of a building footprint, road widening, the addition to or replacement of a structure, and creation or addition of impervious surfaces.</p> <p>Replacement of impervious surfaces includes any activity that is not part of a routine maintenance activity where impervious material(s) are removed, exposing underlying soil during construction. Redevelopment does not include trenching and resurfacing associated with utility work; resurfacing and reconfiguring surface parking lots and existing roadways; new sidewalk construction, pedestrian ramps, or bikeline on existing roads; and routine replacement of damaged pavement, such as pothole repair.</p>
Rational Method	A method of calculating runoff flows based on rainfall intensity, tributary area, and a factor representing the proportion of rainfall that runs off.
Regional (or Watershed) Stormwater Treatment Facility	A facility that treats runoff from more than one project or parcel.
Regional Water Quality Control Board (RWQCB)	California RWQCBs are responsible for implementing pollution control provisions of the Clean Water Act and California Water Code within their jurisdiction. There are nine California RWQCBs.
Retention	The practice of holding stormwater in ponds or basins, or within berms or depressed areas, and allowing it to slowly infiltrate into underlying soils. Some portion will evaporate. See definitions for infiltration and detention.
Self-retaining area	An area designed to retain runoff. Self-retaining areas may include graded depressions with landscaping or pervious pavements and may also include tributary impervious areas up to a 2:1 impervious-to-pervious ratio.
Self-treating area	A natural, landscaped, or turf area drains directly off site or to the public storm drain system.
Source Control BMP (both structural and non-structural)	Land use or site planning practices, or structures that aim to prevent urban runoff pollution by reducing the potential for contamination at the source of pollution. Source control BMPs minimize the contact between pollutants and urban runoff. Examples include roof structures over trash or material storage areas, and berms around fuel dispensing areas.

Source Control	Land use or site planning practices, or structural or nonstructural measures that aim to prevent urban runoff pollution by reducing the potential for contamination at the source of pollution. Source control BMPs minimize the contact between pollutants and urban runoff.
Standard Industrial Classification (SIC)	A Federal government system for classifying industries by 4-digit code. It is being supplanted by the North American Industrial Classification System but SIC codes are still referenced by the RWQCB in identifying development sites subject to regulation under the Municipal Permit. Information and an SIC search function are available at http://www.bls.gov/bls/NAICS.htm
Stormwater NPDES Permit	A permit issued by a Regional Water Quality Control Board (see definition) to local government agencies (Dischargers) placing provisions on allowable discharges of municipal stormwater to waters of the state.
Storm Water Pollution Prevention Plan (SWPPP)	A plan providing for temporary measures to control sediment and other pollutants during construction as required by the statewide stormwater NPDES Permit for construction activities.
Stormwater Pollution Prevention Program	A comprehensive program of activities designed to minimize the quantity of pollutants entering storm drains. See Jurisdictional Urban Runoff Management Plan.
Standard Urban Stormwater Mitigation Plan (SUSMP)	Refers to various documents prepared in connection with implementation of the Municipal Permit mandate to control pollutants from new development and redevelopment. Each discharger will adapt the Model SUSMP to create a local SUSMP for their respective jurisdiction. Applicants for development project approvals will use the local SUSMP to prepare a submittal for each Priority Development Project they propose.
Treatment	Removal of pollutants from runoff, typically by filtration or settling.
Water Board	See Regional Water Quality Control Board .
Water Quality Volume (WQV)	For stormwater treatment facilities that depend on detention to work, the volume of water that must be detained to achieve maximum extent practicable pollutant removal. This volume of water must be detained for a specified drawdown time.

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APPENDIX B

How to use this worksheet (also see instructions on pages 34-35 of the *Countywide Model SUSMP*):

1. Review Column 1 and identify which of these potential sources of stormwater pollutants apply to the site. Check each box that applies.
2. Review Column 2 and incorporate all of the corresponding applicable BMPs in the Project-Specific SUSMP drawings.
3. Review Columns 3 and 4 and incorporate all of the corresponding applicable permanent controls and operational BMPs in a table in the Project-Specific SUSMP. Use the format shown in Table 3-1 on page 35 of the *Countywide Model SUSMP*. Describe the specific BMPs in an accompanying narrative, and explain any special conditions or situations that required omitting BMPs or substituting alternatives.

IF THESE SOURCES WILL BE ON THE PROJECT SITE THEN THE STORMWATER CONTROL PLAN SHOULD INCLUDE THESE SOURCE CONTROL BMPs		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on SUSMP Drawings	3 Permanent Controls—List in SUSMP Table and Narrative	4 Operational BMPs—Include in SUSMP Table and Narrative
<input type="checkbox"/> A. On-site storm drain inlets	<input type="checkbox"/> Locations of inlets.	<input type="checkbox"/> Mark all inlets with the words “No Dumping! Flows to Bay” or similar.	<input type="checkbox"/> Maintain and periodically repaint or replace inlet markings. <input type="checkbox"/> Provide stormwater pollution prevention information to new site owners, lessees, or operators. <input type="checkbox"/> See applicable operational BMPs in Fact Sheet SC-44, “Drainage System Maintenance,” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com <input type="checkbox"/> Include the following in lease agreements: “Tenant shall not allow anyone to discharge anything to storm drains or to store or deposit materials so as to create a potential discharge to storm drains.”
<input type="checkbox"/> B. Interior floor drains and elevator shaft sump pumps		<input type="checkbox"/> State that interior floor drains and elevator shaft sump pumps will be plumbed to sanitary sewer.	<input type="checkbox"/> Inspect and maintain drains to prevent blockages and overflow.

APPENDIX B

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<input type="checkbox"/> C. Interior parking garages		<input type="checkbox"/> State that parking garage floor drains will be plumbed to the sanitary sewer.	<input type="checkbox"/> Inspect and maintain drains to prevent blockages and overflow.
<input type="checkbox"/> D1. Need for future indoor & structural pest control		<input type="checkbox"/> Note building design features that discourage entry of pests.	<input type="checkbox"/> Provide Integrated Pest Management information to owners, lessees, and operators.
<input type="checkbox"/> D2. Landscape/ Outdoor Pesticide Use	<input type="checkbox"/> Show locations of native trees or areas of shrubs and ground cover to be undisturbed and retained. <input type="checkbox"/> Show self-retaining landscape areas, if any. <input type="checkbox"/> Show stormwater treatment facilities.	State that final landscape plans will accomplish all of the following. <input type="checkbox"/> Preserve existing native trees, shrubs, and ground cover to the maximum extent possible. <input type="checkbox"/> Design landscaping to minimize irrigation and runoff, to promote surface infiltration where appropriate, and to minimize the use of fertilizers and pesticides that can contribute to stormwater pollution. <input type="checkbox"/> Where landscaped areas are used to retain or detain stormwater, specify plants that are tolerant of saturated soil conditions. <input type="checkbox"/> Consider using pest-resistant plants, especially adjacent to hardscape. <input type="checkbox"/> To insure successful establishment, select plants appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency, and plant interactions.	<input type="checkbox"/> Maintain landscaping using minimum or no pesticides. <input type="checkbox"/> See applicable operational BMPs in Fact Sheet SC-41, “Building and Grounds Maintenance,” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com <input type="checkbox"/> Provide IPM information to new owners, lessees and operators.

APPENDIX B

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<input type="checkbox"/> E. Pools, spas, ponds, decorative fountains, and other water features.	<input type="checkbox"/> Show location of water feature and a sanitary sewer cleanout in an accessible area within 10 feet.	<input type="checkbox"/> If the local jurisdiction requires pools to be plumbed to the sanitary sewer, place a note on the plans and state in the narrative that this connection will be made according to local requirements.	<input type="checkbox"/> See applicable operational BMPs in Fact Sheet SC-72, “Fountain and Pool Maintenance,” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com
<input type="checkbox"/> F. Food service	<input type="checkbox"/> For restaurants, grocery stores, and other food service operations, show location (indoors or in a covered area outdoors) of a floor sink or other area for cleaning floor mats, containers, and equipment. <input type="checkbox"/> On the drawing, show a note that this drain will be connected to a grease interceptor before discharging to the sanitary sewer.	<input type="checkbox"/> Describe the location and features of the designated cleaning area. <input type="checkbox"/> Describe the items to be cleaned in this facility and how it has been sized to insure that the largest items can be accommodated.	<input type="checkbox"/>

APPENDIX B

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<input type="checkbox"/> G. Refuse areas	<input type="checkbox"/> Show where site refuse and recycled materials will be handled and stored for pickup. See local jurisdictional requirements for sizes and other details of refuse areas. <input type="checkbox"/> If dumpsters or other receptacles are outdoors, show how the designated area will be covered, graded, and paved to prevent run-on and show locations of berms to prevent runoff from the area. <input type="checkbox"/> Any drains from dumpsters, compactors, and tallow bin areas shall be connected to a grease removal device before discharge to sanitary sewer.	<input type="checkbox"/> State how site refuse will be handled and provide supporting detail to what is shown on plans. <input type="checkbox"/> State that signs will be posted on or near dumpsters with the words “Do not dump hazardous materials here” or similar.	<input type="checkbox"/> State how the following will be implemented: Provide adequate number of receptacles. Inspect receptacles regularly; repair or replace leaky receptacles. Keep receptacles covered. Prohibit/prevent dumping of liquid or hazardous wastes. Post “no hazardous materials” signs. Inspect and pick up litter daily and clean up spills immediately. Keep spill control materials available on-site. See Fact Sheet SC-34, “Waste Handling and Disposal” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com
<input type="checkbox"/> H. Industrial processes.	<input type="checkbox"/> Show process area.	<input type="checkbox"/> If industrial processes are to be located on site, state: “All process activities to be performed indoors. No processes to drain to exterior or to storm drain system.”	<input type="checkbox"/> See Fact Sheet SC-10, “Non-Stormwater Discharges” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

APPENDIX B

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<input type="checkbox"/> I. Outdoor storage of equipment or materials. (See rows J and K for source control measures for vehicle cleaning, repair, and maintenance.)	<input type="checkbox"/> Show any outdoor storage areas, including how materials will be covered. Show how areas will be graded and bermed to prevent run-on or run-off from area. <input type="checkbox"/> Storage of non-hazardous liquids shall be covered by a roof and/or drain to the sanitary sewer system, and be contained by berms, dikes, liners, or vaults. <input type="checkbox"/> Storage of hazardous materials and wastes must be in compliance with the local hazardous materials ordinance and a Hazardous Materials Management Plan for the site.	<input type="checkbox"/> Include a detailed description of materials to be stored, storage areas, and structural features to prevent pollutants from entering storm drains. Where appropriate, reference documentation of compliance with the requirements of local Hazardous Materials Programs for: <ul style="list-style-type: none"> ▪ Hazardous Waste Generation ▪ Hazardous Materials Release Response and Inventory ▪ California Accidental Release (CalARP) ▪ Aboveground Storage Tank ▪ Uniform Fire Code Article 80 Section 103(b) & (c) 1991 ▪ Underground Storage Tank 	<input type="checkbox"/> See the Fact Sheets SC-31, “Outdoor Liquid Container Storage” and SC-33, “Outdoor Storage of Raw Materials ” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

APPENDIX B

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<input type="checkbox"/> J. Vehicle and Equipment Cleaning	<input type="checkbox"/> Show on drawings as appropriate: (1) Commercial/industrial facilities having vehicle /equipment cleaning needs shall either provide a covered, bermed area for washing activities or discourage vehicle/equipment washing by removing hose bibs and installing signs prohibiting such uses. (2) Multi-dwelling complexes shall have a paved, bermed, and covered car wash area (unless car washing is prohibited on-site and hoses are provided with an automatic shut-off to discourage such use). (3) Washing areas for cars, vehicles, and equipment shall be paved, designed to prevent run-on to or runoff from the area, and plumbed to drain to the sanitary sewer. (4) Commercial car wash facilities shall be designed such that no runoff from the facility is discharged to the storm drain system. Wastewater from the facility shall discharge to the sanitary sewer, or a wastewater reclamation system shall be installed.	<input type="checkbox"/> If a car wash area is not provided, describe measures taken to discourage on-site car washing and explain how these will be enforced.	Describe operational measures to implement the following (if applicable): <input type="checkbox"/> Washwater from vehicle and equipment washing operations shall not be discharged to the storm drain system. <input type="checkbox"/> Car dealerships and similar may rinse cars with water only. <input type="checkbox"/> See Fact Sheet SC-21, “Vehicle and Equipment Cleaning,” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

APPENDIX B

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<input type="checkbox"/> K. Vehicle/Equipment Repair and Maintenance	<input type="checkbox"/> Accommodate all vehicle equipment repair and maintenance indoors. Or designate an outdoor work area and design the area to prevent run-on and runoff of stormwater. <input type="checkbox"/> Show secondary containment for exterior work areas where motor oil, brake fluid, gasoline, diesel fuel, radiator fluid, acid-containing batteries or other hazardous materials or hazardous wastes are used or stored. Drains shall not be installed within the secondary containment areas. <input type="checkbox"/> Add a note on the plans that states either (1) there are no floor drains, or (2) floor drains are connected to wastewater pretreatment systems prior to discharge to the sanitary sewer and an industrial waste discharge permit will be obtained.	<input type="checkbox"/> State that no vehicle repair or maintenance will be done outdoors, or else describe the required features of the outdoor work area. <input type="checkbox"/> State that there are no floor drains or if there are floor drains, note the agency from which an industrial waste discharge permit will be obtained and that the design meets that agency's requirements. <input type="checkbox"/> State that there are no tanks, containers or sinks to be used for parts cleaning or rinsing or, if there are, note the agency from which an industrial waste discharge permit will be obtained and that the design meets that agency's requirements.	<p>In the SUSMP report, note that all of the following restrictions apply to use the site:</p> <input type="checkbox"/> No person shall dispose of, nor permit the disposal, directly or indirectly of vehicle fluids, hazardous materials, or rinsewater from parts cleaning into storm drains. No vehicle fluid removal shall be performed outside a building, nor on asphalt or ground surfaces, whether inside or outside a building, except in such a manner as to ensure that any spilled fluid will be in an area of secondary containment. Leaking vehicle fluids shall be contained or drained from the vehicle immediately. <input type="checkbox"/> No person shall leave unattended drip parts or other open containers containing vehicle fluid, unless such containers are in use or in an area of secondary containment.

APPENDIX B

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<input type="checkbox"/> L. Fuel Dispensing Areas	<input type="checkbox"/> Fueling areas ¹ shall have impermeable floors (i.e., portland cement concrete or equivalent smooth impervious surface) that are: a) graded at the minimum slope necessary to prevent ponding; and b) separated from the rest of the site by a grade break that prevents run-on of stormwater to the maximum extent practicable. <input type="checkbox"/> Fueling areas shall be covered by a canopy that extends a minimum of ten feet in each direction from each pump. [Alternative: The fueling area must be covered and the cover's minimum dimensions must be equal to or greater than the area within the grade break or fuel dispensing area ¹ .] The canopy [or cover] shall not drain onto the fueling area.		<input type="checkbox"/> The property owner shall dry sweep the fueling area routinely. <input type="checkbox"/> See the Business Guide Sheet, "Automotive Service—Service Stations" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

¹ The fueling area shall be defined as the area extending a minimum of 6.5 feet from the corner of each fuel dispenser or the length at which the hose and nozzle assembly may be operated plus a minimum of one foot, whichever is greater.

APPENDIX B

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<input type="checkbox"/> M. Loading Docks	<input type="checkbox"/> Show a preliminary design for the loading dock area, including roofing and drainage. Loading docks shall be covered and/or graded to minimize run-on to and runoff from the loading area. Roof downspouts shall be positioned to direct stormwater away from the loading area. Water from loading dock areas should be drained to the sanitary sewer where feasible. Direct connections to storm drains from depressed loading docks are prohibited. <input type="checkbox"/> Loading dock areas draining directly to the sanitary sewer shall be equipped with a spill control valve or equivalent device, which shall be kept closed during periods of operation. <input type="checkbox"/> Provide a roof overhang over the loading area or install door skirts (cowling) at each bay that enclose the end of the trailer.		<input type="checkbox"/> Move loaded and unloaded items indoors as soon as possible. <input type="checkbox"/> See Fact Sheet SC-30, “Outdoor Loading and Unloading,” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com
<input type="checkbox"/> N. Fire Sprinkler Test Water		<input type="checkbox"/> Provide a means to drain fire sprinkler test water to the sanitary sewer.	<input type="checkbox"/> See the note in Fact Sheet SC-41, “Building and Grounds Maintenance,” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

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IF THESE SOURCES WILL BE ON THE PROJECT SITE THEN THE STORMWATER CONTROL PLAN SHOULD INCLUDE THESE SOURCE CONTROL BMPs		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on SUSMP Drawings	3 Permanent Controls—List in SUSMP Table and Narrative	4 Operational BMPs—Include in SUSMP Table and Narrative
<p>O. Miscellaneous Drain or Wash Water</p> <p><input type="checkbox"/> Boiler drain lines</p> <p><input type="checkbox"/> Condensate drain lines</p> <p><input type="checkbox"/> Rooftop equipment</p> <p><input type="checkbox"/> Drainage sumps</p> <p><input type="checkbox"/> Roofing, gutters, and trim.</p>		<p><input type="checkbox"/> Boiler drain lines shall be directly or indirectly connected to the sanitary sewer system and may not discharge to the storm drain system.</p> <p><input type="checkbox"/> Condensate drain lines may discharge to landscaped areas if the flow is small enough that runoff will not occur. Condensate drain lines may not discharge to the storm drain system.</p> <p><input type="checkbox"/> Rooftop mounted equipment with potential to produce pollutants shall be roofed and/or have secondary containment.</p> <p><input type="checkbox"/> Any drainage sumps on-site shall feature a sediment sump to reduce the quantity of sediment in pumped water.</p> <p><input type="checkbox"/> Avoid roofing, gutters, and trim made of copper or other unprotected metals that may leach into runoff.</p>	
<p><input type="checkbox"/> P. Plazas, sidewalks, and parking lots.</p>			<p><input type="checkbox"/> Plazas, sidewalks, and parking lots shall be swept regularly to prevent the accumulation of litter and debris. Debris from pressure washing shall be collected to prevent entry into the storm drain system. Washwater containing any cleaning agent or degreaser shall be collected and discharged to the sanitary sewer and not discharged to a storm drain.</p>

Appendix C

Information on SIC Codes

U.S. Department of Labor Occupational Safety & Health Administration (www.osha.gov)

SIC DESCRIPTION FOR *5013*

Division F: Wholesale Trade

Major Group 50: Wholesale Trade-durable Goods

Industry Group 501: Motor Vehicles and Motor Vehicle Parts

5013 Motor Vehicle Supplies and New Parts

Establishments primarily engaged in the wholesale distribution of motor vehicle supplies, accessories, tools, and equipment; and new motor vehicle parts.

- Automobile engine testing equipment electrical-wholesale
- Automobile glass-wholesale
- Automobile service station equipment-wholesale
- Automotive accessories-wholesale
- Automotive engines, new-wholesale
- Automotive parts, new-wholesale
- Automotive stampings-wholesale
- Automotive supplies-wholesale
- Batteries, automotive-wholesale
- Engine electrical equipment, automotive-wholesale
- Garage service equipment-wholesale
- Hardware, automotive-wholesale
- Motorcycle parts-wholesale
- Pumps, measuring and dispensing: gasoline and oil-wholesale
- Seat belts, automotive-wholesale
- Seat covers, automotive-wholesale

- Service station equipment, automobile-wholesale
- Testing equipment, electrical: automotive-wholesale
- Tools and equipment, automotive-wholesale
- Wheels, motor vehicle: new-wholesale

SIC DESCRIPTION FOR 5014

Division F: Wholesale Trade

Major Group 75: Automotive Repair, Services, And Parking

5014 Tires and Tubes

Establishments primarily engaged in the wholesale distribution of tires and tubes for passenger and commercial vehicles.

- Repair materials, tire and tube-wholesale
- Tires, used-wholesale
- Tires and tubes, new-wholesale
- Tires, used-wholesale

SIC DESCRIPTION FOR 5541

Division G: Retail Trade

Major Group 55: Automotive Dealers and Gasoline Service Stations

Industry Group 554: Gasoline Service Stations

5541 Gasoline Service Stations

Gasoline service stations primarily engaged in selling gasoline and lubricating oils. These establishments frequently sell other merchandise, such as tires, batteries, and other automobile parts, or perform minor repair work. Gasoline stations combined with other activities, such as grocery stores, convenience stores, or carwashes, are classified according to the primary activity.

- Automobile service stations-retail
- Filling stations, gasoline-retail
- Gasoline and oil-retail
- Marine service stations-retail
- Service stations, gasoline-retail
- Truck stops-retail

SIC DESCRIPTION FOR 5812

Division G: Retail Trade

Major Group 58: Eating And Drinking Places

Industry Group 581: Eating And Drinking Places

5812 Eating Places

Establishments primarily engaged in the retail sale of prepared food and drinks for on-premise or immediate consumption. Caterers and industrial and institutional food service establishments are also included in this industry.

- Automats (eating places)
- Beaneries
- Box lunch stands
- Buffets (eating places)
- Cafes
- Cafeterias
- Carry-out restaurants
- Caterers
- Coffee shops
- Commissary restaurants
- Concession stands, prepared food (e.g., in airports and sports arenas)
- Contract feeding
- Dairy bars
- Diners (eating places)
- Dining rooms
- Dinner theaters
- Drive-in restaurants
- Fast food restaurants
- Food bars
- Food service, institutional

- Frozen custard stands
- Grills (eating places)
- Hamburger stands
- Hot dog (frankfurter) stands
- Ice cream stands
- Industrial feeding
- Lunch bars
- Lunch counters
- Luncheonettes
- Lunchrooms
- Oyster bars
- Pizza parlors
- Pizzerias
- Refreshment stands
- Restaurants
- Restaurants, carry-out
- Restaurants, fast food
- Sandwich bars or shops
- Snack shops
- Soda fountains
- Soft drink stands
- Submarine sandwich shops
- Tea rooms
- Theaters, dinner

SIC DESCRIPTION FOR 7532

Division I: Services

Major Group 75: Automotive Repair, Services, and Parking

Industry Group 753: Automotive Repair Shops

7532 Top, Body, and Upholstery Repair Shops and Paint Shops

Establishments primarily engaged in the repair of automotive tops, bodies, and interiors, or automotive painting and refinishing. Also included in this industry are establishments primarily engaged in customizing automobiles, trucks, and vans except on a factory basis. Establishments primarily engaged in customizing automobiles, trucks, and vans on a factory basis are classified in Manufacturing, Industry Group 371.

- Antique and classic automobile restoration
- Automotive body shops
- Automotive interior shops
- Automotive paint shops
- Automotive tops (canvas or plastic), installation, repair, or sales and
- Automotive trim shops
- Bump shops (automotive repair)
- Collision shops, automotive
- Customizing automobiles, trucks or vans: except on a factory basis
- Upholstery repair, automotive
- Van conversions, except on a factory basis

SIC DESCRIPTION FOR 7533

Division I: Services

Major Group 75: Automotive Repair, Services, and Parking

Industry Group 753: Automotive Repair Shops

7533 Automotive Exhaust System Repair Shops

Establishments primarily engaged in the installation, repair, or sale and installation of automotive exhaust systems. The sale of mufflers, tail pipes, and catalytic converters is considered to be incidental to the installation of these products.

- Catalytic converters, automotive: installation, repair, or sales and
- Exhaust system services, automotive
- Mufflers, automotive: installation, repair, or sales and installation

SIC DESCRIPTION FOR 7534

Division I: Services

Major Group 75: Automotive Repair, Services, And Parking

Industry Group 753: Automotive Repair Shops

7534 Tire Retreading and Repair Shops

Establishments primarily engaged in repairing and retreading automotive tires. Establishments classified here may either retread customers' tires or retread tires for sale or exchange to the user or the trade.

- Rebuilding and retreading tires for the trade
- Retreading tires
- Tire recapping
- Tire repair shops
- Tire studding and restudding
- Vulcanizing tires and tubes

SIC DESCRIPTION FOR 7536

Division I: Services

Major Group 75: Automotive Repair, Services, And Parking

Industry Group 753: Automotive Repair Shops

7536 Automotive Glass Replacement Shops

Establishments primarily engaged in the installation, repair, or sales and installation of automotive glass. The sale of the glass is considered incidental to the replacement.

- Glass replacement and repair, automotive

SIC DESCRIPTION FOR 7537

Division I: Services

Major Group 75: Automotive Repair, Services, And Parking

Industry Group 753: Automotive Repair Shops

7537 Automotive Transmission Repair Shops

Establishments primarily engaged in the installation, repair, or sales and installation of automotive transmissions. The sale of transmissions and related parts is considered incidental to the installation or repair of these products.

- Automatic transmission repair, automotive
- Transmission repair, automotive
- Transmission, automotive: installation, repair, or sale and installation

SIC DESCRIPTION FOR 7538

Division I: Services

Major Group 75: Automotive Repair, Services, And Parking

Industry Group 753: Automotive Repair Shops

7538 General Automotive Repair Shops

Establishments primarily engaged in general automotive repair. Establishments primarily engaged in industrial truck repair are classified in Industry 7699.

- Automotive repair shops, general
- Diesel engine repair, automotive
- Engine repair, automotive
- Engine repair, truck: except industrial
- Garages, general automotive repair and service
- Motor repair, automotive
- Truck engine repair, except industrial

SIC DESCRIPTION FOR 7539

Division I: Services

Major Group 75: Automotive Repair, Services, And Parking

Industry Group 753: Automotive Repair Shops

7539 Automotive Repair Shops, Not Elsewhere Classified

Establishments primarily engaged in specialized automotive repair, not elsewhere classified, such as fuel service (carburetor repair), brake relining, front-end and wheel alignment, and radiator repair. Establishments primarily engaged in automotive welding are classified in Industry 7692.

- Air-conditioner repair, automotive
- Automotive springs, rebuilding and repair
- Axle straightening, automotive

- Brake linings, sale and installation
- Brake repairing, automotive
- Carburetor repair
- Electrical service, automotive (battery and ignition repair)
- Frame repair shops, automotive
- Front end repair, automotive
- Fuel system conversion, automotive
- Fuel system repair, automotive
- Generator and starter repair, automotive
- Radiator repair shops, automotive
- Wheel alignment, automotive

Appendix D

Example Tenant Condition of Approval

The following statement can be added as a condition of approval for all tenant projects:

“The San Diego County Regional Airport Authority and San Diego International Airport is regulated under Regional Water Quality Control Board Order No. 2001-01, National Pollutant Discharge Elimination System (NPDES) Permit No. CAS0108758, Waste Discharge Requirements for Discharges of Urban Runoff from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds of the County of San Diego, the Incorporated Cities of San Diego County, and the San Diego Unified Port District (Municipal Permit), as adopted, amended, and/or modified. The Municipal Permit prohibits any activities that could degrade storm water quality. Post-construction / operational use of this project site must comply with the Municipal Permit and Authority direction related to permitted activities including the requirements found in the Authority’s Storm Water Management Plan (SWMP).

No discharges of any material or waste, including potable water, wash water, dust, soil, trash and debris, may contaminate storm water or enter the storm water conveyance system. Any such material that inadvertently contaminates storm water or enters the storm water conveyance system as part of site operations must be removed immediately. All unauthorized discharges to the storm water conveyance system or the Bay or the ocean must be reported immediately to the Environmental Affairs, in order to address any regulatory permit requirements regarding spill notifications.

Best management practices (BMPs) must be implemented by the Tenant to control the potential release of any materials or wastes being handled or stored on-site which could enter the storm water conveyance system due to wind or storm water runoff.

In addition, this project is subject to the Authority’s Standard Urban Storm Water Mitigation Plan (SUSMP) process. As such, approval of the project by the Authority is necessarily conditioned upon submission by the project proponent of a project specific Urban Storm Water Mitigation Plan (USWMP) that meets Authority requirements. Project approval requires full implementation of all USWMP structural and non-structural BMPs throughout the life of the project. The implementation and maintenance of the USWMP BMPs constitute regulatory obligations for the lessee, and failure to comply with the Municipal Permit, the SWMP, or the Authority approved USWMP, including the specific BMPs contained therein, may be considered a default under the lease.”

End of Document.

APPENDIX D
STORMWATER MONITORING PROGRAMS

Appendix D – Stormwater Monitoring Programs



APPENDIX D-1

DRY WEATHER ANALYTICAL MONITORING PROGRAM

1.0 INTRODUCTION

As required under San Diego Regional Water Quality Control Board (RWQCB) Order No. R9-2007-0001, National Pollutant Discharge Elimination System (NPDES) No. CAS0108758, referred to herein as the Municipal Permit, the San Diego County Regional Airport Authority (Authority) is required to develop and implement a program to detect and eliminate illicit connections and illegal discharges to the Authority's public storm drain system, also referred to as the municipal separate storm sewer system or MS4. This program is described in Chapter 9 of the Authority's Storm Water Management Plan (SWMP), entitled "Illicit Discharge Detection and Elimination Component." The SWMP represents the Authority's jurisdictional urban runoff management program (JURMP) document required by the Municipal Permit.

Non-storm water discharges, as defined by the Municipal Permit, include all discharges to and from an MS4 that do not originate from precipitation events (all discharges from an MS4 other than storm water). Non-storm water discharges include illicit discharges, non-prohibited discharges, and NPDES permitted discharges. An illicit discharge is any discharge to an MS4 that is not composed entirely of storm water, except discharges pursuant to an NPDES permit and discharges resulting from fire-fighting activities [40 CFR 122.26(b)(2)]. Illicit connections are connections to an MS4 that convey an illicit discharge.

A requirement and critical element of the Illicit Discharges Detection and Elimination Component (IDD/EC) is a Dry Weather Analytical Monitoring Program, as specified under Section D.4.c in the Municipal Permit and in the Receiving Waters Monitoring and Reporting Program of the Municipal Permit. The Dry Weather Analytical Monitoring Program is required to consist of the development of an MS4 map, field observations, field screening monitoring, and analytical monitoring at selected stations. The purpose of the program is to detect and eliminate illicit connections and illicit discharges to an MS4 using frequent, geographically-widespread dry weather discharge monitoring and follow-up investigations.

2.0 PROGRAM COMPONENTS

2.1 STORM DRAIN SYSTEM MAPPING

Pursuant to Section D.4.c and the Receiving Waters Monitoring and Reporting Program of the Municipal Permit, the Authority is required to update its MS4 Map. As defined by the Municipal Permit, an MS4 consists of all conveyances within the Authority, including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, and storm drains, owned or operated by the Authority. The Authority has updated this map and it is provided in the Authority's SWMP along with a separate map showing dry weather field screening and analytical monitoring stations (Figure 3). The accuracy of the MS4 Map is confirmed during dry weather field screening and analytical monitoring, and is updated annually.

Appendix D – Monitoring Programs

2.2 SELECTION OF DRY WEATHER FIELD SCREENING AND ANALYTICAL MONITORING STATIONS

The Municipal Permit allows dry weather monitoring stations to be selected non-randomly, provided that the coverage of the MS4 meets or exceeds that provided by the random grid system method.

After the Authority's initial dry weather monitoring event in 2003, the dry weather monitoring locations were modified to coincide with the wet weather sampling locations. Those locations were modified in 2005 and 2006 and finalized in 2007. The Authority now has ten dry weather monitoring locations within its jurisdiction based on a review of the potential pollutants, pollutant sources, and scope of operations within the drainage basins. Drainage basins 1, 2, 3, 4, 5, 6, 7, 8, 12, and 13 contain industrial activities. As a result of the volume and types of activities, illicit discharges and/or illicit connections are more likely to occur in these drainage basins. Drainage basins 9, 10, and 11 are not significantly affected by industrial activities at San Diego International Airport (SDIA) but are affected by municipal activities at SDIA. Drainage basin 10 was selected for monitoring and can be considered to be representative of drainage basins 9 and 11. Drainage basins 2, 4, and 13 are considered substantially identical. However, there were no convenient monitoring locations in any of these drainage basins, so no formal monitoring will be performed in those basins. Monitoring locations within a given drainage basin were selected as far downstream as possible to capture as many areas with industrial activities and sources of potential illicit discharges as possible. Monitoring stations selected for dry weather monitoring are listed in Table D1-1 and consist of ten primary locations.

Additionally, many of the stations are located along maintenance routes and other commonly traveled areas, therefore, informal (cursory) field observations of these stations could be as often as every week. Informal field observations typically consist of a brief visual inspection, whereas a formal field observation consists of complete documentation of the observations on a field form.

TABLE D1-1
SAMPLING LOCATIONS FOR DRY WEATHER MONITORING

Drainage Basin	Sampling Location ID	Sampling Method	Location Description
1	C-B01-1	Grab	Inlet pipe or sheet flow at storm drain inlet
3	C-B03-2	Grab	Inlet pipe or sheet flow at storm drain inlet
5	C-B05-3	Grab	Inlet pipe or sheet flow at storm drain inlet
5	C-B05-4	Grab	Inlet pipe or sheet flow at storm drain inlet
6	C-B06-5	Grab	Inlet pipe or sheet flow at storm drain inlet
7	C-B07-6	Grab	Inlet pipe in manhole west of ASIG/American OWS

Appendix D – Monitoring Programs

Drainage Basin	Sampling Location ID	Sampling Method	Location Description
7	C-B07-7	Grab	Sheet flow at storm drain inlet at end of concrete swale
8	C-B08-8	Grab	Sheet flow from the loading area of Terminal 1
12	C-B12-9	Grab	Inlet pipe at storm drain inlet west of T2W OWS
10	C-B09-10	Grab	Sheet flow at storm drain curb inlet at S perimeter of T2 parking lot.

2.3 DRY WEATHER ANALYTICAL MONITORING PROCEDURES

2.3.1 Monitoring Frequency

The Authority is required to monitor each dry weather monitoring station at least once annually between May 1 and September 30. Field screening and analytical monitoring of dry weather monitoring stations will be scheduled to coincide with the dry weather and coastal monitoring conducted by the Port of San Diego. As a result of this coordination, the Authority will monitor each dry weather station more than once between May 1 and September 30, thereby meeting the Municipal Permit requirements.

A master Monitoring Station Checklist will be used to track the stations that have been visited for formal observations within the sampling period, and those that have not. The Authority will retain records of all monitoring information, including all calibration and maintenance records of monitoring instrumentation, for a period of at least five (5) years from the date of sample collection or measurement. This period may be extended by request of the Regional Board or the USEPA at any time and shall be extended during the course of any unresolved litigation regarding a discharge. Records of monitoring information shall include [40CFR 122.41(j)(3)]:

1. The date, exact place, and time of sampling or measurements;
2. The individual(s) who performed the sampling or measurements;
3. The date(s) analyses were performed;
4. The individual(s) who performed the analyses;
5. The analytical techniques or methods used;
6. The results of such analyses.

All sampling, sample preservation, and analyses must be conducted according to test procedures approved under 40 CFR Part 136 and meet the minimum levels (MLs) in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (Resolution No. 2000-030, April, 26, 2000) of the California Toxics Rule (CTR) published in 65 Fed.Reg. 31682-31719 (May 18, 2000), unless otherwise specified by the Municipal Permit.

2.3.2 Field Screening and Observations

If flow or ponded runoff is observed at a dry weather field screening and analytical monitoring station, and there has been at least seventy-two (72) hours of dry weather, the Authority will make observations and collect at least one (1) grab sample for the purpose of conducting field screening analyses.

Informal field observations typically consist of a brief visual inspection, whereas a formal field observation involves the complete documentation of the observations on a field form. The field form used by the Authority is the Dry Weather Monitoring Field Datasheet developed by the Copermittees. The monitoring data sheet consists of three parts: general information; atmospheric and runoff conditions; and field screening analytical results, analytical laboratory results, and flow measurements. The field data sheet is reviewed and updated annually by the Copermittees as a group.

The general information section provides basic, but relevant, information such as the location, date, time, weather information (time since last rain, quantity of last rain), and site description (conveyance type, dominant and secondary land uses, etc.).

The atmospheric and runoff conditions section of the form is intended to provide a general assessment of the observed dry weather flow or ponded water, including variables such as odor, water clarity, the presence of floatables, and color, together with any visible deposits or stains; the vegetation and biological characteristics of the area; and an assessment of trash in the receiving water and runoff. The assessment of trash shall provide information on the spatial extent, types, and amount of trash present. A photograph of the site can document the site conditions for the record and future reference, and should be taken when deemed appropriate by monitoring personnel.

The field screening and the analytical laboratory results sections allow space to record the appropriate test results. These sections only need to be completed if flow or ponding is observed and if a sample is collected (see Section 2.3.3 for information on how many and how often samples need to be collected and sent to the laboratory).

The flow measurements portion of the form includes width of water surface, approximate depth of water, approximate flow velocity, and flow rate measurements. This information only needs to be completed when flow is present.

At a minimum, the following constituents will be analyzed during field screening of flow or ponded water at all dry weather monitoring stations:

- Specific Conductance (estimates of TDS will be calculated from conductivity),
- Water Temperature,
- pH,
- Turbidity,
- Reactive Phosphorus (Ortho-P),
- Nitrate Nitrogen,
- Ammonia Nitrogen,
- Surfactants (MBAS).

Additional constituents may also be analyzed to aid in the field screening effort. All results of the field screening will be recorded on the monitoring datasheet.

Appendix D - Monitoring Programs

At a minimum, 25 percent of dry weather monitoring stations where ponded or flowing water is observed must be sampled annually and the samples submitted for analytical laboratory analysis. Personnel conducting the monitoring will use their discretion as to the need to collect a grab sample at a particular site. The following factors will be considered: the results of the field screening analysis, the conditions and characteristics of the site and the runoff, the occurrence of illicit connections or illegal discharges at the location in the past, the conditions and uses in the tributary area, and other relevant factors. Once results of the analyses are available, they will be recorded on the monitoring field data sheet for that site.

Samples will be analyzed for the following constituents in a laboratory certified by the State of California Department of Health Services:

- Total hardness;
- Oil and grease;
- Diazinon and chlorpyrifos;
- Dissolved cadmium, copper, lead, and zinc;
- Enterococcus, total coliform, and fecal coliform bacteria.*

*Colilert and Enterolert may be used as alternative methods with Fecal Coliform determined by calculations.

FIELD EQUIPMENT CHECKLIST

The field equipment listed below will be used to conduct dry weather monitoring. This list will be reviewed prior to conducting monitoring to ensure that the proper materials are available.

1. Field Notebook consisting of:
 - Monitoring station checklist,
 - Site map,
 - Monitoring data sheets,
 - Point of Contact (POC) list,
 - Health and Safety Plan,
 - Photographs of monitoring stations.
2. Field Kit including:
 - Sample collection equipment;
 - Clipboard;
 - Pens and/or pencils;
 - Permanent felt tip pen;
 - Digital camera;
 - Nitrile gloves;
 - Protective eyeglasses or goggles;
 - Rubber boots/waders;
 - Paper towels;

Appendix D – Monitoring Programs

- Tape;
- Small, clear container for visual observations;
- Crate for carrying supplies and equipment;
- Portable Field Test Kits, colorimeters or spectrophotometer, and reagents for meters;
- Multi-parameter or individual probes to measure temperature, electrical conductivity, pH, and turbidity;
- De-ionized water in squeeze bottles;
- Thermometer;
- Extra batteries for all meters;
- Waste disposal bottles;
- Polypropylene bucket with rope, or a sampling rod;
- Sample bottles with preservatives;
- Coolers with bagged ice and bubble wrap;
- Pick or manhole puller;
- Flow measurement equipment (required equipment will depend on method used):
 - Measuring tape for measuring stream width,
 - Folding scale for measuring stream depth,
 - Flow meter or wristwatch;
- Extra sample containers;
- Safety harness or flotation device.

2.3.3 Alternate Stations

If a station is dry (no flowing or ponded runoff), the Authority will make and record applicable observations and select another station for monitoring if alternate stations are available.

2.3.4 Investigation Action Criteria

The Authority will rely on the latest action criteria developed by the Copermittee dry weather monitoring workgroup, listed in Tables D1-2 and D1-3, to determine if a follow-up investigation is required. An exceedance of these criteria will necessitate a follow-up investigation to identify and eliminate the source causing the exceedance. The action criteria will not be the sole criteria for initiating an investigation, however. Monitoring personnel will use their discretion to determine if a source investigation is necessary. The decision will be based on the site-specific characteristics. Within 48 hours of receiving dry weather field screening or analytical laboratory results that exceed an action level, the Authority will either conduct an investigation to identify the source of the discharge or provide the rationale for why the discharge does not pose a threat to water quality and does not need further investigation. Obvious illicit discharges (e.g., color, odor, or exceedance of an action level) will be investigated immediately. Dry weather screening and analytical monitoring stations identified to exceed dry weather monitoring criteria for any constituent will continue to be screened in subsequent years.

TABLE D1-2
ACTION CRITERIA FOR ANALYTES – FIELD SCREENING

Analytes	Action Levels¹	Source/Notes
pH	<6.5 or >9.0	Basin Plan, with allowance for elevated pH due to excessive photosynthesis. Elevated pH is especially problematic in combination with high ammonia.
Orthophosphate-P (mg/L)	2.0	USEPA Multi-sector General Permit
Nitrate-N (mg/L)	10.0	Basin Plan and drinking water standards
Ammonia-N (mg/L)	1.0	Based on Workgroup experience. May also consider unionized ammonia fraction.
Turbidity (NTU)	Best Professional Judgment	WQOs relevant to inland surface waters are not available. Base judgment on channel type and bottom, time since last rain, background levels, and, most importantly, visual observation (e.g., unusual colors and lack of clarity) and unusual odors.
Temperature (F or C)	Best Professional Judgment	Base judgment on season, air temperature, channel type, shading, etc.
Conductivity (mS/cm)	Best Professional Judgment	Values > 5 mS/cm may indicate IC/ID; however, EC may be elevated in some regions due to high TDS from groundwater exfiltration to surface water, mineral dissolution, drought, and seawater intrusion. Normal source ID and discharge elimination work is not effective in these situations. Knowledge of area background conditions is important. Values < 0.75mS/cm may indicate excessive potable water discharge or flushing.
MBAS (mg/L)	1.0	Basin Plan, with allowance based on Workgroup field experience and possible field reagent interferences.

¹ The referenced action level will not be the sole criteria for initiating a source identification. Dry weather monitoring data will be interpreted using the various available information, including best professional judgment, and within- and between-site sample variability.

Appendix D – Monitoring Programs

TALE D1-3

ACTION CRITERIA FOR ANALYTES – ANALYTICAL MONITORING

Analytes	Action Levels ¹	Source/Notes
Oil and Grease (mg/L)	15	USEPA Multi-sector General Permit. If a petroleum sheen is observed, the sample will be collected from the water surface. Visual observations may justify immediate investigation.
Diazinon (µg/L)	0.5	Response to diazinon and chlorpyrifos levels above 0.5 µg/L will focus on education and outreach to potential dischargers in the target drainage basin. High levels will be investigated aggressively, as with other potential IC/IDs.
Chlorpyrifos (µg/L)	0.5	
Dissolved Cadmium (µg/L)	California Toxics Rule	Use California Toxics Rule Table 1-hour criteria to determine the appropriate action level for individual samples. Table provides benchmarks based on hardness and dissolved metal concentrations. For example, at 300 mg/L hardness the following action levels apply: Cd – 14 µg/L, Pb – 209 µg/L, and Zn – 297 µg/L.
Dissolved Copper (µg/L)	California Toxics Rule	
Dissolved Lead (µg/L)	California Toxics Rule	
Dissolved Zinc (µg/L)	California Toxics Rule	
Total Coliform (MPN/100mL)	50,000	Action levels are based on upper 90% confidence level of Copermittees 2002 dry weather analytical monitoring data.
Fecal Coliform (MPN/100mL)	20,000	
Enterococcus (MPN/100mL)	10,000	

¹ The referenced action level will not be the sole criteria for initiating a source identification. Dry weather monitoring data will be interpreted using the various available information, including best professional judgment, and within- and between-site sample variability.

2.3.5 Investigations and Elimination of Discharges and Connections

Follow-up source investigations and procedures for the elimination of illicit discharges and connections will be conducted as described below. Source investigations will typically be conducted by the Environmental Affairs monitoring personnel. Source investigations are initiated when observations, field screening results, laboratory analytical results, or a reported complaint suggest a reasonable potential for the existence of an illicit discharge. The Municipal Permit requires the Authority to conduct an investigation to identify the source or rationale for why the

Appendix D – Monitoring Programs

discharge does not pose a threat to water quality within two business days of receiving dry weather field screening or laboratory results that exceed action levels.

STEP 1 – LOCATION OF OBSERVATION

Source investigations begin at the location where the observations that initiated the investigation were made. If the observations were made by someone other than the person or persons conducting the investigation (the investigators), or if they were made more than several hours prior to the initiation of the source investigation, the source investigation should begin with a thorough visual inspection of the location. If flows exist, samples should be collected for field screening and laboratory analysis as deemed appropriate by the investigators. If the illicit discharge is still occurring and is deemed to pose a substantial threat to resources and humans downstream, if feasible, actions should be taken immediately by the Authority to prevent or retard the discharge from flowing further downstream.

STEP 2 – SOURCE TRACKING DETERMINATION

While at the observation location, the investigator should consult various resources such as MS4 and land use maps to determine the characteristics of the tributary areas and upstream communities. In some circumstances, the investigator may be able to identify probable sources of the illicit discharge based on the expected activities of certain upstream sites or the results of previous investigations. In these circumstances, the investigator may choose to go directly to these potential sources to investigate. If inspections of these potential sources do not reveal the source of the illicit discharge, or if potential sources are too numerous, then the investigator should track the discharge upstream.

If the discharge has ceased it may be impossible to track the source. In these circumstances, the investigator should document that the discharge has ceased and cannot be tracked. A brief drive or walkthrough survey of the tributary area should be conducted and documented to verify that there is no obvious source. In some cases, the sources may still be identified by evidence at the site or further upstream. For example, if a sediment laden discharge was reported, an upstream site may reveal signs of sediment discharge such as deposits along curbs or in inlets, signs of eroded slopes, or exposed soils lacking required BMPs.

STEP 3 – SOURCE TRACKING

When source tracking, the investigator should use MS4 maps and other resources to aid in the investigation. Any traceable characteristic of the illicit discharge (color, constituents, odor, quantity, etc.) should be noted, as these will aid the investigator in tracking and identifying sources. The Authority's strategy to source tracking is to track the discharge upstream, thereby reducing the tributary area and potential sources. While working upstream along the MS4, the investigator may encounter tributary pipes or inlets and each should be evaluated for their potential to be the conveyor of the discharge. If a pipe or inlet is dry, it can automatically be eliminated if the illicit discharge is still occurring. If a pipe or inlet is the source of the flow in the main portion of the MS4, then the tracking should continue along that pipe or inlet. If the main portion of the MS4 and the tributary pipe or inlet both contain flow, more detailed observations must be made. The investigator may be able to rule out a conveyance based on visual observations, characteristics of the illicit discharge, or field screening to identify constituents.

Once the set of possible sources has been reduced to a manageable set, the investigator may choose to end the source tracking and continue the investigation by inspecting the various potential

Appendix D - Monitoring Programs

sources. However, if none of these potential sources can be identified as the source of the discharge, or if the investigator cannot identify any potential sources, the source tracking may continue all the way to the source.

Tracking along underground MS4 conveyances is more difficult because observations can only be made at the locations of manholes, outlets, and inlets. The MS4 map will be useful for these investigations. When the map indicates the confluence of two MS4 conveyances, or if an unmapped confluence is suspected, if possible, the investigator should make observations at the point of confluence. Otherwise, the investigator should make observations at the nearest access point upstream along each conveyance. When tracking along underground conveyances, the investigator should be aware that the source of discharge may be an illicit connection or unmapped confluence existing between observation points. The investigator should check surrounding inlets, the surrounding area, and appropriate Authority personnel or records for evidence of infrastructure construction or other activities that might have resulted in an illicit connection. In the case of chronic illicit discharges for which a source cannot be identified, the Authority may choose to conduct dye testing, smoke testing, video monitoring, underground visual inspections, and/or continued water monitoring at the suspected source(s).

STEP 4 - DISCHARGE ELIMINATION

Once the source of a discharge has been identified, if the discharge is still occurring, it must be eliminated. The investigators should contact appropriate Authority personnel who will issue the necessary enforcement mechanism to the discharger to ensure that alterations are implemented to terminate the discharge and clean up the discharge. In cases where the responsible party is present at the source, or the discharge poses a substantial threat to humans or the environment, the investigator may choose to confront the responsible party before appropriate Authority personnel arrive in order to terminate the discharge as quickly as possible. The actions required of the responsible party to eliminate the illicit discharge will vary depending on type of illicit discharge. Clean up or remediation actions may also be required of the responsible party depending on the type and impact of the illicit discharge.

STEP 5 - DAMAGE ASSESSMENT

After the discharge has been terminated, the inspector or other Authority personnel should travel downstream from the discharge to assess the impacts that the discharge caused to downstream resources. Additional remediation may be required of the responsible party if downstream impacts are detected and monitoring may also be necessary to ensure recovery of downstream areas. Authority personnel may also want to consider the level of downstream impact caused by the illicit discharge prior to deciding on which level of enforcement action is appropriate for the case.

STEP 6 - REPORTING

Based on the type of discharge and the damage assessment, the Authority may be required to immediately report the discharge to the RWQCB. The Authority submits the Annual Report to the RWQCB that includes a description of investigations and follow-up actions for illicit discharges and connections, reports the number of illicit discharges and connections identified, and the number eliminated for the previous fiscal year.

3.0 SAMPLING PROCEDURES

Dry weather monitoring involves the collection of grab samples only. The following procedures will be followed:

- Put on clean, nitrile gloves and prepare sample collection devices, if necessary.
- Remove the required pre-labeled sample containers from the cooler (see Tables D1-4 and D1-5 for appropriate containers to use) and fill out the remaining information on the label with a waterproof pen: date, time, and sampler's initials.
- If samples are not collected directly into the sample container (for instance, when a bucket is used to collect the sample), rinse the sample collection device three times with water discharging from the sample location before collecting the sample. Disposable sampling equipment (e.g., bucket liners) will be used at each sample location. Also, rinse sample containers that DO NOT contain a preservative three times prior to sample collection.
- Collect representative samples at a point below the surface of the flow (at about half of the water's depth) and midway across the flow as close as possible. Avoid stagnant pools near the edge of flowing water unless the purpose is to sample a stagnant pool.
- If entering the water is necessary for sampling, enter the flow downstream of the sampling location disturbing as little of the bottom material as possible. Always collect the sample upstream of your position so that the sample will not be contaminated by you or materials on the bottom of the channel that you may have disturbed.
- Measure water quality parameters, listed in Section 2.3.2, at the time of field screening using the appropriate portable meters, field test kits, and the clear, plastic container used for making observations. Estimate the flow rate (see Dry Weather Monitoring Field Datasheet). Record all observations and field screening results on the field datasheet, and describe any unusual or noteworthy conditions or results in detail on the bottom of the field data sheet.
- Fill sample containers to be sent to the laboratory to the shoulder unless directed otherwise by the laboratory.*
- Cap each container tightly and place it into a cooler. The cooler will have a sufficient amount of ice to maintain a temperature of 4 ± 2 °C during transport. If samples need to be stored for an extended period prior to delivery to the laboratory, it may be necessary to renew the ice every 24 hours.
- Dispose of all spent reagents, reacted samples, and rinse solutions in the appropriate waste containers. Upon return to the office, wastes should be decanted into the sewer system.

* Some of the sample containers may contain a small amount of acid as a preservative. To prevent any possible harm to sampling personnel, open the containers with the opening facing away from the face and do not inhale the vapors. When filling the containers, be careful not to spill any acid. If some of the acid does get on the skin, rinse it off thoroughly.

4.0 QUALITY CONTROL/QUALITY ASSURANCE (QC/QA)

The following sections address Quality Assurance and Quality Control (QA/QC) activities associated with both field sampling and laboratory analyses. These general procedures focus on sample collection at SDIA. Field QC samples are collected and used to evaluate potential contamination and sampling error introduced into a sample prior to its submittal to the analytical

Appendix D – Monitoring Programs

laboratory. Laboratory QC activities provide information needed to assess potential laboratory contamination and analytical precision and accuracy. Field and Laboratory Data Quality Objectives (DQOs) are summarized in Tables D1-4 and D1-5.

4.1 FIELD QUALITY ASSURANCE/QUALITY CONTROL

Field QA/QC will consist of sample tracking and handling, and the collection of field blanks and field duplicates. Equipment blanks are not required because new, disposable equipment will be used for all sampling locations. Trip blanks are not required because samples will not be analyzed for volatile organic compounds (VOCs).

4.1.1 Sampling Tracking and Handling

Samples will be kept properly chilled and will be transferred to the analytical laboratory within the holding times specified in Table D1-5. To provide for proper tracking and handling of the samples, chain-of-custody procedures and documentation will accompany the samples from initial collection to final extraction and analysis.

To assure quality data results, it is imperative that the analytical laboratory provide confirmation of each analytical test to be conducted, respective reporting limits, analytical methods, and costs before analyses are allowed to be conducted.

4.1.2 Field Blanks

Field blanks are used to determine if contamination is introduced during field sampling activities. They will be prepared by pouring blank water into sampling containers in the field during the sampling period. Blank water is supplied by the laboratory and certified to be free of contaminants. For grab samples, identical equipment used to collect the grab samples will be rinsed with blank water before the blank water is poured into the sample containers. One field blank will be collected for every ten field samples collected per event.

4.1.3 Field Duplicates

Field duplicates are used to assess variability attributable to sample collection, handling, shipment, and storage, and/or laboratory handling and analysis. Procedures for collecting the additional sample volume required for the duplicate field samples will simulate the normal sampling protocols. Twice as much sample volume is required to be collected for duplicate samples. Duplicate grab samples will be collected by filling two grab samples bottles at the same time (simultaneously) or in rapid sequence. Duplicate samples will be labeled separately and will be submitted “blind” to the laboratory. As with field blanks, one field duplicate will be collected for every ten field samples.

Appendix D - Monitoring Programs

TABLE D1-4
DATA QUALITY OBJECTIVES - FIELD SCREENING

Analyte	Container	Analytical Method	Reporting Limits	Accuracy
Specific Conductance	Plastic	Field Meter	0.01	±2%
pH	Plastic	Field Meter	1-14	± 0.01 units
Temperature	Plastic	Field Meter	0.01	±0.3
Turbidity	Plastic	Field Meter	0.05	±2%
MBAS (surfactants)	Plastic	Field Kit	0.5 mg/L	±0.125
Nitrate NO ₃ -N	Plastic	Field Kit	1.35 mg/L	±0.1
Reactive Phosphorous PO ₄ -P	Plastic	Field Kit	0.07 mg/L	±0.05
Ammonia NH ₃ -N	Plastic	Field Kit	0.05 mg/L	±0.05
Copper (Dissolved)	Plastic	Field Kit	5 µg/L	±0.05

Appendix D – Monitoring Programs

**TABLE D1-5
DATA QUALITY OBJECTIVES – ANALYTICAL MONITORING**

Analyte	Container ¹	Preservative ²	Holding Time	Analytical Method	Reporting Limits	Accuracy	Precision	
							Matrix Spike	RPD
Oil and Grease (O&G)	Glass	4°C, H ₂ SO ₄ to pH<2	28 days	EPA 1664	5 mg/L	40-140%	±25%	±25%
Hardness	Plastic	4°C, H ₂ SO ₄ to pH<2	6 months	SM 2340C	0.40 mg/L	15%	±25%	±25%
Enterococcus (bacteria)	Sterile plastic	4°C, Na ₂ S ₂ O ₂	6 hours	SM 9230	2 MPN/100mL	--	--	--
Total Coliform (bacteria)	Sterile plastic	4°C, Na ₂ S ₂ O ₂	6 hours	SM 9221 B, E	2 MPN/100mL	--	--	--
Fecal Coliform (bacteria)	Sterile plastic	4°C, Na ₂ S ₂ O ₂	6 hours	SM 9221 B, E	2 MPN/100mL	--	--	--
Diazinon & Chlorpyrifos	Glass	4°C	7 days	EPA 8141B	0.05 µg/L	60-130%	±25%	±25%
Metals (Dissolved) ³	Teflon, plastic, borosilicate glass	4°C, HNO ₃ to pH<2	Filter for dissolved fraction and then preserve with acid, within 48 hours; 6 months to analyze	EPA 200.8	5 µg/L	80-120%	±20%	±20%
Cadmium (Cd)				EPA 200.8	5 µg/L	80-120%	±20%	±20%
Copper (Cu)				EPA 200.8	5 µg/L	80-120%	±20%	±20%
Lead (Pb)				EPA 200.8	5 µg/L	80-120%	±20%	±20%
Zinc (Zn)				EPA 200.8	20 µg/L	80-120%	±20%	±20%

Notes:

MPN = Most Probable Number

RPD = Relative Percent Difference

¹ Container volume size will be determined by the laboratory.

² Some analytes with the same preservative can be combined into a single container, if the same laboratory is performing the analyses. Samples volumes and combined analytes will be determined by the laboratory.

³ Samples to be analyzed for dissolved metals will be filtered in the laboratory prior to preservation by acidification.

4.2 LABORATORY QUALITY ASSURANCE/QUALITY CONTROL

Laboratory quality assurance/quality control includes the following:

- Employing analytical chemists trained in the procedures to be followed;
- Adherence to documented procedures, USEPA methods, written Standard Operating Procedures (SOP), and other approved methods (e.g., Standard Methods for the Examination of Water and Wastewater);
- Laboratory Check Samples;
- Complete documentation of sample tracking, analysis, and reporting.

4.2.1 Laboratory Check Samples

Laboratory check samples will include the use of laboratory duplicates, Method Blanks (MBs), Matrix Spike and Matrix Spike Duplicates (MS/MSDs), and Laboratory Control Spikes (LCS). These laboratory QA/QC activities are discussed below and their applicability to each analyte is summarized in Table D1-5.

LABORATORY DUPLICATES

Laboratory duplicate samples will be generated by the laboratory. Duplicate analyses results will be evaluated by calculating the Relative Percent Difference (RPD) between the two sets of results and will serve as a measure of the reproducibility (precision) of the measured results.

METHOD BLANKS

Method blanks will be run by the laboratory to determine the level of contamination associated with laboratory reagents and equipment. An MB is a sample of a known matrix that has been subjected to the same complete analytical procedure as the field samples to determine if contamination has been introduced into the samples during processing. The results of the MB will be checked against reporting limits for analytes. Method blank results should be less than the reporting limits for each analyte.

MATRIX SPIKE AND MATRIX SPIKE DUPLICATES

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) samples are analyzed for their analytes and then are spiked with a known amount of analyte(s). The results of the analysis of the spiked sample are compared to the unspiked sample results and the "percent recovery" of each spiked analyte is calculated. The MS/MSD results and the calculated RPD allow evaluation of the accuracy and precision of the laboratory analytical method and matrix interferences.

LABORATORY CONTROL SPIKES

The LCS contains a known (spiked) amount of the analyte(s) of interest in a clean matrix and assesses the matrix effects on spike recoveries. High or low recoveries of the analytes in an MS may be caused by interferences from the sample. The LCS assesses these possible matrix effects because the known (clean) matrix is free from matrix interference.

Appendix D – Monitoring Programs

CORRECTIVE ACTION

Corrective action is taken when an analytical result is considered to be anomalous. Reasons include exceeding RPD ranges and/or problems with spike recoveries or blanks. The corrective action varies somewhat from analysis to analysis, but typically involves the following:

- A check of procedures;
- A review of documents and calculations to identify possible errors;
- Correction of errors;
- Similar calculations to improve accuracy;
- A re-analysis of the sample extract, if sufficient volume is available, to determine if results can be improved;
- A complete reprocessing and re-analysis of additional sample material, if available and if the holding time has not been exceeded.

4.2.2 Laboratory Data Package Deliverables

The laboratory deliverable package will include a hard copy and an Electronic Data Deliverable (EDD). The hard copy will include standard narratives identifying any analytical or QA/QC problems and corrective actions. A summary of the following QA/QC elements will be in the data package: sample extract and analysis dates; results of MBs, MSs, and MSDs; summary of analytical accuracy; summary of analytical precision; and reporting limits. The electronic data files will contain all information found in the hard copy reports submitted by the laboratory

4.3 DATA MANAGEMENT AND REPORTING PROCEDURES

The Authority will be responsible for tracking the analytical process to make sure that the laboratories are meeting holding times and are providing a complete deliverable package. The Authority will receive the original hard copy from the laboratory, verify its completeness, and log the date of receipt. Upon receipt from the laboratory, each analytical report will be thoroughly reviewed and the data evaluated to determine if its data meets the project objectives. The data will be screened for the following major items:

- A check between electronic data and the hard copy reports provided by the laboratory;
- Conformity check between the Chain-of-Custody Forms, compositing protocol, and laboratory reports;
- A check for laboratory data report completeness;
- A check for typographical errors in the laboratory reports;
- A check for suspect values.

Following the initial screening, a more complete QA/QC review process will be performed. It will include an evaluation of holding times, method blank contamination, and analytical accuracy and precision from LCSs, MSs, and MSDs. If blank contamination is present, the data will be evaluated and qualified according to USEPA guidelines for organic and inorganic data review. Accuracy will be evaluated by reviewing MS/MSD and LCS recoveries. Depending on the analytical method, precision will be evaluated by reviewing field duplicate, MSD, and laboratory duplicate sample RPDs. Control limits for spike recoveries (accuracy) and RPDs (precision) are defined by the project DQOs listed in Table D1-5.

Appendix D – Monitoring Programs

4.4 ELECTRONIC DATA TRANSFER

The laboratory will provide data in both hard copy and electronic formats. The required form of electronic submittals will be provided to the laboratory to make sure the files can be imported directly into the software. Laboratory data will be maintained and managed with either Microsoft® Excel or Microsoft® Access.

5.0 HEALTH AND SAFETY

Dry weather water sampling sometimes may be necessary when the sampling location and/or the discharge create hazardous conditions. Safety precautions will be used at all times when conducting dry weather monitoring.

SAFETY GUIDELINES

- Keep a first aid kit with field equipment.
- Watch out for traffic along the access road when sampling or making observations.
- Do NOT remain in open areas or stand under trees or tall structures if lightning is occurring in the vicinity.
- Watch your step; the ground may be wet and slippery, steep, or unstable. Do not attempt to climb down unsafe slopes.
- Always wear clean, nitrile rubber gloves when sampling.
- Protect eyes and skin against contact with acids and other preservatives.
- Use common sense when deciding whether to sample during adverse weather conditions. This program is intended to assess dry weather conditions. Do not sample during dangerous conditions, such as high winds.
- Do not enter confined spaces.
- Be familiar with Material Safety Data Sheets (MSDSs) for all chemicals used in the field and when calibrating instruments. Know the health hazards and emergency medical treatments, and follow proper disposal instructions.

SAFETY EQUIPMENT

The following safety equipment is to be readily available for use during dry weather sampling:

- First Aid Kit
- Safety Glasses
- Nitrile Gloves
- Work Boots/Rubber Boots
- Safety Rope
- Cellular Phone
- Safety Vest
- Hard Hat

Appendix D – Monitoring Programs



APPENDIX D-2

WET WEATHER MONITORING PROGRAM

Section II.B of the Receiving Waters and Urban Runoff Monitoring and Reporting Program for San Diego Regional Water Quality Control Board Order No. R9-2001-0001, the Municipal Permit, and Section B of the General Industrial Permit require wet weather monitoring. The requirements of both permits have been combined under one sampling program described in this Appendix. The Authority has assumed responsibility for conducting the wet weather monitoring required by the General Industrial Permit. The Authority's monitoring program is structured around compliance with the General Industrial Storm Water Permit, but also includes the Municipal Permit's source identification monitoring requirements.

The General Industrial Permit (Section B.2) objectives and requirements for the storm water monitoring program are included in Section 9 of the SWMP.

The Municipal Permit (Section I of the Receiving Waters and Urban Runoff Monitoring and Reporting Program) lists the following objectives for the overall monitoring program:

- a. Assess compliance with the Municipal Permit;
- b. Measure and improve the effectiveness of the Copermittees' urban runoff management programs;
- c. Assess the chemical, physical, and biological impacts to receiving waters resulting from urban runoff discharges;
- d. Characterize urban runoff discharges;
- e. Identify sources of specific pollutants;
- f. Prioritize drainage and sub-drainage areas that need management actions;
- g. Detect and eliminate illicit discharges and illicit connections to the MS4;
- h. Assess the overall health of receiving waters.

In addition, this Receiving Waters and Urban Runoff Monitoring and Reporting Program is designed to answer the following core management questions:

- a. Are conditions in receiving waters protective, or likely to be protective, of beneficial uses?
- b. What is the extent and magnitude of the current or potential receiving water problems?
- c. What is the relative urban runoff contribution to the receiving water problem(s)?
- d. What are the sources of urban runoff that contribute to receiving water problem(s)?
- e. Are conditions in receiving waters getting better or worse?

Specific monitoring requirements of the Municipal Permit as they pertain to the Authority are discussed in Section 5.0 of this Appendix.

1.0 GENERAL INDUSTRIAL STORM WATER PERMIT MONITORING REQUIREMENTS

The General Industrial Storm Water Permit requirements are discussed in Sections 7 and 9 of the SWMP.

2.0 VISUAL OBSERVATIONS

For descriptions of the storm water and non-storm water visual observations performed at SDIA to comply with the General Industrial Permit, see Section 7 of the SWMP. Also, see Sections 3 and 9 and Appendix D1 for descriptions of the non-storm water discharge program at SDIA for compliance with the Municipal Permit.

3.0 SAMPLING AND ANALYSIS

The 2005 Site Audit at SDIA identified pollutants of concern (POCs) based on comparisons of historical storm water quality data to the selected benchmark values outlined in that report. There were 12 analytes that exceeded the benchmark values, namely (in order of descending benchmark exceedance frequency): copper (total and dissolved), total zinc, total aluminum, total iron, biological oxygen demand, chemical oxygen demand, total suspended solids (TSS), oil and grease (O&G), specific conductance, total lead, ethylene glycol, and pH. The General Industrial Permit outlines the analyses that must be performed, i.e., pH, total suspended solids (TSS), total organic carbon (TOC) (oil and grease may be substituted for TOC), specific conductance (SC), toxic chemicals, and other pollutants that are likely to be present in storm water discharges in significant quantities. Analysis is also required for those parameters listed in Table D of the Industrial Storm Water Permit. Applicable parameters for SDIA listed in Table D are biological oxygen demand (BOD), chemical oxygen demand (COD), ammonium (NH₃), and pH. Therefore, the analyses for industrial monitoring sites additional to General Industrial Permit requirements to cover the POCs likely to be present in storm water discharges from SDIA are: copper (total and dissolved), zinc (total and dissolved), total aluminum, total iron, total lead, total petroleum hydrocarbons (TPH), methylene blue active substances (MBAS) and ethylene glycol. MBAS, an indicator of surfactants, was selected because of the aircraft and vehicle washing activities that occur at SDIA. TPH, an indicator of petroleum hydrocarbons, was selected because of the fueling and maintenance operations that occur at SDIA. Hence, samples from the industrial sampling locations will be analyzed for the following analytes:

- O&G
- pH
- SC
- TSS
- Total metals (aluminum, copper, iron, lead, and zinc)
- Dissolved metals (copper and zinc)
- MBAS
- TPH
- BOD
- COD
- NH₃
- Ethylene glycol

If pollutants that are likely to be present in storm water discharges in significant quantities are not detected in significant quantities after two consecutive sampling events and are not specifically required to be analyzed for, the facility operator may eliminate the pollutant from future sample analysis until the pollutant is likely to be present again.

The Authority is not required to analyze a parameter listed in Table D when the parameter is not already required to be analyzed pursuant to Sections B.5.c.i. and ii., or B.6, of the General Industrial Storm Water

Permit, and either of the two following conditions are met: 1) the parameter has not been detected in significant quantities from the last two consecutive sampling events, or 2) the parameter is not likely to be present in storm water discharges and authorized non-storm water discharges in significant quantities based upon the an evaluation of the facilities industrial activities, potential pollutant sources, and the SWMP. If applicable Table D parameters are not analyzed for, the Authority must certify in the Annual Report that the above conditions have been satisfied.

The sampler shall visually observe and collect samples of storm water discharges from all drainage areas that represent the quality and quantity of the facility's storm water discharges from the storm event. Ten sampling locations have been identified for SDIA pursuant to the General Industrial Storm Water Permit and are shown on the SWMP site map (Figure 3), and in Table 1 below.

As described in Table 1, drainage basins 1, 2, 3, 4, 5, 6, 7, 8, 12, and 13 contain industrial activities. Drainage basins 9, 10, and 11 are all parking lot areas and are not significantly affected by industrial activities, but are affected by municipal activities at SDIA. Drainage basin 10 was selected for compliance sampling and can be considered to be representative of drainage basins 9 and 11.

Sampling locations selected for industrial monitoring are described in Table 1 and consist of ten primary locations. Based on a review of the potential pollutants and pollutant sources, and the scope of operations within the drainage basins, drainage basins 2, 4, and 13 are considered substantially identical. All three of the drainage basins had similar RPRs. Drainage basin 13 had the highest RPR; however, there were no convenient sampling locations in drainage basin 13, and similarly, there were no convenient sampling locations in drainage basins 2 or 4, so no sampling will be performed in those basins.

**TABLE 1
SAMPLING LOCATIONS FOR COMPLIANCE MONITORING**

Drainage Basin	Sampling Location ID	Sampling Method	Location Description
1	C-B01-1	Grab ¹	Sheet flow at storm drain inlet
3	C-B03-2	Grab ¹	Sheet flow at storm drain inlet
5	C-B05-3 (same location as S-B05-5)	Grab ²	Inlet pipe in storm drain inlet
5	C-B05-4	Grab ¹	Sheet flow at storm drain inlet
6	C-B06-5	Grab ¹	Sheet flow at storm drain inlet
7	C-B07-6	Grab ⁴	Inlet pipe in manhole west of OWS
7	C-B07-7	Grab ¹	Sheet flow at storm drain inlet at end of concrete swale
8	C-B08-8 (same	Composite ³	Sheet flow from the loading area of Terminal 1

Drainage Basin	Sampling Location ID	Sampling Method	Location Description
	location as S-B08-14)		
12	C-B12-9	Grab ⁴	Inlet pipe at storm drain inlet 12-05-I
9	C-B09-10 (same location as S-B09-3)	Grab ⁴	Sheet flow at storm drain curb inlet at SE corner of T2 parking lot/road into parking lot

Notes:

¹ Grab sample collected using a Vortex sampler.

² Grab sample collected using automated equipment.

³ Composite sample collected using automated sampling equipment. Grab samples in this location were not possible because of the high level of aircraft traffic in this area.

⁴ Grab sample collected manually.

Sampling locations were selected as far downstream as possible to capture as many areas with industrial activities as possible within a given drainage basin. Where sampling locations are tidal or access is restricted (e.g., when they are over the zipper line), sheet flow runoff will be collected. For drainage basins 5 and 7, however, a single sampling location could not capture all industrial areas. In these drainage basins, multiple sampling locations were selected.

If the Authority determines that the industrial activities and BMPs within two or more drainage areas are substantially identical, it may either 1) collect samples from a reduced number of substantially identical drainage areas, or 2) collect samples from each substantially identical drainage area and analyze a combined sample from each substantially identical drainage area. The Authority must document such a determination in the annual report.

4.0 SAMPLE COLLECTION AND ANALYSIS GUIDELINES

All sampling and sample preservation shall be in accordance with the current edition of "Standard Methods for the Examination of Water and Wastewater" (American Public Health Association). All monitoring instruments and equipment (including a facility operator's own field instruments for measuring pH and Electro Conductivity) shall be calibrated and maintained in accordance with manufacturers' specifications to ensure accurate measurements. All laboratory analyses must be conducted according to test procedures under 40 CFR Part 136, unless other test procedures have been specified by the Regional Water Board. With the exception of analysis conducted by facility operators, all laboratory analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. Facility operators may conduct their own sample analyses if the facility operator has sufficient capability (qualified employees, laboratory equipment, etc.) to adequately perform the test procedures. Table 2 shows the data quality objectives, including the analytical methods and corresponding method detection limits used to detect pollutants in storm water discharges. All reporting limits specified in the monitoring program are below (often well below) USEPA Multi-Sector General Permit benchmarks, so that any exceedances of those benchmarks can be identified in the results.

TABLE 2
DATA QUALITY OBJECTIVES

Analyte	Container ⁽¹⁾	Preservative ⁽²⁾	Holding Time	Analytical Method	Reporting Limits	Accuracy	Precision	
							Matrix Spike	RPD
Specific Conductance	Glass or PE	4°C, Filter if hold time >24 hours	28 days	EPA 120.1	0.5 μ mhos/cm	--	--	--
pH	Glass or PE	None	15 minutes	EPA 150.1	± 0.01 units	--	--	--
Temperature	Glass or PE	None	15 minutes	Field Meter	± 0.1°C	--	--	--
Total Suspended Solids (TSS)	Glass or PE	4°C	7 days	EPA 160.2	4 mg/L	75-125%	±20%	±20%
Ethylene glycol	Glass or PE	4°C, HCl to pH<2	7 days extract, 14 days analyze	EPA 8015.1	1 mg/L	75-125%	±25%	±25%
Biological Oxygen Demand (BOD)	Glass or PE	4°C	48 hours	EPA 405.1	2 mg/L	--	--	--
Chemical Oxygen Demand (COD)	Glass or PE	4°C	28 days	EPA 410.4	10 mg/L	65-135%	±20%	±20%
Oil and Grease (O&G)	Glass or PE	4°C, H ₂ SO ₄ to pH<2	28 days	EPA 1664	5 mg/L	40-140%	±25%	±25%
Total Petroleum Hydrocarbons (TPH) - Jet Fuel - Diesel - Motor Oil	Wide-mouth glass (jet fuel, diesel, and motor oil)	4°C	Extract-7 days, analyze-40 days (diesel, jet fuel, and motor oil)					
				EPA 8015B	0.5 mg/L	45-130%	±20%	±20%
				EPA 8015B	0.5 mg/L	45-130%	±20%	±20%
				EPA 8015B	0.5 mg/L	45-130%	±20%	±20%

TABLE 2 (continued)
DATA QUALITY OBJECTIVES

Analyte	Container ⁽¹⁾	Preservative ⁽²⁾	Holding Time	Analytical Method	Reporting Limits	Accuracy	Precision	
							Matrix Spike	RPD
Metals (Total and Dissolved) ⁽³⁾ Aluminum (Al) Copper (Cu) Iron (Fe) Lead (Pb) Zinc (Zn)	Teflon, PE, borosilicate glass	4°C, HNO ₃ to pH<2	Filter for dissolved fraction and preserve within 48 hours; 6 months to analyze	EPA 200.8 EPA 200.8 EPA 200.8 EPA 200.8 EPA 200.8	50 µg/L 2 µg/L 50 µg/L 2 µg/L 2 µg/L	80-120% 80-120% 80-120% 80-120% 80-120%	±20% ±20% ±20% ±20% ±20%	±20% ±20% ±20% ±20% ±20%
MBAS	PE/Glass	4°C	48 hours	EPA 425.1	0.05 mg/L	80-120%	±20%	±20%
Ammonia-N (NH ₃ -N)	Glass or PE	4°C, H ₂ SO ₄ to pH<2	28 days	EPA 350.3	0.1 mg/L	80-120%	±20%	±20%
Particle Size Distribution	Glass w/TFE	4°C Analyze at room temp.	As soon as possible	SM 2560D	0.1 µm	80-120%	NA	5% of Sample

Notes:

PE = Polyethylene

RPD = Relative Percent Difference

Completeness objective for all analytes is 95%.

(1) Container volume size to be determined by the laboratory.

(2) Analytes with the same preservative can be combined into a single container, if the same laboratory is performing the analyses. Samples volumes to be determined by laboratory.

(3) Dissolved analytes will be filtered in the laboratory prior to acidification.

5.0 MUNICIPAL PERMIT URBAN RUNOFF MONITORING REQUIREMENTS

Under Section II.B.2 of the Receiving Waters and Urban Runoff Monitoring and Reporting Program No. R9-2001-0001 of the Municipal Permit, source identification monitoring within each watershed is required beginning no later than the 2008-2009 monitoring year. The Municipal Permit requires copermittees to collaborate in developing and implementing a monitoring program to identify sources of discharges of pollutants causing the priority water quality problems within each watershed. As a first step towards that, and to meet some of the objectives of the Authority's Sampling Plan i.e., 1) to identify and rate sources of POCs at SDIA in terms of annual mass loading in storm water, the potential for reduction through BMP implementation, and the best combination of sources to address through BMP implementation to achieve pollutant load reduction objectives, and 2) to monitor the performance and effectiveness of BMPs, the Authority conducted source identification and BMP effectiveness monitoring during the 2006-2007 monitoring season. The BMP effectiveness program is a multiple year program and will continue into the 2007-2008 monitoring season and beyond. These parts of the monitoring program are part of the program effectiveness assessment, which is described in Section 13.

6.0 SAMPLING AND ANALYSIS

POCs at SDIA were identified as described in Section 3.0, above. Copper and zinc were identified as the priority POCs because they exceeded the benchmark values more than 50 percent of the time, i.e., they had the highest exceedance frequencies airport-wide and for most of the outfalls and drainage basins. The other analytes that exceeded benchmark values are considered, for the purposes of the source identification and BMP effectiveness sampling, secondary POCs. The source identification objectives focus on the primary POCs. However, the secondary POCs are also anticipated to benefit from the implementation of BMPs designed to address the primary POCs.

The Authority has set long term (10-year) pollutant load reduction objectives of 65 pounds per year for copper and 35 pounds per year for zinc. Short term (5-year) objectives are 33 pounds per year of copper, and 17 pounds per year of zinc, following production of a BMP Recommendations Report by MACTEC in 2005. Since source control BMPs will be implemented to meet short-term pollutant load reduction objectives, source identification sampling will help to prioritize the implementation of treatment control BMPs to meet the long-term pollutant load reduction objectives. Measuring BMP effectiveness is included for both discrete treatment control BMPs and BMP systems. BMP systems are considered combinations of source and treatment controls implemented throughout a watershed or basin that together can provide a reduction in pollutants. For both treatment control BMPs and BMP systems, objectives are to assess whether the BMPs are reducing pollutant concentrations (for both primary and secondary POCs) below benchmark values and whether BMPs are achieving the short-term and long-term pollutant load reduction objectives for the primary POCs (i.e., copper and zinc).

6.1 SOURCE IDENTIFICATION SAMPLING

The objective of source identification is to identify and rate sources of pollutants of concern (POCs) at SDIA in terms of annual mass loading in storm water, the potential for reduction through BMP implementation, and the best combination of sources to address through BMP implementation to achieve pollutant load reduction objectives. The number of samples required to characterize the probable sources of copper and zinc are based on the power analyses conducted during the development of the Authority's Sampling Plan. For airport operations related sources (i.e., runways, roofs, and aircraft loading/unloading areas), 14 samples must be collected for copper and 111 samples collected for zinc to assess (at a power of 80) whether mean concentrations are above benchmark values. For ground transportation-related sources (i.e., parking lots), 17 samples must be collected for copper and 205 samples collected for zinc to assess (at a power of 80) whether mean concentrations are above benchmark values, assuming certain mean concentrations are achieved. The number of samples required for copper

is considered a feasible number of samples to collect and analyze. The number of samples required for zinc, however, is not considered feasible. For the purposes of this sampling program, the number of samples required to estimate mean copper and zinc concentrations will be based on the number of samples required for copper. In summary, the number of samples required to characterize each possible source of the POCs is 14 for airport operations related sources and 17 for ground transportation related sources.

The minimum number of sampling locations was selected to meet the source identification objectives and achieve the required number of samples (based on the power analysis) within a one-year period. A one-year period was selected so that baseline source characterization data could be gathered prior to the implementation of enhanced source control BMPs identified in the BMP Recommendations Report. As such, fourteen sampling locations have been selected to characterize the quality of non-industrial storm water runoff associated with vehicle and aircraft use and emissions, atmospheric deposition, and galvanized metal structures, particularly metal roofs.

Sampling locations are described in Table 3. Sampling locations were selected to capture runoff from parking lots, runways, roofs, and aircraft loading/unloading areas. Samples of runoff from parking lots will help evaluate the concentration of POCs in storm water runoff from vehicle emissions and use and atmospheric deposition. Samples of runoff from runways and airport operations will help evaluate the concentration of POCs in storm water runoff from aircraft emissions and use and atmospheric deposition. Samples of runoff from roofs will help evaluate the concentration of POCs in storm water runoff from metal roofs and atmospheric deposition. Several of these locations are also used for BMP effectiveness evaluation.

Note that this sampling program will not quantify the specific contribution of POCs from atmospheric deposition. Both atmospheric deposition and vehicle and aircraft use and emissions may deposit POCs on a surface (for example, a parking lot). However, because BMPs would not necessarily depend on whether the POC originates from vehicle use or atmospheric deposition, the sampling program is not designed to differentiate these specific sources.

TABLE 3
SAMPLING LOCATIONS FOR SOURCE IDENTIFICATION

Source	Drainage Basin	Sampling Location ID	Location Description	Sampling Method	Samples per Season	Number of Seasons to Sample
Parking Lot	8	S-B08-1	Sheet flow at storm drain curb inlet 08-45-I. Combine with S-B08-2	Composite ²	6	1
	8		Sheet flow at storm drain curb inlet on S end of T1 parking lot entry road. Combine with S-B08-1			
	9	S-B09-3 (same location as C-B09-10)	Sheet flow at storm drain curb inlet at SE corner of T2 parking lot/road into parking lot. Combine with S-B11-4	Composite ²	6	1
	11	S-B11-4	Sheet flow at Manhole 11-10-M. Combine with S-B09-3			
	5	S-B05-5 (same location as C-B05-3)	Inlet pipe in storm drain inlet	Composite ²	6	1
Roof Runoff	7	S-B07-6	Flow from downspout on SDCRAA employee office building	Grab ³	5	1
	12	S-B12-7	Flow from downspout on Terminal 2 Building	Grab ³	5	1

TABLE 3 (continued)
SAMPLING LOCATIONS FOR SOURCE IDENTIFICATION

Source	Drainage Basin	Sampling Location ID	Location Description	Sampling Method	Samples per Season	Number of Seasons to Sample
Roof Runoff (continued)	8	S-B08-8	Flow from downspout on Terminal 1 Building	Grab ³	5	1
Runway	8	S-B08-9	Sheet flow from runway at storm drain inlet	Grab ¹	5	1
	3	S-B03-10	Sheet flow from runway at storm drain inlet	Grab ¹	5	1
	6	S-B06-11	Sheet flow from runway at storm drain inlet	Grab ¹	5	1
Airport Operations	6	S-B06-12	Inlet pipe in trench drain	Composite ²	5	1
Aircraft Loading/Unloading	12	S-B12-13	Sheet flow from the loading area of Terminal 2	Composite ²	5	1
	8	S-B08-14 (same location as C-B08-8)	Sheet flow from the loading area of Terminal 1	Composite ²	5	1

Notes:¹ Grab sample will be collected using a Vortex sampler.² Composite sample will be collected using automated sampling equipment.³ Grab sample will be collected manually.

Sampling Locations S-B08-1 and S-B08-2 are sheet flow locations from the Terminal 1 parking lot. These samples should be combined into one sample to provide a more representative sample of the entire parking lot. Similarly, Sampling Locations S-B09-3 and S-B11-4, and sheet flow from the Terminal 2 parking lot, should be combined. Sampling Location S-B05-5 was selected to characterize runoff from the large rental car storage lot in drainage basin 5.

To characterize runoff from the roofs of buildings at SDIA, Sampling Locations S-B07-6, S-B12-7, and S-B08-8 were assigned to downspouts representative of various roofing materials and ages at SDIA. Both terminals have multi-ply, built-up, shingle asphalt roofs with lead and galvanized steel flashing. Sampling Locations S-B08-9, S-B03-10, and S-B06-11 were chosen to characterize runoff from the runway, and Sampling Locations S-B12-13 and S-B08-14 were chosen to characterize runoff from aircraft loading/unloading areas. Sampling Location S-B06-12 was chosen to be a composite sample representing runoff from Drainage Basin 6, which has the highest RPR of all the drainage basins. This drainage basin is comprised of primarily airport operations and industrial land uses and contains a variety of both structural and non-structural BMPs.

Samples from the source identification sampling locations will be analyzed for the primary POCs (total and dissolved copper and zinc). Additionally, to help assess the treatability of storm water runoff at SDIA, particle size distribution analysis will be performed at Sampling Location S-B06-12. This sampling location is considered to be representative of other drainage basins in terms of particle size distribution. Source identification samples should be collected over one wet season. Depending on success, this schedule will provide approximately 15 data sets for each airport operations related source and 18 data sets for each ground transportation related source (i.e., parking lots). This meets the goals of 14 samples for airport operations and 17 samples for ground transportation.

6.2 BMP EFFECTIVENESS SAMPLING

The objectives of BMP Effectiveness sampling are to monitor the performance and effectiveness of BMPs. Although this is also stated as a requirement and objective of the General Industrial Permit, this objective is identified separately to allow more flexibility in monitoring the performance of BMPs beyond the requirements identified in the General Permit. Structural and non-structural BMP performance will be evaluated at locations that receive runoff from both industrial and non-industrial drainage basins to assess whether the BMPs are reducing pollutant concentrations (for both primary and secondary POCs) below benchmark values and whether BMPs are achieving the short-term and long-term pollutant load reduction objectives for the primary POCs (i.e., copper and zinc). The number of samples required to evaluate the effectiveness of treatment control BMPs and BMP systems is based on the power analyses conducted. Based on the power analysis, copper requires a reasonable number of samples to produce meaningful data when comparing to benchmark values, assessing potential changes in mean concentrations over time, and detecting differences between influent and effluent concentrations.

Based on the power analyses, 14 samples are required to compare mean concentrations to benchmark values. A total of 14 samples is also required to detect an 80 percent reduction in influent concentrations, either through treatment at a discrete treatment control BMP, or through treatment by a BMP system.

Sampling locations for treatment control BMP monitoring and BMP system monitoring are discussed below. The effectiveness of BMP systems (i.e., combinations of structural and non-structural BMPs) will be evaluated by conducting a paired watershed study and collecting flow-weighted composite samples from a representative drainage basin and tracking trends as BMPs become fully implemented over time.

TREATMENT CONTROL BMP MONITORING

The locations for treatment control BMPs will depend on the specific BMPs constructed. As outlined in the BMP Recommendations Report, these may include one or more of the following:

- Sand filters,
- Detention basins,
- Biofiltration strips and swales,
- Bioretention.

For the treatment control BMPs being considered for implementation, monitoring locations would consist of an influent location and an effluent location at the BMP. If multiple BMPs of one type are implemented, then influent and effluent monitoring will be conducted at one BMP representative of the BMP type implemented. Differences in the design and/or construction of a BMP type may dictate the monitoring of more than one of the same type of BMP.

PAIRED WATERSHED MONITORING

A paired watershed study will be conducted to evaluate BMP system effectiveness. In a paired watershed study, one watershed is considered the control. Within the control watershed, BMPs are neither added nor removed. The other watershed is the treatment or test watershed where new BMPs are implemented.

Two periods of monitoring are required: calibration and treatment. During the calibration period, the two watersheds are treated identically and a relationship between the control and treatment watersheds is established. Two such studies are recommended in this program. The first consists of the parking lots for Terminal 1 and Terminal 2. The second study is between the drainage basins for Outfalls 8 and 12.

Table 4 presents the sampling locations for these two studies. These locations were selected from the source identification sampling locations to minimize additional sampling locations.

TABLE 4
SAMPLING LOCATIONS FOR BMP EFFECTIVENESS

Drainage Basin	Sampling Location ID	Samples per Season	Number of Seasons to Sample	Description
Paired Watershed Monitoring				
8	S-B08-1 and S-B08-2	6	3 (calibration period) + 3 (treatment period)	Control watershed representing parking lots
9, 11	S-B09-3 and S-B11-4	6	3 (calibration period) + 3 (treatment period)	Test watershed representing parking lots
12	S-B12-13	5	3 (calibration period) + 3 (treatment period)	Control watershed representing airport operations
8	S-B08-14	5	3 (calibration period) + 3 (treatment period)	Test watershed representing airport operations
Trend Analysis Monitoring				
6	S-B06-12	5	10	Priority target for BMPs (highest RPR) to determine reduction over time.

The parking lot study will compare lots that are used primarily for short-term, civilian parking. Sample Locations S-B08-1 and S-B08-2 will be combined to form one sample representing the parking lot for Terminal 1. Assuming this lot is designated the control sample, no BMPs will be added to or removed from this lot, and the BMPs currently in place will be maintained at their current level. Sample Locations S-B09-3 and S-B11-4 will be combined to form one sample representing the parking lot for Terminal 2. BMPs currently in place within the parking lot drainage area for Terminal 2 should be maintained at their current level during the calibration period. After the calibration period is over, BMPs can then be added and/or modified.

The second study will compare runoff water quality from drainage basins 8 and 12. These basins are mostly comprised of industrial and airport operations land uses. Sampling Location S-B08-14, which also represents Sampling Location C-B08-8, will represent runoff from the airport operations use of drainage basin 8. Sampling Location S-B12-13 will represent runoff from drainage basin 12. Drainage basin 12 is the recommended control watershed because it had a lower RPR in 2005. Based on the RPRs, adding to

and/or modifying the BMPs in drainage basin 8 are anticipated to be more effective at reducing the overall pollution load at SDIA than adding to and/or modifying BMPs in drainage basin 12.

The calibration period for these studies is expected to be three years. 14 samples are required for copper. Three years will provide 15 samples. The data should be tested using the t-test each year that samples are collected. If the data has a low variability then statistically meaningful calculations may be performed on less than 14 samples. On the other hand, the data may indicate that more samples must be collected. More samples may also be required to perform meaningful calculations for analytes other than copper.

When a sufficient number of results have been collected to derive regression relationships between the control and treatment watersheds, the treatment period may begin. For planning purposes, it is assumed that the treatment period will last for three years. However, data from the calibration period will be used to calculate the number of samples required for the treatment period. A power analysis will be performed to determine the number of samples necessary to detect the predicted change in the treatment watershed. As discussed above, the goal is to detect a reduction in the copper concentration of 83 percent, which is equivalent to 0.011 mg/L.

TREND ANALYSIS MONITORING

Samples will be collected for BMP effectiveness monitoring at Sampling Location S-B06-12. Drainage basin 6 had the highest RPR in 2005 and is, therefore, a priority target for BMP implementation. Trend analysis will be performed on data from these samples from this location. The goal is to obtain enough data to confidently establish a downward trend. The data must be carefully checked to meet all assumptions of the analysis before conclusions are drawn. The lack of an obvious downward trend does not necessarily mean BMPs are not effective. This location should be sampled for a minimum of ten years, or until all planned BMPs have been fully implemented.

All BMP effectiveness samples will be analyzed for the primary POCs (total and dissolved copper and zinc) and secondary POCs. Secondary POCs are (in order of descending benchmark exceedance frequency): total aluminum, total iron, biological oxygen demand, chemical oxygen demand, total suspended solids (TSS), oil and grease, specific conductance, total lead, ethylene glycol, and pH. The required samples can be collected in 3 years if 5 samples are successfully sampled per year for airport operations and 6 samples are successfully sampled per year for ground transportation.

7.0 RECORDS

For details on record keeping requirements for wet weather monitoring under the General Industrial Permit, see Sections 7 and 9 in the SWMP.

8.0 ANNUAL REPORTS

The Authority is subject to two annual reporting requirements, detailed below.

8.1 GENERAL INDUSTRIAL STORM WATER PERMIT REQUIREMENTS

For reporting requirements under the General Industrial Storm Water Permit, see Sections 7 and 9 of the SWMP.

8.2 SAN DIEGO MUNICIPAL PERMIT REQUIREMENTS

The Authority's Annual Report for the San Diego Municipal Permit shall be a documentation of the activities conducted by the Authority during the past annual reporting period to meet all requirements of section D. The reporting period for these annual reports shall be the previous fiscal year. For example, the report submitted September 30, 2008 shall cover the reporting period July 1, 2007 to June 30, 2008. It shall, at a minimum, contain the following:

- Comprehensive descriptions of all activities conducted by the Authority to meet all requirements of each component of the JURMP Sections of the permit.
 - D.1: Development Planning Component
 - D.2: Construction Component
 - D.3: Existing Development Component (Including Municipal, Industrial, Commercial, Residential)
 - D.4: Illicit Discharge Detection and Elimination Component
 - D.5: Education Component
 - D.6: Public Participation Component
 - Fiscal Analysis
 - I.1: Program Effectiveness Assessment
- An accounting of all:
 - Reports of illicit discharges (i.e., complaints) and how each was resolved (indicating referral source);
 - Inspections conducted;
 - Enforcement actions taken;
 - Education efforts conducted.
- Public participation mechanisms utilized during the SWMP implementation process;
- Proposed revisions to the SWMP;
- A summary of all urban runoff related data not included in the annual Copermittee monitoring report (e.g., special investigations);
- Budget for upcoming year;
- Identification of management measures proven to be ineffective in reducing urban runoff pollutants and flow;
- Identification of water quality improvements or degradation.

The report shall also include an executive summary, introduction, conclusion, recommendations, and signed certified statement.

Appendix D – Stormwater Monitoring Programs



**ATTACHMENT D1-A
TRASH ASSESSMENT PROGRAM**

Final Monitoring Workplan for the Assessment of Trash in San Diego County Watersheds

Prepared For:

The County of San Diego

August 30, 2007



FINAL

Monitoring Workplan for the Assessment of Trash in San Diego County Watersheds

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TABLE OF CONTENTS

1.0	INTRODUCTION	2
1.1	Background	2
1.2	Monitoring Objectives and Assessment Questions.....	3
2.0	MONITORING DESIGN	4
2.1	Trash Assessment.....	4
2.1.1	Locations.....	4
2.1.2	Frequency.....	5
2.1.3	Trash Assessment Procedures.....	5
3.0	ASSESSMENT AND REPORTING	7
3.1	Trash Assessment.....	7
3.2	Reporting.....	8
4.0	PROGRAM ASSESSMENT AND MODIFICATION	9
5.0	REFERENCES	9

ATTACHMENT 1 Trash Assessment Form

LIST OF TABLES

Table 1.	Trash Monitoring Locations and Number of Annual Monitoring Events.	4
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1.0 INTRODUCTION

In accordance with the Receiving Waters and Urban Runoff Monitoring and Reporting Program No. R9-2007-0001 permit requirements (Permit), the San Diego Municipal Copermittees (Copermittees) are required to assess the presence of trash in receiving waters and urban runoff at each dry weather field screening site, mass loading station (MLS), and temporary watershed assessment station (TWAS) in the San Diego Watersheds. This trash assessment program is designed to provide information on the spatial extent and relative amount of trash present, as well as the nature of the trash present. Permit Section II A. 1. k. (Receiving Waters Monitoring Program) states: *“The Copermittees shall collaborate to develop and implement a program to assess the presence of trash (anthropogenic litter) in receiving waters. The program shall collect and evaluate trash data in conjunction with collection and evaluation of analytical data.”* Additionally, Section II. B.3.c. (7) (Dry Weather field Screening and Analytical) requires the Copermittees to: *“Assess the presence of trash in receiving waters and urban runoff at each dry weather field screening or analytical monitoring station.”*

1.1 Background

Trash is not only an aesthetic concern, but one which can adversely affect water quality, fish and wildlife, and the beneficial uses of water bodies. It can affect beneficial uses such as recreation in water bodies (fishing and swimming) and degrade aquatic habitat. Trash may become marine debris and has the potential to harm fish and wildlife as it travels through streams and rivers and reaches the ocean. Most water quality concerns from trash are related to wildlife in the form of entanglement and ingestion. In addition to wildlife, the human health effects from poor water quality are sometimes a result of discarded medical waste, human or pet waste, and broken glass. Trash “hotspots” such as illegal dumping, littering, and/or accumulation of trash are also of concern from a management perspective. Trash in the form of leaf litter or other organic materials (such as from intentional dumping) can be of concern and cause nutrient and ecosystem imbalance in streams and rivers. During storms, trash may block drainage areas and result in flooding that erodes soils by undercutting stream banks. Excess suspended solids (including trash) are detrimental to aquatic organisms and may scour stream beds and damage habitats.

The San Francisco Bay Region implemented a rapid trash assessment from 2002 through 2005 in order to support Clean Water Act Section 303(d) listing decisions and, in conjunction with the SWAMP program, produced a document called “A Rapid Trash Assessment Method Applied to Waters of the San Francisco Bay Region: Trash Measurement in Streams.” The Trash Assessment Program for San Diego Watersheds will parallel the approach outlined in this document. Other work in the San Diego area has been conducted by the City of San Diego Storm Water Division, which currently assesses trash at various locations in Chollas Creek. The monitoring is done once a year at dry weather sites and employs a simplified version of the ranking system developed by the San Francisco Bay Region. A similar assessment is being conducted in Forrester Creek by the City of El Cajon. In an attempt to expand upon these studies and accurately represent the range of conditions found in San Diego Watersheds, the Dry-Weather Monitoring Sub-Workgroup has developed a trash assessment form (Attachment 1) which provides five categories to describe the abundance of trash.

1.2 Monitoring Objectives and Assessment Questions

The overall monitoring objective is to assess the relative amounts of trash within the San Diego Watersheds. Until now, the nature of trash within most watersheds has been unknown and, although problem areas have been identified, it is unclear how much trash can be attributed to urban runoff. The primary objective of this program is to develop a qualitative assessment of trash in San Diego Watersheds by providing information on the spatial extent and relative amount of trash present, as well as the nature of the types of trash present. This program will also evaluate the spatial and temporal variability in trash distribution and assist the Copermittees in setting watershed priorities.

Section II.A.9 of the Permit Fact Sheet states that *“Since a monitoring program for trash is new, the Copermittees are provided significant leeway in the development and implementation of the program. The Copermittees can utilize the flexibility incorporated into the MRP (Monitoring and Reporting Program) to develop a program that is workable for them while providing the necessary information.”*

In order to assess the presence of trash for use in this program, the following questions are asked:

Q1. Where is trash being detected in San Diego Watersheds?

By performing trash assessments at each of the MLS and TWAS during wet and dry weather events and at the dry weather monitoring locations during dry events using a standardized trash monitoring form (Attachment 1), the Copermittees will assess approximately 1,000 sites per year, which will determine where trash is being detected. This spatial information on trash will assist the Copermittees with identifying problem areas that will in turn be considered to develop regional and watershed priorities.

Q2. How many sites are identified as submarginal or poor?

At sites identified as submarginal or poor, the spatial extent, relative amounts, and nature of trash present will also be evaluated through the use of the standardized trash monitoring form mentioned in Q1 above (Attachment 1). These results will help the Copermittees identify the nature of problem areas and aid Copermittees in prioritizing sites. Sites can also be reviewed over time to evaluate any trends (positive or negative) on a jurisdictional, watershed and regional level. Sites will be assessed during the initial monitoring period (i.e. first reporting cycle). Recommendations for program refinements will be made based on the data gathered over the first year of program implementation. An overall evaluation of trash levels and potential sources within individual watersheds will be conducted as part of the Annual Regional Monitoring Report.

Q3. In locations identified as submarginal or poor, what is the nature of the types of trash present?

The nature of the types of trash identified at submarginal, and poor sites will help the Copermittees determine the potential sources and routes of trash which can then guide management actions. The potential implementation of management actions such as outreach

efforts to specific groups may be directed based on the information collected on the nature of trash.

2.0 MONITORING DESIGN

2.1 Trash Assessment

2.1.1 Locations

Trash assessments will be performed as part of the Regional Monitoring Program on a rotational basis during wet and dry weather monitoring at the locations discussed below.

Mass Loading Stations (MLS) and Temporary Watershed Assessment Locations (TWAS)

Trash assessment will be performed at MLS and TWAS monitoring sites during both dry ambient monitoring and storm event monitoring. These sites will provide information on the relative amounts of trash present in receiving waters. The minimum number of annual monitoring events required for each location is provided in Table 1. This schedule corresponds to that specifically outlined in the Permit.

Table 1. Trash Monitoring Locations and Number of Annual Monitoring Events.

Watershed	Permit Year 2007-2008		Permit Year 2008-2009*		Permit Year 2009-2010		Permit Year 2010-2011		Permit Year 2011-2012	
	MLS	TWAS	MLS	TWAS	MLS	TWAS	MLS	TWAS**	MLS	TWAS**
Santa Margarita River	4		1				4			
San Luis Rey River	4	4	1				4	4		
Loma Alta Creek		4						4		
Buena Vista Creek		4						4		
Agua Hedionda Creek	4	4	1				4	4		
Escondido Creek	4	4	1				4	4		
San Dieguito River	4	8	1				4	8		
Los Peñasquitos Creek	4	8	1				4	8		
Rose Creek						4				4
Tecolote Creek			1		4	4			4	4
San Diego River			1		4	12			4	12
Chollas Creek	4		1		4		4		4	
Sweetwater River			1		4	4			4	4
Otay River						4				4
Tijuana River			1		4	8			4	8

*Bight '08 Monitoring Year

** TWAS Locations may change based on information gathered during the first rotation

Dry Weather Monitoring Stations

Trash assessment will be conducted at established dry weather field screening locations. Stations within each Copermittee's jurisdiction will be identified in the Jurisdictional Urban Runoff Management Plans to be submitted in January 2008.

2.1.2 Frequency

The Trash Assessment Form will be completed at each location during each monitoring event. MLS and TWAS locations will be monitored on a rotational basis between the northern and southern watersheds during two wet weather and two dry weather (ambient) monitoring events per year. Each of the selected dry weather monitoring locations will be assessed for trash at least once between May 1st and September 30th of each year (or as often as the Copermittees determine is necessary to comply with permit requirements).

2.1.3 Trash Assessment Procedures

Prior to a site visit, it is important to identify personnel who are familiar with the site and have some local knowledge of the general area. There should also be a general consensus among the monitoring team as to the extent of the area to be assessed. When a site is first established, the length of the site being assessed should be determined as a channel or shore length. When possible, distinctive site characteristics, such as a large boulder or tree, should be used as starting/finishing length landmarks. The upper boundary of each bank should be used for the width of the monitoring site. This can be determined visibly by either a debris or water line. When determining site boundaries, it is important to remember that the intent of the trash assessment is to determine the trash which has been mobilized or has the potential to be mobilized by water at the defined locations.

Upon arrival at a designated site, a qualitative estimate of the presence of trash should be determined and documented in the top portion of the Trash Assessment Form (Attachment 1). This is a qualitative assessment which should reflect a first impression of the site. There are five categories to describe the amount and extent of trash at each site:

- *Optimal:* On first glance, no trash is visible. Little or no trash (<10 pieces) is evident when the evaluated area is closely examined for litter and debris.
- *Suboptimal:* On first glance, little or no trash is visible. After close inspection, small levels of trash (~10-50 pieces) are evident in the evaluated area.
- *Marginal:* Trash is evident in low to medium levels (~51-100 pieces) on first glance. Evaluated area contains litter and debris. Evidence of site being used by people: scattered cans, bottles, food wrappers, blankets, or clothing are present.
- *Submarginal:* Trash distracts the eye on first glance. Evaluated area contains substantial levels of litter and debris (>100-400 pieces). Evidence of site being used frequently by people: many cans, bottles, food wrappers, blankets, or clothing are present.
- *Poor:* Site is significantly impacted by trash. Evidence of trash accumulation behind a constriction point or evidence of excessive dumping. Evaluated area contains substantial levels of litter and debris (>400 pieces).

Sites will also be evaluated to determine the threat to human health and/or threat to aquatic health. In some cases, sites may pose a threat to both categories. The evaluation of each category is presented as follows:

- Threat to Human Health - Site poses a threat to human health via swimming, wading, or walking through the area. Trash and debris has the potential to contain chemicals that may bioaccumulate, transmit dangerous bacteria (e.g. medical waste, diapers, human waste), or has the potential for physical harm (sharps, entanglement, nails, etc...). Comments should be added at the bottom of the field sheet for clarification.
- Threat to Aquatic Health – Site poses a threat to aquatic health or other wildlife (via contact, ingestion, entanglement, etc...) from the trash and debris present. Trash and debris such as small floatable material that is persistent and can be transported long distances may resemble food and may be ingested. Wire, plastic, fishing line, and other material that has the potential for entanglement. Oil and other visible chemicals or chemical containers falls in this category. Comments should be added at the bottom of the field sheet for clarification.

If the quantity of trash falls into the submarginal, or poor category, assessments of the type(s) of trash present, the potential trash mobilization route, and the potential source will occur. Categories of trash types listed on the form include:

- Automotive
- Biohazard waste
- Business Related
- Cigarette Butts
- Construction
- Fabric/Clothing
- Food Packaging
- Food Waste
- Household
- Shopping Carts
- Toxic
- Yard Waste

The types of trash present should be ranked in order of their prevalence (from 1 to 12, where 1 is the most prevalent and 12 is the least prevalent). Next, the user should try to determine the potential mobilization route for the trash (e.g., dumping, littering, or upstream sources). If the route is unknown, then it may be described as “unable to determine.” Finally, the user should check the potential sources of the trash. The form includes the following source categories:

- Household
- Construction
- Commercial
- Industrial
- School
- Transient

Again, if the source is unknown, the form includes the category “unable to determine.” Prior knowledge of the surrounding area will help when making assumptions about the potential route and sources of trash present.

3.0 ASSESSMENT AND REPORTING

3.1 Trash Assessment

The regional and jurisdictional trash assessments provide Copermittees with valuable information they can use to make informed decisions on how to address problem areas. Information such as potential sources and/or types of trash may guide the Copermittees efforts on outreach to the appropriate target groups. This information may also be used to guide the selection of management actions where appropriate. In order to evaluate the nature and extent of trash accumulation, the following questions are asked as the basis for the monitoring design:

Q1. Where is trash being detected in San Diego Watersheds?

The presence of trash in receiving waters and MS4 locations will be differentiated and illustrated in tabular and graphical formats. GIS maps may also be used, when applicable, to depict the relative amounts of trash at the MLS, TWAS and dry weather monitoring locations across San Diego County.

Q2. How many sites are identified as submarginal or poor?

Summarizing information on how many sites with submarginal, or poor trash levels can provide a general overview of where problem areas occur throughout the region. The number of problem sites can be tracked annually and evaluated over time. This type of assessment can be conducted on both a regional and watershed scale, as well as jurisdictionally in the Dry Weather Monitoring reports. General information on the number of submarginal, or poor sites per watershed will be presented in tabular and graphical formats in regional and watershed assessments. Jurisdictional assessments could also track problem sites over time to determine if management efforts are working. Evaluating the effectiveness of outcomes such as behavior changes and load reductions, where applicable, may be appropriate after evaluating multiple years of data and observing improvements or declines in site conditions.

Q3. In locations identified as submarginal, or poor, what is the nature of the types of trash present?

In locations where submarginal, or poor trash levels are present, additional analysis of the nature of trash present will be performed. These analyses may differentiate between dry and wet weather monitoring events, as well as between receiving waters and MS4 monitoring locations. During the first year assessment period, general information on the number of submarginal, or poor sites per watershed along with the predominant trash types and potential sources will be presented in tabular and graphical formats in regional and watershed assessments. Additionally, the number of sites determined to be threats to human and/or aquatic health will be presented in tabular format. The information assessed may then be used to identify regional strategies to develop targeted outreach strategies, where applicable. When appropriate, these data could be

used by watershed groups and/or jurisdictions to single out a predominant source and/or type of trash that commonly occurs. The data may also help guide the selection of management actions where appropriate.

3.2 Reporting

Trash assessment reporting will be presented on a jurisdictional basis in the Jurisdictional Urban Runoff Monitoring Program (JURMP) Reports and on a watershed basis in the Annual Regional Monitoring Report. The Annual Regional Monitoring Report will include summary statistics of trash assessment data within each watershed management area assessment section. Copermittees will also provide jurisdictional trash assessments in their individual dry weather reports contained in their JURMPs. These assessments will follow the Permit requirements for reporting the dry weather monitoring program. Trash monitoring data from jurisdictional dry weather monitoring and MLS/TWAS monitoring will be assessed by modifying the current Watershed Data Assessment Framework used for establishing frequency of occurrence for water quality parameters. This assessment will provide the Copermittees with information needed to make informed decisions on where to address problem areas related to trash. The diamond ranking system for determining constituent of concern (COC) frequency of occurrence rankings of “high”, “medium”, or “low” will be used to assess the watersheds trash data. These criteria will take into account the dry weather monitoring and MLS/TWAS sites with submarginal, or poor assessments only; and classify each COC as high, medium or low frequency of occurrence in the watershed. The classification of COC can change from year to year in response to the changes in the levels of trash being identified within the watershed.

4.0 Program Review and Modification

As stated previously in this document, Order 2007-0001 provides the Copermittees flexibility to develop a workable trash assessment program. Specifically, section II.A.9 of the Permit Fact Sheet states:

“Since a monitoring program for trash is new, the Copermittees are provided significant leeway in the development and implementation of the program. The Copermittees can utilize the flexibility incorporated into the MRP (Monitoring and Reporting Program) to develop a program that is workable for them while providing the necessary information.”

The program described in this document meets the Permit criteria for a trash monitoring program. As stated previously in this program, the initial year of trash monitoring focuses on qualitative assessments of trash at sites within the region. This was determined to be the most acceptable approach because it enables Copermittees to collect a relatively consistent set of data, while making initial assessments of the overall impacts of trash within the region. To date, Copermittees cannot be certain that a high number of sites are impacted with trash. More importantly, Copermittees need to ensure that the data they collect can be directly related to making management decisions (ie site cleanups, increased BMPs, etc) and to water quality improvements.

Because the program is newly developed and has not yet been field tested, it is appropriate to assume that modifications may need to be made after an initial assessment of the data collected.

Copermittees intend to evaluate the data and determine where and how program modification will be made. Particularly important will be data collected from sub-marginal and poor sites. Where initial data suggests that the incorporation of quantitative assessments will lead to improvements in water quality, then Copermittees will modify the program to include quantitative measures.

5.0 REFERENCES

California Regional Water Quality Control Board, San Diego Region. 1994. *Water Quality Control Plan for the San Diego Basin* (9).

California Regional Water Quality Control Board, San Francisco Region. 2007. *A Rapid Trash Assessment Method Applied to Waters of the San Francisco Bay Region: Trash Measurement in Streams*.

ATTACHMENT 1: TRASH ASSESSMENT FORM

Draft Trash Assessment Form

SITE ID: _____

DATE: _____

LOCATION: _____

TIME: _____

OBSERVER: _____

PREVIOUS TRASH ASSESSMENT RATING (IF APPLICABLE):

ESTIMATED AREA OF ASSESSMENT L X W (FT):

Amount and Extent of Trash	
EVALUATION OF TRASH INCLUDES*: <input type="checkbox"/> MS4 <input type="checkbox"/> RECEIVING WATER <input type="checkbox"/> BOTH	
<input type="checkbox"/> Optimal	On first glance, no trash visible. Little or no trash (<10 pieces) evident when evaluated area is closely examined for litter and debris.
<input type="checkbox"/> Suboptimal	On first glance, little or no trash visible. After close inspection small levels of trash (~10-50 pieces) evident in evaluated area.
<input type="checkbox"/> Marginal	Trash is evident in low to medium levels (~51-100 pieces) on first glance. Evaluated area contains litter and debris. Evidence of site being used by people: scattered cans, bottles, food wrappers, blankets, or clothing present.
<input type="checkbox"/> Submarginal	Trash distracts the eye on first glance. Evaluated area contains substantial levels of litter and debris (>100- 400) . Evidence of site being used frequently by people: many cans, bottles, food wrappers, blankets, or clothing present.
<input type="checkbox"/> Poor	Site is significantly impacted by trash. Evidence of trash accumulation behind a constriction point or evidence of excessive dumping. Evaluated area contains substantial levels of litter and debris (>400 pieces).

* In areas where receiving water is accessible and adjacent to dry weather site, trash evaluation must include receiving water.

Site Evaluation for Threat to Human Health and/or Aquatic Health	
<input type="checkbox"/> Threat Human Health	Site poses a threat to human health via swimming, wading, or walking through the area. Trash and debris has the potential to contain chemicals that may bioaccumulate, transmit dangerous bacteria (e.g. medical waste, diapers, human waste), or has the potential for physical harm (sharps, entanglement, nails, etc...). Comments should be added for clarification .
<input type="checkbox"/> Threat to Aquatic Health	Site poses a threat to aquatic health or other wildlife (via contact, ingestion, entanglement, etc...) from the trash and debris present. Trash and debris such as small floatable material that is persistent and can be transported long distances may resemble food and may be ingested. Wire, plastic, fishing line, and other material that has the potential for entanglement. Oil and other visible chemicals or chemical containers falls in this category. Comments should be added for clarification.

- Complete the following section for Marginal, Submarginal, and Poor Evaluations ONLY

TYPE	Ranking or Count by Type *	POTENTIAL ROUTE (CHECK UP TO 2)				POTENTIAL SOURCE (CHECK UP TO 2)						
		Dumping	Littering	Upstream	Unable to determine	Household	Construction	Commercial	Industrial	School	Transient	Unable to determine
Automotive												
Biohazard Waste												
Business Related												
Cigarette Butts												
Construction												
Fabric/Clothing												
Food Packaging												
Food Waste												
Household												
Shopping Carts												
Toxic												
Yard Waste												

* Only rank the types of trash PRESENT in evaluated area from 1 through 12 (1 is most prevalent – 12 is least prevalent).
DO NOT rank types of trash that are not present in evaluated area.

Comments: _____

Note: This draft form may be updated by the Dry Weather Monitoring Workgroup

Appendix D – Stormwater Monitoring Programs



APPENDIX E
TENANT SUMMARY SHEETS

Appendix E - Tenant Summary Sheets



Tenant Summary Sheet

Tenant:

Air Canada Jazz

SIC Code: 4512, 4522

Primary Activity: Passenger Carrier

Drainage Area: 8

Nearst MS4 inlet: 200-1000 feet

Contact: Phil Delk, Station Manager

E: pdelk@atsstl.com, P: 619-220-0164, C: 310-227-7331

Secondary Contact: Alioune Sow, Regional Manager

P: 310-849-9935

Address: 3665 North Harbor Drive # 223
San Diego, CA 92101

Tenant Description and Primary Industrial Activities:

1. Operate out of Gate 20. Recently moved operations over from Terminal 1.
2. All equipment maintenance is done in the GES maintenance shop area by GES.
3. All aircraft maintenance is performed by Pacific Aviation.
4. Fueling is conducted by ASIG at gate. ATS conducts monthly station safety audits which include observing fueling. ATS requests a poundage of fuel to be put into the aircraft prior to each fueling.
5. Cleaning of vehicles is done at the triturator. No aircraft cleaning is performed at SDIA.
6. All ground handling activities are performed by ATS, a vendor to Air Canada Jazz.
7. Tenant uses the Airport Storm Water Management Plan, and does not have a Hazardous Materials Business Plan.

Significant Materials Potentially Exposed to Storm Water:

Potential Pollutant Sources

Aircraft Fueling
Aircraft Maintenance
Aircraft sanitary services
Fluid leaks from aircraft
Fuel spills

Potential Pollutants

Lavatory wastes, Antifreeze, Lubricants,
Oil and Grease, Lavatory chemicals,
Hydraulic Fluid, Fuel.

Best Management Practices and Current Structural Controls:

The list below identifies the BMP categories and specific BMPs that are applicable to Air Canada Jazz. Appendix B provides a description of each BMP category.

Applicable BMP Categories

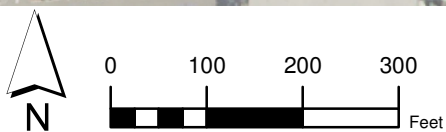
Non-Storm Water Management
Outdoor Equipment Ops and Maintenance Areas
Aircraft, Ground Vehicle and Equipment Maintenance
Aircraft, Ground Vehicle and Equipment Fueling
Aircraft, Ground Vehicle and Equipment Cleaning
Employee Training
Housekeeping
Safer/Alternative Products
Spill Prevention, Control, and Clean-up

BMP Number

SC01 - 1, 2, 4
SC02A - 2, 1
SC02B - 10, 3, 7, 1, 2, 4, 5, 6, 8
SC03 - 2, 4, 5, 6
SC04 - 1
SC10 - 2, 3, 1, 4
SC18 - 1, 4, 2, 3, 5
SC19 - 1, 2
SR01 - 2, 6, 1, 3, 5, 7, 8, 9

Structural control measures used at Air Canada Jazz:

Air Canada Jazz



PROJECT NO.:
5013-11-0003

DATE:
November 2011

DRAWN BY:
RMH

CHECKED BY:
AA



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**Air Canada Jazz
Operating Areas**

San Diego International Airport

FIGURE

E-1

Tenant Summary Sheet

Tenant:

Alaska

SIC Code: 4512, 4522

Primary Activity: Passenger Carrier

Drainage Area: 8, 12

Nearst MS4 inlet: < 200 feet

Contact: Danny Flores, Station Manager

E: danny.flores@alaskaair.com, P: 619-238-2042; C: 619-869-5412, F: 619-543-1318

Secondary Contact: Warren Paulsen, Line Maintenance Supervisor

E: warren.paulsen@alaskaair.com, P: 619-238-2011, C: 949-547-4896

Address: 3665 North Harbor Drive #228
San Diego, CA 92101

Tenant Description and Primary Industrial Activities:

1. Alaska operates out of Gates 16 through 18. Daily international flight arrives at Gate 20. May use gate 21 occasionally.
2. DAL Global Services is a subtenant to Alaska, and provides ground handling services and vehicle and equipment maintenance. Maintenance operations and materials for DAL have moved to the freight house. Minimal maintenance is performed at Gate 18.
3. Alaska performs minor aircraft maintenance at the gate. Materials are stored in caged area in the Alaska baggage area.
4. GAT is contracted to perform cargo handling.
5. Dry washing of aircraft has been suspended at SAN since the beginning of 2011. All dry washing is now performed out of Seattle.
6. Most significant materials are stored indoors in the Material Storage Area.
7. Deicing is no longer performed at SAN, although equipment is still available on ground. Until a new station takes this equipment ELS will continue to service as a functioning equipment.
8. Wastes are stored in the Waste Accumulation Area located next to deicing fluid.
9. Spill response material for fuel and lavatory spills is kept away from operational area near facility entrance.
10. Tenant does not have a Storm Water Pollution Prevention Plan but uses the Airport Storm Water Management Plan. Tenant has a Hazardous Materials Business Plan.

Significant Materials Potentially Exposed to Storm Water:

Potential Pollutant Sources

Aircraft fueling
Aircraft maintenance
Aircraft sanitary services
Cargo handling
Chemical storage
Equipment fueling
Equipment maintenance
Equipment storage
Fluid leaks from aircraft
Fuel spills
Outdoor waste storage
Vehicle fueling
Vehicle maintenance
Vehicle parking

Potential Pollutants

Lubricants, Degreasers (Citrus based),
Antifreeze, Lubricants, Paints, Degreasers
(Citrus based), Carburetor cleaner, Fuel,
Cleaning solutions, Oil and Grease,
Battery acid, Lavatory chemicals,
Lavatory wastes

Tenant Summary Sheet

Tenant:

Alaska

Best Management Practices and Current Structural Controls:

The list below identifies the BMP categories and specific BMPs that are applicable to Alaska. Appendix B provides a description of each BMP category.

<u>Applicable BMP Categories</u>	<u>BMP Number</u>
Non-Storm Water Management	SC01 - 1, 4, 2
Outdoor Equipment Ops and Maintenance Areas	SC02A - 1, 2
Aircraft, Ground Vehicle and Equipment Maintenance	SC02B - 10, 13, 3, 5, 6, 1, 11, 12, 2, 4, 7, 8, 9
Aircraft, Ground Vehicle and Equipment Fueling	SC03 - 1, 2, 4, 6, 5, 8
Aircraft, Ground Vehicle and Equipment Cleaning	SC04 - 1
Outdoor Loading/Unloading of Materials	SC06 - 2, 1, 4, 6, 7
Outdoor/Indoor Material Storage	SC07 - 12, 1, 11, 2, 3
Waste Handling and Disposal	SC08 - 10, 11, 2, 1, 12, 14, 3, 4, 5, 8, 9
Employee Training	SC10 - 1, 2, 3, 4
Lavatory Service Operation	SC11 - 4, 6, 10, 3, 5, 7, 8, 9
Housekeeping	SC18 - 1, 4, 2, 3, 5, 6, 7, 8, 9
Safer/Alternative Products	SC19 - 1, 2
Spill Prevention, Control, and Clean-up	SR01 - 6, 1, 2, 3, 5, 7, 8, 9

Structural control measures used at Alaska:

Vehicle washing area is sloped to divert wash water into a sump connected to the sanitary sewer.



0 100 200 300
Feet

PROJECT NO.:
5013-11-0003
DATE: November 2011
DRAWN BY: RMH
CHECKED BY: AA



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Alaska
Operating Areas
San Diego International Airport

FIGURE

E-2

Tenant Summary Sheet

Tenant:

Allegiant

SIC Code: 4512, 4522

Primary Activity: Passenger Carrier

Drainage Area: 12

Nearest MS4 inlet: 200-1000 feet

Contact: Phil Delk, Station Manager

E: pdelk@atsstl.com, P: 619-220-0164, C: 310-227-7331

Secondary Contact: Alioune Sow, Regional Manager

P: 310-849-9935

Address: 3707 N. Harbor Dr. T2E
San Diego, CA 92101

Tenant Description and Primary Industrial Activities:

1. Operate out of Gate 22 but occasionally use 21, 24, or 26. Gate 22 is shared by multiple airlines. Hawaiian operates out of Gate 22 daily and West Jet operates Thursdays and Sundays.
2. All equipment maintenance is done in the GES maintenance shop area by GES. Daily vital fluid checks are performed by ATS staff and monthly Preventive Maintenance Inspections are conducted by Tom Mescuranis of GES. ATS is a subtenant to Allegiant.
3. Fueling is conducted by ASIG at the Gates. ATS conducts monthly station safety audits which include observing fueling. ATS requests a poundage of fuel to be put into the aircraft prior to each fueling.
4. Cleaning of vehicles is done at the triturator facility. No aircraft cleaning is performed at SIDA.
5. All aircraft maintenance is performed by Pacific Aviation.
6. Tenant uses the Airport Storm Water Management Plan, and does not have a Hazardous Materials Business Plan.

Significant Materials Potentially Exposed to Storm Water:

Potential Pollutant Sources

Aircraft Fueling
Aircraft Maintenance
Aircraft sanitary services
Equipment fueling
Equipment maintenance
Fluid leaks from aircraft
Fuel spills
Vehicle fueling
Vehicle maintenance
Vehicle parking

Potential Pollutants

Oil and Grease, Sediment, Antifreeze,
Fuel, Lavatory chemicals, Lavatory wastes,
Battery acid, Lubricants,

Best Management Practices and Current Structural Controls:

The list below identifies the BMP categories and specific BMPs that are applicable to Allegiant. Appendix B provides a description of each BMP category.

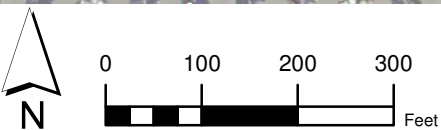
Applicable BMP Categories

Non-Storm Water Management
Outdoor Equipment Ops and Maintenance Areas
Aircraft, Ground Vehicle and Equipment Maintenance
Aircraft, Ground Vehicle and Equipment Fueling
Waste Handling and Disposal
Employee Training
Lavatory Service Operation
Potable Water System Flushing
Housekeeping
Safer/Alternative Products
Spill Prevention, Control, and Clean-up

BMP Number

SC01 - 1, 2, 4
SC02A - 2, 1
SC02B - 10, 11, 2, 3, 7, 1, 4, 5, 6, 8
SC03 - 1, 2, 4, 5, 6, 8
SC08 - 1, 12, 3, 4, 7, 8, 9
SC10 - 2, 4, 1
SC11 - 10, 4, 6, 3, 5, 7, 8, 9
SC14 - 1
SC18 - 1, 4, 2, 3, 5
SC19 - 1, 2
SR01 - 2, 6, 3, 5, 7, 8, 9

Structural control measures used at Allegiant:



PROJECT NO.:
5013-11-0003

DATE:
November 2011

DRAWN BY:
RMH

CHECKED BY:
AA



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**Allegiant
Operating Areas**
San Diego International Airport

FIGURE

E-3

Tenant Summary Sheet

Tenant:

Allied Aviation

SIC Code: 4581

Primary Activity: Fuel Storage

Drainage Area: 6, 7

Nearest MS4 inlet: < 200 feet

Contact: Nelson Kelly, General Manager

E: nelson.kelly@alliedaviation.com , P: 619-574-7808, C: 619-921-4883, F: 619-574-7810

Address: 3698-C Pacific Highway

San Diego, CA 92111

Tenant Description and Primary Industrial Activities:

1. Allied Aviation main office is located in the North Ramp Area next to the ARFF station. A second "remote" fueling facility is located near the airport cargo area.
2. The Fuel Storage Facility has the following:
 - a. Three dual-position jet fuel unloading islands with spill containment. These pumps are used only as emergency backups.
 - b. Two 1,000,000-gallon jet fuel ASTs within secondary containment.
 - c. One 15,000-gallon diesel underground storage tank (UST).
 - d. One 15,000-gallon auto gas UST.
 - e. A diesel/auto gas loading/unloading island with spill containment.
 - f. One 3,000-gallon waste fuel UST.
 - g. An equipment pad with spill containment.
 - h. A foam equipment building with a 1,500-gallon 3% aqueous foam concentrate AST.
 - i. A 12,000-gallon oil/water separator includes an 8,000-gallon holding tank to treat fuel spills.
3. The Remote Fueling Facility, operated by Allied Aviation and used by ASIG to load fuel trucks, has the following:
 - a. Four single-position refueler loading islands with spill containment.
 - b. One 12,000-gallon underground waste water tank.
 - c. One 3,000-gallon underground reclaimed fuel tank.
 - d. An underground pipeline conveying fuel from the Fuel Storage Facility.
4. A trailer unit or mini vac-truck of 250-gallon capacity is available to clean up spills.
5. NRC is the designated Oil Spill Response Organization (OSRO) to provide cleanup services in case of a spill.
6. ASIG and American Airlines trucks take Jet-A fuel at the Remote Fueling Facility and then take fuel to the gates. Jet fuel comes from 10th Avenue by an underground pipeline to two 1,000,000-gallon ASTs at the Fuel Storage Facility. An annual survey is performed on leak detection systems.
7. The only equipment maintenance performed is on the nozzle valves at the loading islands and the valves on pumps. Pipes at loading/unloading islands are painted.
8. At the Fuel Storage Facility, pig mats are placed over the storm drains that are not linked to the OWS, this is done only during fueling activities.
9. The emergency eye wash station is tested monthly and water is allowed to evaporate and does not reach the storm drain. Fire hydrants at the foam house are flush-tested annually producing a foam discharge. A bermed area is created in the parking lot and all discharge goes into the drains connected to the OWS. IPS performs this task.
10. The only outdoor area that is cleaned is the concrete pad at the loading islands in the Remote Fueling Facility. The area is steam cleaned, and the discharge enters the 12,000-gallon underground wastewater tank. Filter Recycling collects and disposes of wastewater. NRC picks up wastes.
11. The Firefighting equipment near the two 1-million gallon tanks are tested annually with water only to make sure adequate water pressure is available. The water is discharged into the storm drains. BMPs have been recommended to prevent discharge carrying any potential pollutants into the storm drain.
12. At the foam house, the test ports inside the house are used to test the water to foam ratio. IPS performs testing and berms testing area, captures, and disposes of discharge.
13. Tenant has a Storm Water Pollution Prevention Plan, Spill Prevention, Control, and Countermeasure Plan, and Facility Response Plan. Tenant filed a NOI to be covered under the NPDES general permit and has WDID # 9375012120.

Tenant Summary Sheet

Tenant:

Allied Aviation

Tenant Description and Primary Industrial Activities:

13. Filter Recycling services the OWS and the 12,000-gallon wastewater UST annually and collects all hazardous wastes. Annual sampling is done on the effluent side of the OWS and on the wastewater at the Remote Fueling Facility.

Significant Materials Potentially Exposed to Storm Water:

Potential Pollutant Sources

Building/ grounds maintenance
Chemical storage
Drainage system maintenance
Equipment maintenance
Equipment painting
Fire fighting equipment testing
Fuel storage
Loading of jet fuel into refueling trucks at loading islands
Loading/ offloading of gasoline or diesel
Offloading of off-spec jet fuel from a 3,000 gallon UST
Offloading of water/ fuel mixture from a 3,000 gallon UST
Outdoor waste storage
Pesticide/ herbicide usage
Vehicle parking

Potential Pollutants

Paints, Herbicides, Fuel, Sediment, Fuel, Solvents, Bulk auto gas and diesel, Pesticides/Herbicides/Fertilizers, Fire Fighting Foam (AFFF), Oil and Grease, Paints, Lubricants, Metals, Trash, Sump fuel, Antifreeze, Cleaning solutions, Solvents,

Best Management Practices and Current Structural Controls:

The list below identifies the BMP categories and specific BMPs that are applicable to Allied Aviation. Appendix B provides a description of each BMP category.

Applicable BMP Categories

Non-Storm Water Management
Outdoor Equipment Ops and Maintenance Areas
Aircraft, Ground Vehicle and Equipment Maintenance
Aircraft, Ground Vehicle and Equipment Fueling
Outdoor Loading/Unloading of Materials
Outdoor/Indoor Material Storage
Waste Handling and Disposal
Building and Grounds Maintenance
Employee Training
Fire Fighting Foam Discharge
Parking Lots
Storm Drain Maintenance
Housekeeping
Safer/Alternative Products
Spill Prevention, Control, and Clean-up
Treatment Controls

BMP Number

SC01 - 1, 2
SC02A - 2, 1
SC02B - 3, 5, 1, 11, 13, 2, 4, 6, 9
SC03 - 1, 10, 11, 2, 3, 4, 5, 6, 8, 9
SC06 - 1, 2, 3, 4, 5, 6, 7
SC07 - 1, 10, 11, 12, 3, 6, 7, 8, 9
SC08 - 5, 1, 10, 11, 12, 14, 2, 3, 4, 6, 7,
SC09 - 3
SC10 - 1, 2, 3, 4
SC13 - 1, 2, 3, 4, 5
SC16 - 1, 12, 2, 6
SC17 - 1
SC18 - 4, 1, 2, 3, 5, 6, 7, 8, 9
SC19 - 1, 2
SR01 - 6, 1, 10, 2, 3, 4, 5, 7, 8, 9
TC01 - 1, 2, 3, 4

Tenant Summary Sheet

Tenant:

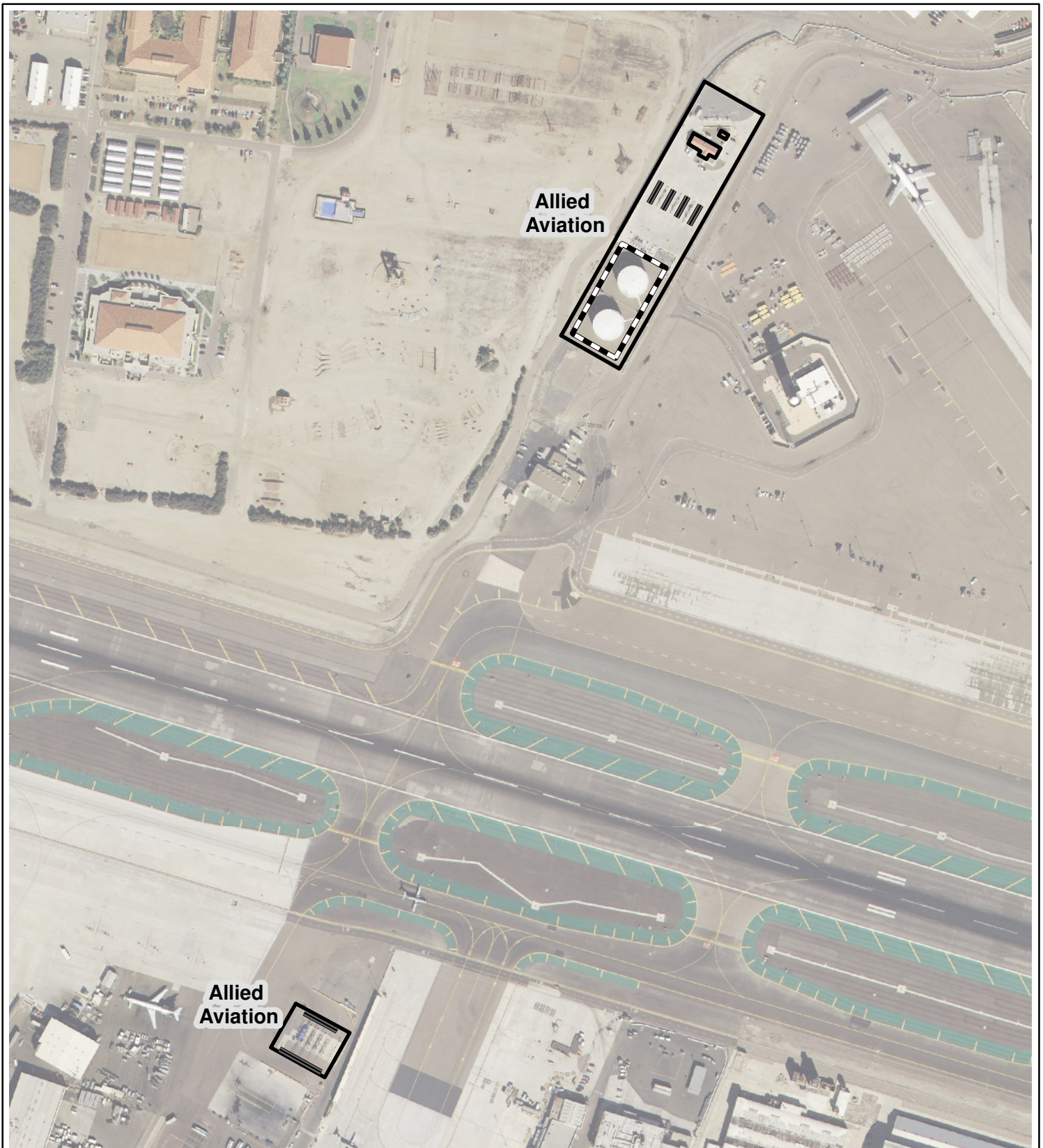
Allied Aviation

Structural control measures used at Allied Aviation:

Fueling areas are sloped to divert water into oil water separator.

Concrete secondary containment around storage tanks.

Concrete curbing to direct drainage.



Allied
Aviation

Allied
Aviation

Legend

— Berms

Secondary Containment Area



0 100 200 300 400 500
Feet

PROJECT NO.:
5013-11-0003
DATE: November 2011
DRAWN BY: RMH
CHECKED BY: AA



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**Allied Aviation
Operating Areas**
San Diego International Airport

FIGURE

E-4

Tenant Summary Sheet

Tenant:

American

SIC Code: 4512, 4522

Primary Activity: Passenger Carrier

Drainage Area: 7, 12

Nearest MS4 inlet: 200-1000 feet

Contact: Gib Anderson, Crew Chief-Autoshop

E: gib.anderson@aa.com, P: 619- 231-5483, C: 619-807-3052, F: 619-231-7271

Address: 3707 North Harbor Drive #103
San Diego, CA 92101

Tenant Description and Primary Industrial Activities:

1. American Airlines operates out of gates 27, 29, 30, 31, and 32 in Terminal 2 East.
2. American Airlines performs its own fueling of aircraft, vehicles, and equipment. Vehicles and equipment are fueled where they are parked. American has two (2) 8,400 gallon Jet A fueling trucks, one (1) 10,000 gallon Jet A fueling truck and one (1) combination 400 gallon diesel/350 gallon gasoline fueling truck.
3. Vehicle and equipment maintenance is performed inside or outside the Maintenance Shop (Auto shop).
4. Vehicle painting is performed inside or outside the Maintenance Shop using paint rollers.
5. Minor aircraft maintenance is performed at the gate. Major aircraft maintenance is performed in the wash rack area or north ramp.
6. Aircraft and vehicles are washed at the Aircraft Wash rack and at north ramp.
7. Five waste accumulation areas - one between Gates 31 and 32, two inside auto shop, one outside of auto shop, and one in stores next to auto shop.
8. Heritage Environmental Services collects American Airlines' hazardous wastes. Some are recycled and some are treated and disposed of.
9. During deicing operations, a scrubber is used to wash the deicing area and vacuum up wash water, which is drummed and disposed of by Heritage Environmental Services.
10. The County of San Diego inspects the sump at the aircraft wash rack every 6 months. American Airlines performs some maintenance and a contractor samples it and sumps it out when required.
11. Environmental Recovery Services come in and take samples from wash rack every 3 - 4 months.
12. American no longer does freight/cargo handling. GAT still receives deliveries (i.e. cabin supplies) for American.
13. Sump at aircraft washrack is cleaned every 6 months by Environmental Recovery Services.
14. Tenant has uses the Airport Storm Water Management Plan, and has an Emergency Contingency Plan, a Spill Prevention, Control, and Countermeasure Plan, and a Hazardous Materials Business Plan.

Significant Materials Potentially Exposed to Storm Water:

Potential Pollutant Sources

Aircraft fueling
Aircraft maintenance
Aircraft sanitary services
Aircraft washing
Chemical storage
Equipment fueling
Equipment maintenance
Equipment storage
Fluid leaks from aircraft
Fuel spills
Fuel storage
Outdoor waste storage
Vehicle fueling
Vehicle maintenance
Vehicle parking
Vehicle/equipment washing

Potential Pollutants

Cleaning solutions, Solvents, Antifreeze, Lubricants, Oil and Grease, Trash, Adhesives, Jet Fuel, Lavatory wastes, Paints, Sediment, Sealants, Acetone, Hydraulic fluids, Lavatory chemicals, Dumpster wastes, Deicing/ Anti-icing Fluids, Brake fluid, Gasoline, Propylene glycol, Battery acid, Diesel

Tenant Summary Sheet

Tenant:

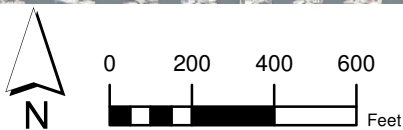
American

Best Management Practices and Current Structural Controls:

The list below identifies the BMP categories and specific BMPs that are applicable to American. Appendix B provides a description of each BMP category.

<u>Applicable BMP Categories</u>	<u>BMP Number</u>
Non-Storm Water Management	SC01 - 1, 2, 4
Outdoor Equipment Ops and Maintenance Areas	SC02A - 2, 1
Aircraft, Ground Vehicle and Equipment Maintenance	SC02B - 10, 12, 13, 3, 7, 1, 11, 2, 4, 5, 6, 8, 9
Aircraft, Ground Vehicle and Equipment Fueling	SC03 - 1, 10, 11, 2, 3, 4, 5, 6, 8, 9
Aircraft, Ground Vehicle and Equipment Cleaning	SC04 - 1, 2, 3, 5, 6, 7, 8
Aircraft Deicing/Anti-Icing	SC05 - 1, 2, 3, 4
Outdoor/Indoor Material Storage	SC07 - 1, 11, 12, 2, 3, 7
Waste Handling and Disposal	SC08 - 7, 1, 10, 11, 12, 14, 2, 3, 4, 5, 7,
Employee Training	SC10 - 1, 2, 3, 4
Lavatory Service Operation	SC11 - 4, 6, 10, 3, 5, 7, 8, 9
Potable Water System Flushing	SC14 - 1
Housekeeping	SC18 - 1, 4, 2, 3, 5, 6, 7, 8, 9
Safer/Alternative Products	SC19 - 1, 2
Spill Prevention, Control, and Clean-up	SR01 - 6, 1, 10, 2, 3, 4, 5, 7, 8, 9

Structural control measures used at American:



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**American
Operating Areas**
San Diego International Airport

FIGURE

E-5

Tenant Summary Sheet

Tenant:

American Eagle

SIC Code: 4512, 4522

Primary Activity: Passenger Carrier

Drainage Area: 6

Nearest MS4 inlet: < 200 feet

Contact: Steve Terry, General Manager

E:steve.terry@aa.com, P: 619- 231-7202, C: 619-794-7925, F: 619-231-7204

Address: 3225 North Harbor Drive #109
San Diego, CA 92101

Tenant Description and Primary Industrial Activities:

1. American Eagle operates out of the Commuter Terminal.
2. American Eagle belongs to American Airlines, but is a separate tenant.
3. Vehicle and equipment maintenance and painting is performed at the American Airlines Maintenance Shop by American Eagle's mechanics from LA twice a week (Tuesday and Friday).
4. American Airlines fuels equipment and vehicles.
5. Minor aircraft maintenance is performed by Pacific Aircraft Maintenance on the ramp.
6. ASIG fuels aircraft parked on ramp.
7. American Airlines stores and arranges for disposal of American Eagle's waste oils.
8. Honeybee lavatory cleaner is stored on spill pallet inside baggage loading area. No other significant materials are stored onsite.
9. Tenant has a Hazardous Materials Business Plan, a copy of American Airlines Environmental Business Plan, and is aware of the Airport Storm Water Management Plan.

Significant Materials Potentially Exposed to Storm Water:

Potential Pollutant Sources

Aircraft fueling
Aircraft maintenance
Aircraft sanitary services
Chemical storage
Equipment fueling
Equipment storage
Fuel spills
Vehicle fueling
Vehicle parking

Potential Pollutants

Lubricants, Lavatory chemicals, Fuel,
Solvents, Lubricants, Oil and Grease,
Battery acid, Battery acid, Fuel, Lavatory
wastes, Carburetor cleaner, Cleaning Solutions,
Trash, Sediment, Paints, Brake fluid, Hydraulic fluid

Best Management Practices and Current Structural Controls:

The list below identifies the BMP categories and specific BMPs that are applicable to American Eagle. Appendix B provides a description of each BMP category.

Applicable BMP Categories

Non-Storm Water Management
Outdoor Equipment Ops and Maintenance Areas
Aircraft, Ground Vehicle and Equipment Maintenance
Aircraft, Ground Vehicle and Equipment Fueling
Aircraft, Ground Vehicle and Equipment Cleaning
Outdoor Loading/Unloading of Materials
Outdoor/Indoor Material Storage
Waste Handling and Disposal

BMP Number

SC01 - 1, 2, 4
SC02A - 1, 2
SC02B - 10, 2, 3, 1, 11, 12, 13, 4, 5, 6, 7,
SC03 - 1, 2, 4, 5, 6, 8
SC04 - 1
SC06 - 1, 2, 3, 4, 7
SC07 - 11, 12
SC08 - 7, 1, 10, 11, 12, 2, 3, 4, 5, 8, 9

Tenant Summary Sheet

Tenant:

American Eagle

Applicable BMP Categories

Employee Training

Lavatory Service Operation

Housekeeping

Safer/Alternative Products

Spill Prevention, Control, and Clean-up

BMP Number

SC10 - 1, 2, 3, 4

SC11 - 4, 10, 3, 5, 6, 7, 8, 9

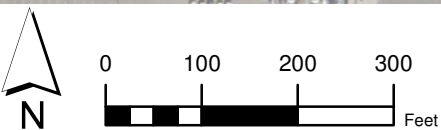
SC18 - 1, 4, 5, 2, 3, 6, 7, 8, 9

SC19 - 1, 2

SR01 - 6, 1, 2, 3, 4, 5, 7, 8, 9

Structural control measures used at American Eagle:

Aircraft wash area is sloped to divert wash water into the sanitary sewer.



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**American Eagle
Operating Areas**

San Diego International Airport

FIGURE

E-6

Tenant Summary Sheet

Tenant:

ARFF

SIC Code: 4581

Primary Activity: Aircraft Fire Fighting and Rescue

Drainage Area: 6

Nearest MS4 inlet: < 200 feet

Contact: Mike Brown, B Division Captain

E: mkbrown@sandiego.gov, P: 619-692-4950, C: 619-756-5943

Secondary Contact: Todd Dubler, A Division Captain

E: TDubler@sandiego.gov

John Langford, C Division Captain

E: JLangford@sandiego.gov

Address: 3698 Pacific Highway
San Diego, CA 92102

Tenant Description and Primary Industrial Activities:

1. Three fire fighting vehicles are stored and fueled indoors by ASIG.
2. Maintenance is done by Inland Fire in flat dirt parking lot area away from storm drains. All waste is taken off site by Inland Fire mechanics. Inland Fire brings in all maintenance equipment and fluids.
3. There are two material storage containers that house the 3% foam and Purple K powder fire retardant. The other stores items moved for the renovation of the fire house and tires. Empty barrels of foam are also kept in these containers.
4. Firefighting equipment and foam testing is performed once a year on the North ramp. Ocean Blue is contracted to collect all runoff from the exercise. They barricade all storm drain and ramp area to collect all test water. They vacuum up all runoff and foam for proper disposal. The nearest storm drain is connected to an oil-water separator that Ocean Blue blocks the end of and vacuums out if necessary.
5. Washing is done in flat dirt parking lot area away from storm drains.
6. Tenant uses the Airport Storm Water Management Plan. Tenant could not locate Hazardous Materials Business Plan due to current renovation.

Significant Materials Potentially Exposed to Storm Water:

Potential Pollutant Sources

Chemical storage
Equipment fueling
Equipment maintenance
Equipment storage
Fire fighting equipment testing
Fuel spills
Vehicle maintenance
Vehicle parking
Vehicle washing

Potential Pollutants

Fuel, Dumpster wastes, Oil and Grease,
Fire fighting foam (AFFF), Dumpster wastes, Trash

Best Management Practices and Current Structural Controls:

The list below identifies the BMP categories and specific BMPs that are applicable to ARFF. Appendix B provides a description of each BMP category.

Applicable BMP Categories

Non-Storm Water Management
Outdoor Equipment Ops and Maintenance Areas
Aircraft, Ground Vehicle and Equipment Maintenance
Aircraft, Ground Vehicle and Equipment Fueling
Aircraft, Ground Vehicle and Equipment Cleaning

BMP Number

SC01 - 1, 2, 3, 4
SC02A - 2, 1
SC02B - 10, 3, 1, 11, 2, 4, 5, 6, 7, 8
SC03 - 1, 2, 3, 4, 5, 6, 8
SC04 - 1, 2, 3, 5, 6, 7, 8

Tenant Summary Sheet

Tenant:

ARFF

Applicable BMP Categories

Outdoor/Indoor Material Storage

Waste Handling and Disposal

Employee Training

Fire Fighting Foam Discharge

Parking Lots

Housekeeping

Safer/Alternative Products

Spill Prevention, Control, and Clean-up

Spill Prevention, Control, and Clean-up

BMP Number

SC07 - 11, 1, 2, 3, 7

SC08 - 1, 10, 11, 12, 14, 2, 3, 4, 5, 7, 8, 9

SC10 - 1, 2, 3, 4

SC13 - 1, 2, 3, 4, 5

SC16 - 11, 2, 4, 6

SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9

SC19 - 1, 2

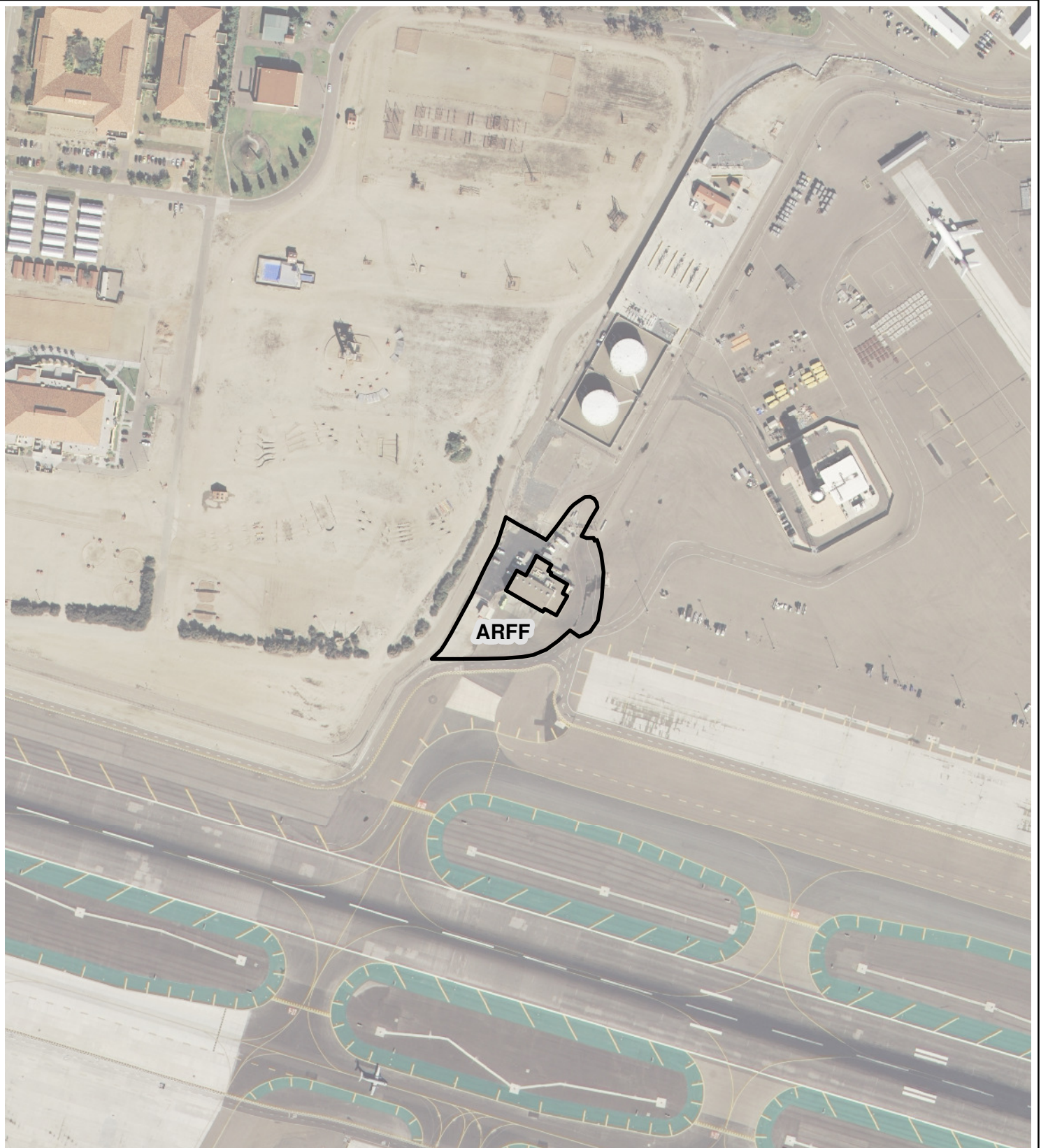
SR01 - 10

SR01 - 6, 1, 10, 2, 3, 4, 5, 7, 8, 9

Structural control measures used at ARFF:

Equipment testing area is sloped to divert water into oil water separator.

Booms are deployed during foam testing to prevent foam from entering storm water system. Foam is vacuumed and removed from site.



0 100 200 300
Feet

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ARFF
Operating Areas
San Diego International Airport

FIGURE

E-7

Tenant Summary Sheet

Tenant:

ASIG

SIC Code: 4581

Primary Activity: Fueling and vehicle/equipment maintenance

Drainage Area: 5, 6, 7, 8, 12

Nearest MS4 inlet: < 200feet

Contact: Barry Lopez, Health, Safety & Environmental Manager

E: barry.lopez@asig.com, P: 619-321-4670, C: 619-250-6916, F: 619-298-0178

Secondary Contact: Kent Kersten, Regional Manager

C: 612-290-3684

Address: 2340 Stillwater Road
San Diego, CA 92101

Tenant Description and Primary Industrial Activities:

1. ASIG main office and shop is located east of the cargo area next to the American Airlines maintenance shop.
2. Vehicle maintenance is conducted inside Maintenance Shop.
3. Waste accumulation areas are located inside Maintenance Shop.
4. Outdoor material storage container/shed contains drums of used absorbent and fuel filters.
5. One onsite storm drain inlet drains to OWS.
6. Eighteen refueling trucks - 8,000-gallon, 10,000-gallon, and 15,000-gallon capacities tanker truck staged outdoors on pavement.
7. Refueling trucks fueled at Remote Fueling Facility.
8. Two eyewash stations - one indoors and one in parking lot.
9. Vehicles are washed weekly at the wash rack, which is bermed and connect to the sanitary sewer.
10. Asbury Environmental picks up hazardous waste drums.
11. Initial and annual refresher training for employees. Airlines provide their training so ASIG personnel follow fueling procedures and safety protocols.
12. Sweeping is performed as needed.
13. Tenant has a Storm Water Pollution Prevention Plan, a Hazardous Materials Business Plan, and a Spill Prevention, Control, and Countermeasure Plan. Tenant has filed a Notice Of Intent (NOI) to be covered under the NPDES general permit and has WDID # CAD982346173.

Significant Materials Potentially Exposed to Storm Water:

Potential Pollutant Sources

Chemical storage
Fuel spills
Fuel storage
Outdoor waste storage
Vehicle fueling
Vehicle maintenance
Vehicle parking
Vehicle washing
Vehicle/ equipment painting

Potential Pollutants

Solvents, Cleaning solutions, Lubricants,
Dumpster wastes, Antifreeze, Fuel,
Oil and Grease, Trash, Paints, Sediment,

Best Management Practices and Current Structural Controls:

The list below identifies the BMP categories and specific BMPs that are applicable to ASIG. Appendix B provides a description of each BMP category.

Tenant Summary Sheet

Tenant:

ASIG

<u>Applicable BMP Categories</u>	<u>BMP Number</u>
Non-Storm Water Management	SC01 - 1, 2, 4
Outdoor Equipment Ops and Maintenance Areas	SC02A - 1, 2
Aircraft, Ground Vehicle and Equipment Maintenance	SC02B - 10, 3, 5, 1, 11, 12, 13, 2, 4, 6, 7, 8, 9
Aircraft, Ground Vehicle and Equipment Fueling	SC03 - 1, 10, 11, 3, 4, 5, 6, 8, 9
Aircraft, Ground Vehicle and Equipment Cleaning	SC04 - 3, 1, 2, 5, 6, 7, 8
Outdoor Loading/Unloading of Materials	SC06 - 4, 6, 1, 2, 7
Outdoor/Indoor Material Storage	SC07 - 1, 11, 12, 2, 3, 6, 7, 8, 9
Waste Handling and Disposal	SC08 - 1, 10, 11, 12, 14, 2, 3, 4, 5, 8, 9
Employee Training	SC10 - 1, 2, 3, 4
Parking Lots	SC16 - 1, 6, 9, 11, 2, 4
Housekeeping	SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9
Safer/Alternative Products	SC19 - 1, 2
Spill Prevention, Control, and Clean-up	SR01 - 6, 1, 10, 2, 3, 4, 5, 7, 8, 9

Structural control measures used at ASIG:

Vehicle washing area is sloped to divert wash water into a sump connected to the sanitary sewer.

Refueling vehicle fuel transfer area is sloped to divert water into oil water separator.

Storm drain is covered to prevent water from entering MS4.



0 100 200 300
Feet

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ASIG
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San Diego International Airport

FIGURE

E-8

Tenant Summary Sheet

Tenant:

ATI

SIC Code: 4581

Primary Activity: Cargo Handling Services

Drainage Area: 5, 6,

Nearest MS4 inlet: 200-1000 feet

Contact: Cindy Wheating, Supervisor

E: Cindy.Wheating@airtransport.cc, P: 419-867-9911 ext 2256, C: 419-481-1026

Secondary Contact: David Johnson, Station Manager
(Integrated Airlines Services, Inc.)

E: dajohnson@iasair.com, P: 619-225-8437, C: 619-204-84967

Address: Two Air Cargo Parkway East
Swanton, OH 43558

Tenant Description and Primary Industrial Activities:

1. Air Transport International LLC (ATI) is the primary tenant. Integrated Airline Services (IAS) is subcontracted by ATI to handle all loading/unloading and ground work.
2. ATI utilizes Capital Cargo's plane, the assigned carrier, to transport cargo for DB Schenker (formerly BAX Global). IAS provides all man power and equipment.
3. Operations takes place at the North ramp area next to FedEx.
4. Capital Cargo mechanic performs minor aircraft maintenance on ramp. Pacific Aircraft Maintenance is contracted to perform major aircraft maintenance as needed.
5. Small amount of significant materials (oil, hydraulic fluid, paint, anti freeze) are stored inside an IAS van.
6. No hazardous waste or waste oil is stored on site.
7. ASIG performs fueling of aircraft and vehicles.
8. One spill kit in a plastic drum owned by Pacific Aircraft Maintenance (PAM) is located next to parked aircraft. IAS does not have their own spill kit within operational area.
9. Tenant uses the Airport Storm Water Management Plan. Tenant has a BMP Plan and a Hazardous Materials Business Plan.

Significant Materials Potentially Exposed to Storm Water:

Potential Pollutant Sources

Aircraft fueling
Aircraft maintenance
Cargo handling
Equipment maintenance
Fluid leaks from aircraft
Fuel spills
Vehicle parking

Potential Pollutants

Paints, Trash, Solvents, Oil and Grease,
Fuel, Lubricants, Trash, Anti Freeze,
Metals, Cleaning Solutions,

Best Management Practices and Current Structural Controls:

The list below identifies the BMP categories and specific BMPs that are applicable to ATI. Appendix B provides a description of each BMP category.

Applicable BMP Categories

Non-Storm Water Management
Outdoor Equipment Ops and Maintenance Areas
Aircraft, Ground Vehicle and Equipment Maintenance
Aircraft, Ground Vehicle and Equipment Fueling
Aircraft, Ground Vehicle and Equipment Cleaning

BMP Number

SC01 - 1, 2, 4
SC02A - 2, 1
SC02B - 3, 1, 11, 13, 2, 4, 5, 6, 7, 8
SC03 - 1, 2, 4, 5, 6, 8
SC04 - 1, 2, 3, 4, 5, 6, 7, 8

Tenant Summary Sheet

Tenant:
ATI

<u>Applicable BMP Categories</u>	<u>BMP Number</u>
Outdoor Loading/Unloading of Materials	SC06 - 3, 1, 2, 4, 6, 7
Outdoor/Indoor Material Storage	SC07 - 1, 2, 3
Waste Handling and Disposal	SC08 - 14, 1, 12, 2, 3, 4, 5, 8, 9
Employee Training	SC10 - 2, 3, 4, 1
Housekeeping	SC18 - 9, 2, 3
Safer/Alternative Products	SC19 - 1, 2
Spill Prevention, Control, and Clean-up	SR01 - 1, 3, 5, 6, 2, 4, 7, 8, 9

Structural control measures used at ATI:

Secondary containment or "diaper" system is used to capture leaking oil from the aircraft engines.

Portable booms are used during washing of ramp to funnel water to collection point where it is removed before entering MS4.



0 100 200 300
Feet

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DATE: November 2011
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ATI
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FIGURE

E-9

Tenant Summary Sheet

Tenant:

Continental

SIC Code: 4512, 4522

Primary Activity: Passenger Carrier

Drainage Area: 12

Nearest MS4 inlet: < 200 feet

Contact: Michael Wilson, Supervisor

E: michael.wilson@coair.com, P: 619-564-5817, C: 949-300-1338, F: 619-564-5862

Secondary Contact: Gladston Taylor III, Sr.,
Environmental Specialist

E: gladston.tayloriii@coair.com, P: 310-258-3725, C: 310-686-6950

Address: 3835 North Harbor Drive #115
San Diego, CA 92101

Tenant Description and Primary Industrial Activities:

1. Continental operates out of gates 35 and 36 in Terminal 2 West.
2. Continental's own mechanics perform minor maintenance of aircraft parked on ramp.
3. ASIG fuels aircraft, ground support equipment, and vehicles.
4. GAT performs all ground services and cargo handling. GAT also performs maintenance on vehicles and equipment (loaders, tugs).
5. Aircraft washing performed offsite.
6. Ashland picks up all wastes.
7. Tenant uses the Airport Storm Water Management Plan. Tenant has a Hazardous Materials Business Plan and a Corporate Environmental Procedures Manual.

Significant Materials Potentially Exposed to Storm Water:

Potential Pollutant Sources

Aircraft fueling
Aircraft maintenance
Aircraft sanitary services
Cargo handling
Fluid leaks from aircraft
Fuel spills
Vehicle fueling
Vehicle parking

Potential Pollutants

Antifreeze, Oil and Grease, Solvents,
Cleaning Solutions, Lubricants, Fuel,
Fuel, Lavatory Chemicals, Trash,
Battery acid, Lavatory wastes

Best Management Practices and Current Structural Controls:

The list below identifies the BMP categories and specific BMPs that are applicable to Continental. Appendix B provides a description of each BMP category.

Applicable BMP Categories

Non-Storm Water Management
Outdoor Equipment Ops and Maintenance Areas
Aircraft, Ground Vehicle and Equipment Maintenance

Aircraft, Ground Vehicle and Equipment Fueling
Aircraft, Ground Vehicle and Equipment Cleaning
Outdoor/Indoor Material Storage
Waste Handling and Disposal
Employee Training

BMP Number

SC01 - 1, 2, 3, 4
SC02A - 2, 1
SC02B - 10, 3, 7, 1, 11, 12, 13, 2, 4, 5, 6, 8, 9
SC03 - 1, 2, 3, 4, 5, 6, 8
SC04 - 1
SC07 - 1, 11, 12, 2, 3, 7
SC08 - 1, 10, 11, 12, 14, 2, 3, 4, 5, 8, 9
SC10 - 1, 2, 3, 4

Tenant Summary Sheet

Tenant:

Continental

Applicable BMP Categories

Storm Drain Maintenance

Housekeeping

Safer/Alternative Products

Spill Prevention, Control, and Clean-up

BMP Number

SC17 - 2, 7

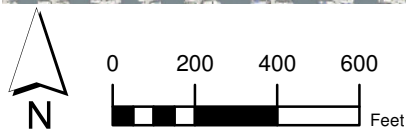
SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9

SC19 - 1, 2

SR01 - 1, 2, 3, 4, 5, 6, 7, 8, 9

Structural control measures used at Continental:

Concrete curbing is used to direct stormwater away from covered storage area.



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Operating Areas**
San Diego International Airport

FIGURE

E-10

Tenant Summary Sheet

Tenant:

Delta

SIC Code: 4512, 4522

Primary Activity: Passenger Carrier

Drainage Area: 7, 8, 12

Nearest MS4 inlet: < 200 feet

Contact: Bassel Sakkab, Supervisor

E: bassel.h.sakkab@delta.com, P: 619-491-2885, F: 619-491-2803

Secondary Contact: America Rodriguez

Address: 3835 North Harbor Drive #107
San Diego, CA 92101

Tenant Description and Primary Industrial Activities:

1. Delta, merged with Northwest, operates out of gates 38, 39, 40, and 41 of Terminal 2 West and gate 26 of Terminal 2 East.
2. GAT handles cargo for Delta.
3. DAL Global Services (DGS) is Delta's subtenant for maintenance. DGS operates the GSE maintenance shop located at the cargo loading/unloading building. DGS performs vehicle and GSE maintenance for Delta and several other airlines. Maintenance is primarily performed inside the GSE maintenance shop, however, some is performed outdoors. In addition to maintenance, DGS provides ground handling and baggage services.
4. Ground support equipment, cargo containers, dollies, and other items are stored behind the cargo building and the DGS maintenance shop.
5. Delta's own technicians perform aircraft maintenance at the gates. Pacific Aircraft Maintenance has a contract with Delta as backup to Delta's technicians. Pacific Aircraft Maintenance performs maintenance on former Northwest Aircrafts.
6. Vehicles and GSE are washed at ASIG's wash rack.
7. Spill carts (containing absorbent booms, drums, protective clothing, and non-sparking shovels), are located at Gates 38 and 41.
8. Delta/DGS each performs regular inspections of vehicles/GSE and aircraft during fueling operations.
9. All fueling is performed by ASIG.
10. Flushing of potable water lines is not performed.
11. Hazardous wastes are collected by Nexeo Solutions LLC (formerly Ashland), who does liquid waste recycling.
12. Tenant has a Corporate Storm Water Pollution Prevention Plan, a Hazardous Materials Business Plan, a Hazardous Waste Emergency Plan, a Hazardous Waste Management Plan, and a FOD Plan.

Significant Materials Potentially Exposed to Storm Water:

Potential Pollutant Sources

Aircraft fueling
Aircraft maintenance
Aircraft sanitary services
Aircraft washing
Cargo handling
Chemical storage
Equipment degreasing
Equipment fueling
Equipment maintenance
Equipment storage
Fluid leaks from aircraft
Fuel spills
Fuel storage
Outdoor waste storage
Vehicle fueling
Vehicle maintenance
Vehicle parking

Potential Pollutants

Battery acid, Oil and Grease,
Cleaning solutions, Lubricants, Antifreeze,
Paints, Metals, Lavatory chemicals,
Trash, Solvents, Fuel, Rust preventer, Dumpster
wastes, Acetone, Hydraulic fluid (Skydrol),
Coolant, Brake fluid,

Tenant Summary Sheet

Tenant:

Delta

Best Management Practices and Current Structural Controls:

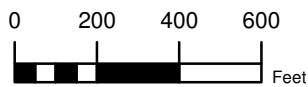
The list below identifies the BMP categories and specific BMPs that are applicable to Delta. Appendix B provides a description of each BMP category.

<u>Applicable BMP Categories</u>	<u>BMP Number</u>
Non-Storm Water Management	SC01 - 1, 2, 4
Outdoor Equipment Ops and Maintenance Areas	SC02A - 2, 1
Aircraft, Ground Vehicle and Equipment Maintenance	SC02B - 10, 11, 3, 6, 7, 1, 12, 13, 2, 4, 5, 8, 9
Aircraft, Ground Vehicle and Equipment Fueling	SC03 - 1, 2, 4, 5, 6, 8
Aircraft, Ground Vehicle and Equipment Cleaning	SC04 - 1, 2, 3, 5, 6, 7
Outdoor Loading/Unloading of Materials	SC06 - 2, 3, 1, 4, 6, 7
Outdoor/Indoor Material Storage	SC07 - 3, 1, 11, 12, 2
Waste Handling and Disposal	SC08 - 4, 1, 10, 11, 12, 14, 2, 3, 5, 6, 7,
Employee Training	SC10 - 1, 2, 3, 4
Lavatory Service Operation	SC11 - 10, 3, 4, 5, 6, 7, 8, 9
Housekeeping	SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9
Safer/Alternative Products	SC19 - 1, 2
Spill Prevention, Control, and Clean-up	SR01 - 6, 1, 2, 3, 4, 5, 7, 8, 9

Structural control measures used at Delta:

Concrete curbing is used to direct stormwater away from covered storage area.

Vehicle washing area is sloped to divert wash water into a sump connected to the sanitary sewer.



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FIGURE

E-11

Tenant Summary Sheet

Tenant:

Elite Line Services

SIC Code: 4581

Primary Activity: Maintenance of passenger boarding bridges, baggage conveyors, and potable water hoses.

Drainage Area: 8, 12

Nearest MS4 inlet: 200-1000 feet

Contact: Claudia Cox, Site Manager

E: ccox@elitelineservices.com, P: 619-298-5215, C: 619-279-1999, F: 619-298-0976

Secondary Contact: Derek Berger, Site Supervisor, C: 619-279-0185

Address: 3707 North Harbor Drive, #121
San Diego, CA 92101

Tenant Description and Primary Industrial Activities:

1. ELS services all passenger bridges and baggage conveyors except for United Airlines (in bound) and United Airlines conveyors at the ticket counters as well as the bag room. ELS also maintains all potable water cabinets.
2. Vehicle maintenance is conducted offsite.
3. Vehicles are fueled offsite. A golf cart is fueled in the fenced maintenance area located by Gate 27 using 5-gallon gasoline containers. Generator uses propane.
4. Wastes are stored in outdoor Waste Accumulation Area by Gate 27, contained and under cover.
5. No vehicle or equipment washing is performed.
6. ELS does not wash passenger bridges.
7. Ocean Blue picks up all hazardous wastes and waste oil.
8. Tenant uses the Airport Storm Water Management Plan. Tenant has a Hazardous Materials Business Plan.

Significant Materials Potentially Exposed to Storm Water:

Potential Pollutant Sources

Chemical storage
Equipment fueling
Equipment maintenance
Equipment storage
Fuel spills
Fuel storage
Outdoor waste storage
Vehicle parking

Potential Pollutants

Adhesives, Caulking, Cleaning solutions,
Oil and Grease, Paints, Degreasers,
Solvents, Lubricants, Antifreeze,
Fuel, Metals, Carburetor cleaner,
Acetone, Hydraulic Fluid, Trash,

Best Management Practices and Current Structural Controls:

The list below identifies the BMP categories and specific BMPs that are applicable to Elite Line Services. Appendix B provides a description of each BMP category.

Applicable BMP Categories

Non-Storm Water Management
Outdoor Equipment Ops and Maintenance Areas
Aircraft, Ground Vehicle and Equipment Maintenance
Aircraft, Ground Vehicle and Equipment Fueling
Aircraft, Ground Vehicle and Equipment Cleaning
Outdoor/Indoor Material Storage
Waste Handling and Disposal

BMP Number

SC01 - 1, 2, 4
SC02A - 1, 2
SC02B - 2, 1, 10, 11, 12, 13, 3, 4, 5, 6, 8,
SC03 - 1, 11, 2, 4, 5, 6
SC04 - 1, 2
SC07 - 1, 11, 12, 2, 3, 7
SC08 - 1, 10, 11, 12, 2, 3, 4, 5, 8, 9

Tenant Summary Sheet

Tenant:

Elite Line Services

Applicable BMP Categories

Employee Training

Housekeeping

Safer/Alternative Products

Spill Prevention, Control, and Clean-up

BMP Number

SC10 - 1, 2, 3, 4

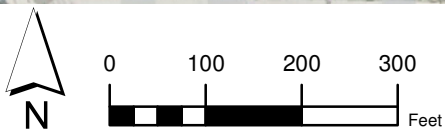
SC18 - 1, 2, 4, 3, 5, 6, 7, 8, 9

SC19 - 1, 2

SR01 - 6, 1, 2, 3, 4, 5, 7, 8, 9

Structural control measures used at Elite Line Services:

Concrete curbing is used to direct stormwater away from covered storage area



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**Elite Line Services
Operating Areas**

San Diego International Airport

FIGURE

E-12

Tenant Summary Sheet

Tenant:

FedEx

SIC Code: 4513

Primary Activity: Cargo Handling and Shipment

Drainage Area: 5, 6

Nearest MS4 inlet: < 200 feet

Contact: Connie Robertson, Lead Environmental

E: csrobertson@fedex.com, P: 619-688-9203, C: 619-890-2973

Secondary Contact: Cedric Manley, Manager

C: 619-818-6136

Address: 2221 West Washington Street
San Diego, CA 92110

Tenant Description and Primary Industrial Activities:

1. Aircraft loading/unloading occurs at three gates on the North Ramp area.
2. ASIG fuels aircraft, vehicles, and equipment.
3. Two dumpsters utilized by FedEx's office are managed by EDCO and located in the parking lot.
4. Two above ground plastic storage tanks are outside FedEx's office, one contains drinking water and one contains waste water. Diamond Environmental Services collects the waste water regularly.
5. A spill kit is located inside a container south of the office, containing absorbent litter, mats, and sox.
6. Minor vehicle maintenance is conducted outdoors in designated vehicle maintenance area. Maintenance area is cover and has a spill protection area.
7. Hazardous waste and waste oil are stored in covered storage containers, on pallets, and inside sheds southeast of FedEx's offices. Asbury is contracted to pick up hazardous wastes.
8. Significant materials are stored in covered storage containers on pallets inside the sheds southeast of FedEx's office.
9. Safety Clean is contracted to clean up any hazardous material spills that may occur.
10. Vehicles are parked in front of and northwest of FedEx's offices.
11. Cargo loading and unloading equipment is staged in designated areas throughout the ramp.
12. GAT performs lavatory services as needed.
13. Fleetwash is contracted to perform washing as needed, usually once every 2 -3 months. Majority of washing is performed offsite.
14. Ecology Auto Wreck is contracted to handle salvage equipment/vehicles. Interstate recycles all used batteries.
15. Tenant uses the Airport Storm Water Management Plan and has a Hazardous Materials Business Plan.

Significant Materials Potentially Exposed to Storm Water:

Potential Pollutant Sources

Aircraft fueling
Aircraft maintenance
Cargo handling
Chemical storage
Equipment degreasing
Equipment fueling
Equipment maintenance
Equipment storage
Fluid leaks from aircraft
Fuel spills
Fuel storage
Outdoor waste storage
Outdoor wastewater storage storage tank
Vehicle fueling
Vehicle maintenance
Vehicle parking

Potential Pollutants

Oil and Grease, Dumpster wastes, Battery acid, Paints, Fuel, Antifreeze, Solvents, Radio active goods, Trash, Recyclable paper/cardboard

Tenant Summary Sheet

Tenant:

FedEx

Best Management Practices and Current Structural Controls:

Applicable BMP Categories

Non-Storm Water Management

Outdoor Equipment Ops and Maintenance Areas

Aircraft, Ground Vehicle and Equipment Maintenance

Aircraft, Ground Vehicle and Equipment Fueling

Aircraft, Ground Vehicle and Equipment Cleaning

Outdoor Loading/Unloading of Materials

Outdoor/Indoor Material Storage

Waste Handling and Disposal

Employee Training

Parking Lots

Housekeeping

Safer/Alternative Products

Spill Prevention, Control, and Clean-up

BMP Number

SC01 - 1, 2, 4

SC02A - 1, 2

SC02B - 10, 1, 11, 12, 13, 2, 3, 4, 5, 6, 7, 8, 9

SC03 - 1, 2, 4, 5, 6, 8

SC04 - 1, 2, 3, 4, 5, 6, 7

SC06 - 3, 1, 2, 4, 6, 7

SC07 - 1, 11, 12, 2, 3, 6, 7, 8

SC08 - 1, 10, 11, 12, 14, 2, 3, 4, 5, 7, 8, 9

SC10 - 1, 2, 3, 4

SC16 - 2, 4

SC18 - 4, 5, 1, 2, 3, 6, 7, 8, 9

SC19 - 1, 2

SR01 - 6, 8, 1, 2, 3, 4, 5, 7, 9

Structural control measures used at FedEx:

Covered sheds over equipment and material storage areas.



0 100 200 300
Feet

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FedEx
Operating Areas
San Diego International Airport

FIGURE

E-13

Tenant Summary Sheet

Tenant:

FlagShip

SIC Code: 4581

Primary Activity: Janitorial/Cleaning Services

Drainage Area: 8, 12

Nearest MS4 inlet: < 200 feet

Contact: Rich Kersulis, Account Manager

E: Rkersulis@flagshipinc.com, P: 619-298-6793, C: 619-778-4306, F: 619-298-2957

Secondary Contact: Joel Pennison, Operations Manager

E: Jpennison@flagshipinc.com, C: 619-778-9929

Address: 3835 North Harbor Drive, # 130
San Diego, CA 92101

Tenant Description and Primary Industrial Activities:

1. FlagShip (formerly SPC) is responsible for cleaning the restrooms inside the airport and those on the airside. They empty all trash cans and recycling cans inside and outside the airport, but not the dumpsters. They clean floors and carpets inside the airport, except for those in gift shops or food courts, and they sweep sidewalks up to the curb on the landside and the airside using an industrial dry vacuum cleaner. They do not clean the baggage make up areas.
2. FlagShip owns two pressure washers. These two washers are used to power-wash the sidewalks on the landside and the airside. The power washers are stored in the cage area between gates 26 and 28. One washer is used 4 nights every week and the other is used 3 nights every week. During power washing, water is heated to 200 degrees, which probably cools to 140-150 degrees by the time it reaches the surfaces, and at a pressure of 3,000 psi. The wash water is vacuumed up by a separate vacuum machine. Water booms are used during this operation to avoid discharges to the storm drains. Wash water is dumped to the dewatering bin at the trash compactor area.
3. FlagShip also power-washes the trash compactor area near the Commuter Terminal, the dumpster area between Terminal 2 East and West, the HMS Host grease container area near Gate 27, the dumpster area at Terminal 1, and the grease container behind Chillis. All pressure-washing is performed between the hours of 11pm to 4am. Carpet cleaning wastewater is also disposed of at the dewatering bin at the trash compactor area.
4. FlagShip also transports and unloads trash/recycling from trash cart system located between Terminal 1 and Terminal 2.
5. Diesel is used to heat water on the power washers; gasoline is used in the engine of the power washers.
6. FlagShip contracts SoCal to clean windows at T2W every 3 to 6 months using FlagShip equipment. All wash waters are collected and disposed of offsite by SoCal.
7. Flagship uses battery operated pieces of equipment (vacuum, carpet cleaners, hard floor surface cleaners).
8. Track mouter carpter extractor is used to clean carpets in terminals and is stored at Gate 17. All water is disposed of in T1 sump (via trash compactors).
9. Tenant uses the Airport Storm Water Management Plan and no longer possesses a Hazardous Materials Business Plan.

Significant Materials Potentially Exposed to Storm Water:

Potential Pollutant Sources

Chemical storage
Equipment fueling
Equipment storage
Fuel spills
Fuel storage
Outdoor washdown
Trash collection
Vehicle fueling
Vehicle parking

Potential Pollutants

Oil and Grease, Fuel, Dumpster wastes
(Non recycables and recycables), Trash,
Cleaning Solutions, Hazardous Medical Material
(Needles, Vomit), Lubricants, Floatables

Tenant Summary Sheet

Tenant:

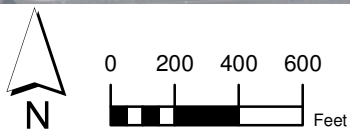
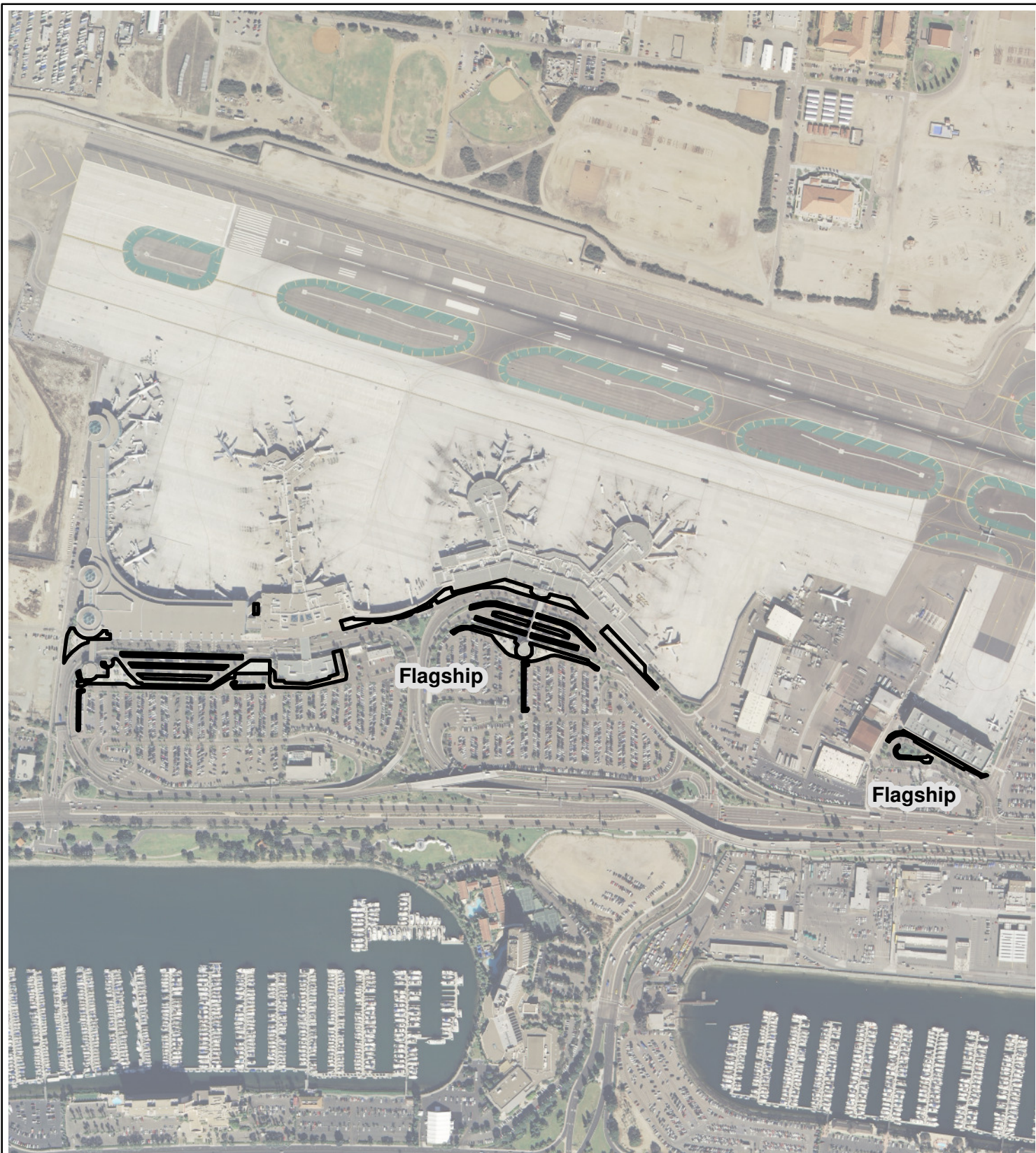
FlagShip

Best Management Practices and Current Structural Controls:

The list below identifies the BMP categories and specific BMPs that are applicable to FlagShip. Appendix B provides a description of each BMP category.

<u>Applicable BMP Categories</u>	<u>BMP Number</u>
Non-Storm Water Management	SC01 - 1, 2, 4
Outdoor Equipment Ops and Maintenance Areas	SC02A - 1, 2
Aircraft, Ground Vehicle and Equipment Maintenance	SC02B - 1, 10, 11, 12, 13, 4, 5, 6
Aircraft, Ground Vehicle and Equipment Fueling	SC03 - 2, 1, 11, 4, 5, 6, 8
Aircraft, Ground Vehicle and Equipment Cleaning	SC04 - 4, 1, 2, 3, 5, 6, 7, 8
Outdoor/Indoor Material Storage	SC07 - 12, 1, 2, 3, 7
Waste Handling and Disposal	SC08 - 4, 1, 10, 11, 12, 13, 2, 3, 5, 7, 8, 9
Employee Training	SC10 - 1, 2, 3, 4
Outdoor Washdown/Sweeping (Apron Washing, Ramp Scrubbing)	SC12 - 5, 1, 3, 6, 7, 8, 9
Housekeeping	SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9
Safer/Alternative Products	SC19 - 1, 2
Spill Prevention, Control, and Clean-up	SR01 - 2, 6, 1, 10, 3, 4, 5, 7, 8, 9

Structural control measures used at FlagShip:



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**Flagship
Operating Areas**
San Diego International Airport

FIGURE

E-14

Tenant Summary Sheet

Tenant:

Frontier

SIC Code: 4512, 4522

Primary Activity: Passenger Carrier

Drainage Area: 7, 12

Nearest MS4 inlet: 200-1000 feet

Contact: Eric Srangsriwong, Manager

E: esrangsriwong@flyfrontier.com , P: 619-683-7765, C: 619-894-1072, F: 619-683-9263

Address: 3707 North Harbor Drive, T2
San Diego, CA 92101

Tenant Description and Primary Industrial Activities:

1. Frontier operates out of gate 28 with its main office located near gate 24.
2. Frontier uses their own GSE and personnel to handle baggage.
3. GAT performs GSE maintenance at the gate or GAT shop.
4. GAT handles cargo and cleans GSE.
5. Pacific Aircraft Maintenance minor aircraft maintenance while parked on ramp.
6. One flammables cabinet is located at gate 24 containing engine oil and paint. Currently tenant is looking to remove all Hazardous Materials from operational area.
7. GSE equipment is a combination of gas and propane.
8. Drip pans are used on an as-needed basis.
9. Sweeping is done on an as-needed basis.
10. Tenant uses the Airport Storm Water Management Plan, and does not have a Hazardous Materials Business Plan.

Significant Materials Potentially Exposed to Storm Water:

Potential Pollutant Sources

Aircraft fueling
Aircraft maintenance
Aircraft sanitary services
Cargo handling
Equipment fueling
Equipment maintenance
Equipment storage
Fluid leaks from aircraft
Fuel spills
Fuel storage
Potable water flushing
Vehicle fueling
Vehicle maintenance
Vehicle parking

Potential Pollutants

Hydraulic fluids, Fuel, Trash, Cleaning solutions, Lavatory chemicals, Lavatory wastes, Oil and Grease, Lubricants, Paints

Best Management Practices and Current Structural Controls:

The list below identifies the BMP categories and specific BMPs that are applicable to Frontier. Appendix B provides a description of each BMP category.

Applicable BMP Categories

Non-Storm Water Management
Outdoor Equipment Ops and Maintenance Areas
Aircraft, Ground Vehicle and Equipment Maintenance
Aircraft, Ground Vehicle and Equipment Fueling

BMP Number

SC01 - 1, 2, 4
SC02A - 2, 1
SC02B - 10, 3, 7, 9, 1, 11, 13, 2, 4, 5, 6, 8
SC03 - 1, 2, 4, 5, 6, 8

Tenant Summary Sheet

Tenant:

Frontier

Applicable BMP Categories

Aircraft, Ground Vehicle and Equipment Fueling

Outdoor Loading/Unloading of Materials

Outdoor/Indoor Material Storage

Waste Handling and Disposal

Employee Training

Lavatory Service Operation

Housekeeping

Safer/Alternative Products

Spill Prevention, Control, and Clean-up

BMP Number

SC03 - 5, 4, 2, 6

SC06 - 1, 2, 6

SC07 - 1, 2, 3, 7

SC08 - 7, 1, 10, 12, 2, 3, 4, 8, 9

SC10 - 4, 1, 2, 3

SC11 - 4, 10, 3, 5, 6, 7, 8, 9

SC18 - 4, 1, 2, 3, 5, 6, 7, 8, 9

SC19 - 1, 2

SR01 - 2, 1, 3, 4, 5, 6, 7, 8, 9

Structural control measures used at Frontier:



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**Frontier
Operating Areas**
San Diego International Airport

FIGURE

E-15

Tenant Summary Sheet

Tenant:

Hawaiian

SIC Code: 4512, 4522

Primary Activity: Passenger Carrier

Drainage Area: 12

Nearest MS4 inlet: 200-1000 feet

Contact: Aaron O'Neil, Manager

E: aaron.oneill@hawaiianair.com, P: 619- 278-0973, F: 619-278-0977

Secondary Contact: Amber Kamakiiaina, Assistant Manager

E: amber.kamakiiaina@hawaiianair.com

Address: 3707 North Harbor Drive, T2
San Diego, CA 92101

Tenant Description and Primary Industrial Activities:

1. Hawaiian currently operates out of gate 22, with two flights per day.
2. Aviation Port Services (APS) is a service provider who owns all ground support equipment, loads and unloads cargo, and performs lavatory services.
3. GSE performs maintenance on vehicles and equipment and GAT handles cargo.
4. ABX performs minor maintenance of aircraft parked on ramp.
5. ASIG fuels aircraft and vehicles.
6. Aircraft are washed offsite in Honolulu.
7. No outdoor material or waste storage areas.
8. Tenant uses the Airport Storm Water Management Plan and does not have a Hazardous Materials Business Plan.

Significant Materials Potentially Exposed to Storm Water:

Potential Pollutant Sources

Aircraft fueling
Aircraft maintenance
Aircraft sanitary services
Cargo handling
Fluid leaks from aircraft
Fuel spills

Potential Pollutants

Oil and Grease, Lubricants, Lavatory wastes, Lavatory chemicals, Hydraulic fluids, Cleaning solutions, Fuel, Trash,

Best Management Practices and Current Structural Controls:

The list below identifies the BMP categories and specific BMPs that are applicable to Hawaiian. Appendix B provides a description of each BMP category.

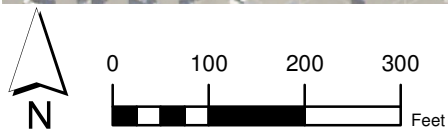
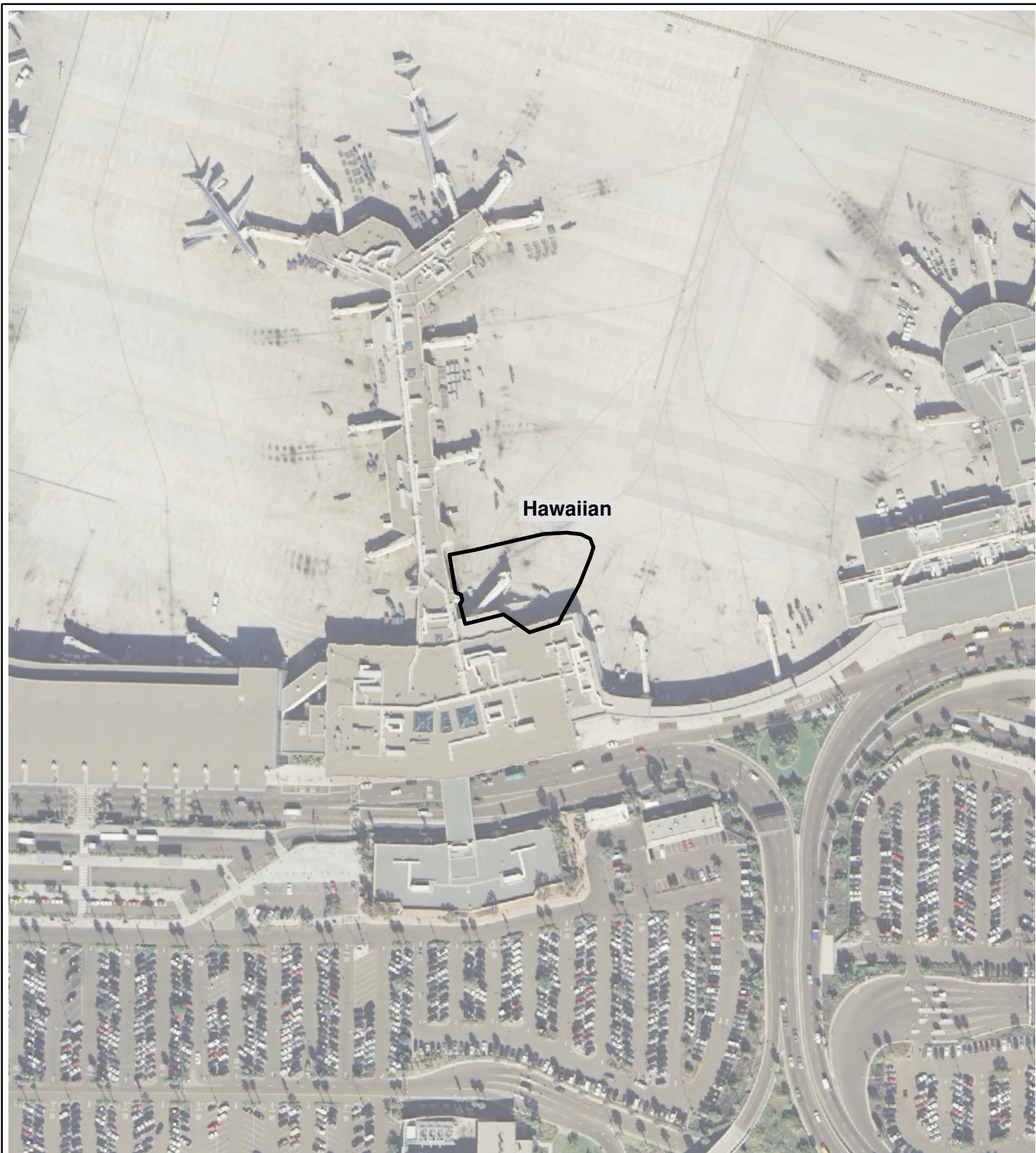
Applicable BMP Categories

Non-Storm Water Management
Outdoor Equipment Ops and Maintenance Areas
Aircraft, Ground Vehicle and Equipment Maintenance
Aircraft, Ground Vehicle and Equipment Fueling
Aircraft, Ground Vehicle and Equipment Cleaning
Outdoor Loading/Unloading of Materials
Employee Training
Lavatory Service Operation
Housekeeping
Safer/Alternative Products
Spill Prevention, Control, and Clean-up

BMP Number

SC01 - 1, 2, 4
SC02A - 1, 2
SC02B - 3, 5, 1, 11, 12, 13, 2, 4, 6
SC03 - 1, 2, 4, 5, 6, 8
SC04 - 1
SC06 - 3, 1, 2, 4, 6, 7
SC10 - 2, 3, 1, 4
SC11 - 10, 3, 4, 6, 7, 8, 9
SC18 - 2, 4, 3, 5, 9
SC19 - 1, 2
SR01 - 6, 1, 3, 4, 5, 7, 8, 9

Structural control measures used at Hawaiian:



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**Hawaiian
 Operating Areas**
 San Diego International Airport

FIGURE
E-16

Tenant Summary Sheet

Tenant:

HMS Host

SIC Code: 4581

Primary Activity: Food Services

Drainage Area: 8, 12

Nearest MS4 inlet: < 200 feet

Contact: Ernie Legaspi, Maintenance Manager

E: ernie.legaspi@hmshost.com, P: 619-231-5100 ext 126,
C: 619-726-3451, F: 619-321-2014

Secondary Contact: Joe Niknam

P: 619-231-2100 ext 157, C: 949-587-6125

Address: 3665 North Harbor Drive
San Diego, CA 92101

Tenant Description and Primary Industrial Activities:

1. Host has two 3,000- gallon grease receptacles at the airport. One at Terminal 2 between the West and East connector, and one at Terminal 1 behind Chilis. Two 2,000 gallon interceptors installed at the construction site at Terminal 2 West under the Terminal Development Program. Terminal 1 between gates 1 and 2 has a 320-gallon grease interceptor. The grease receptacles have 3 baffles in tandem. The wastewater from restaurants enters the receptacles and goes to the first baffle then the second, and then the third. Grease or milky sludge (from Starbucks for example) is caught by the baffle system and can build up to 1-foot-deep. A company called AGP (Affordable Grease Pumping) removes the grease quarterly from the receptacle behind Chili's and twice a year for the others. They rinse out the receptacles using hoses attached to the hose bibs at the airport. A 5,000-gallon vacuum truck is used to vacuum out the grease and wastewater, which is taken back to their facility. The mixture is processed, and the water is removed and discharged to the sanitary sewer under permit. The grease remaining is a solid cake and is disposed of at a regular landfill under permit. Beyond the baffle system of the receptacles, the units are linked to the sanitary sewer.
2. Host also has ten 25 to 50-gallon grease traps on the airside of the Terminals 1 and 2; some below ground and some above ground. There are also some inside the buildings, close to the restaurants. These also have the baffle system. Grease is vacuumed out of the small traps every 4 weeks, the rest between 2 to 3 months, as required by the City of San Diego, and then they are rinsed in a similar procedure to the grease receptacles, but on a smaller scale, using a 400-gallon tank. Beyond the baffle system, the units are linked to the sanitary sewer.
3. Additionally, Host has three 250-gallon grease containers with drip pans located at Terminal 2 East, between Terminal 2 West and East, and at Terminal 1, behind Chilis. Five-gallon cans with spouts are used to transfer the grease from deep fat fryers in the restaurants to the container. The container at Terminal 1 is emptied twice a month and the others are emptied when full or quarterly by Darling International. They filter and recycle the grease. Steam cleaning of these units is done offsite by Darling International or Host's outside cleaning company services contract.
4. Host contracts Floortek to clean the areas around the grease containers and steam clean as needed at Terminal 1 and between Terminal 2 West and East.
5. Host contract Ecolab Company to perform pesticide applications and none of these products are stored at the Food Service Facilities.
6. Vehicles are fueled by ASIG and cleaned offsite.
7. The City inspects all grease traps/containers every 3 months.
8. A trainable cart system for transporting trash is located at Terminal 2 managed by Flagship.
9. Host has a new shipping and receiving area on Airline Road in the cargo area. The area accepts deliveries every morning and serves as storage for some supplies and equipment.
10. Tenant uses the Airport Storm Water Management Plan, and has a Hazardous Materials Business Plan.

Tenant Summary Sheet

Tenant:
HMS Host

Significant Materials Potentially Exposed to Storm Water:

Potential Pollutant Sources

Equipment maintenance
Materials loading/ unloading
Outdoor waste storage
Pesticide usage
Trash collection
Vehicle parking

Potential Pollutants

Cleaning Solutions, Solvents,
Pesticides/Herbicides/Fertilizers,
Oil and Grease, Trash, Dumpster wastes,
Dumpster Wastes, Food Waste,
Anti Freeze, Lubricants, Fuel,

Best Management Practices and Current Structural Controls:

The list below identifies the BMP categories and specific BMPs that are applicable to HMS Host. Appendix B provides a description of each BMP category.

Applicable BMP Categories

Non-Storm Water Management
Outdoor Equipment Ops and Maintenance Areas
Aircraft, Ground Vehicle and Equipment Maintenance

Aircraft, Ground Vehicle and Equipment Fueling
Aircraft, Ground Vehicle and Equipment Cleaning
Outdoor Loading/Unloading of Materials
Outdoor/Indoor Material Storage
Waste Handling and Disposal
Building and Grounds Maintenance
Employee Training
Outdoor Washdown/Sweeping (Apron Washing, Ramp Scrubbing)
Storm Drain Maintenance
Housekeeping
Safer/Alternative Products
Spill Prevention, Control, and Clean-up

BMP Number

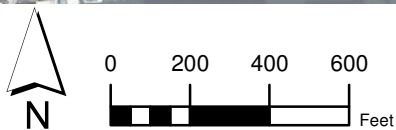
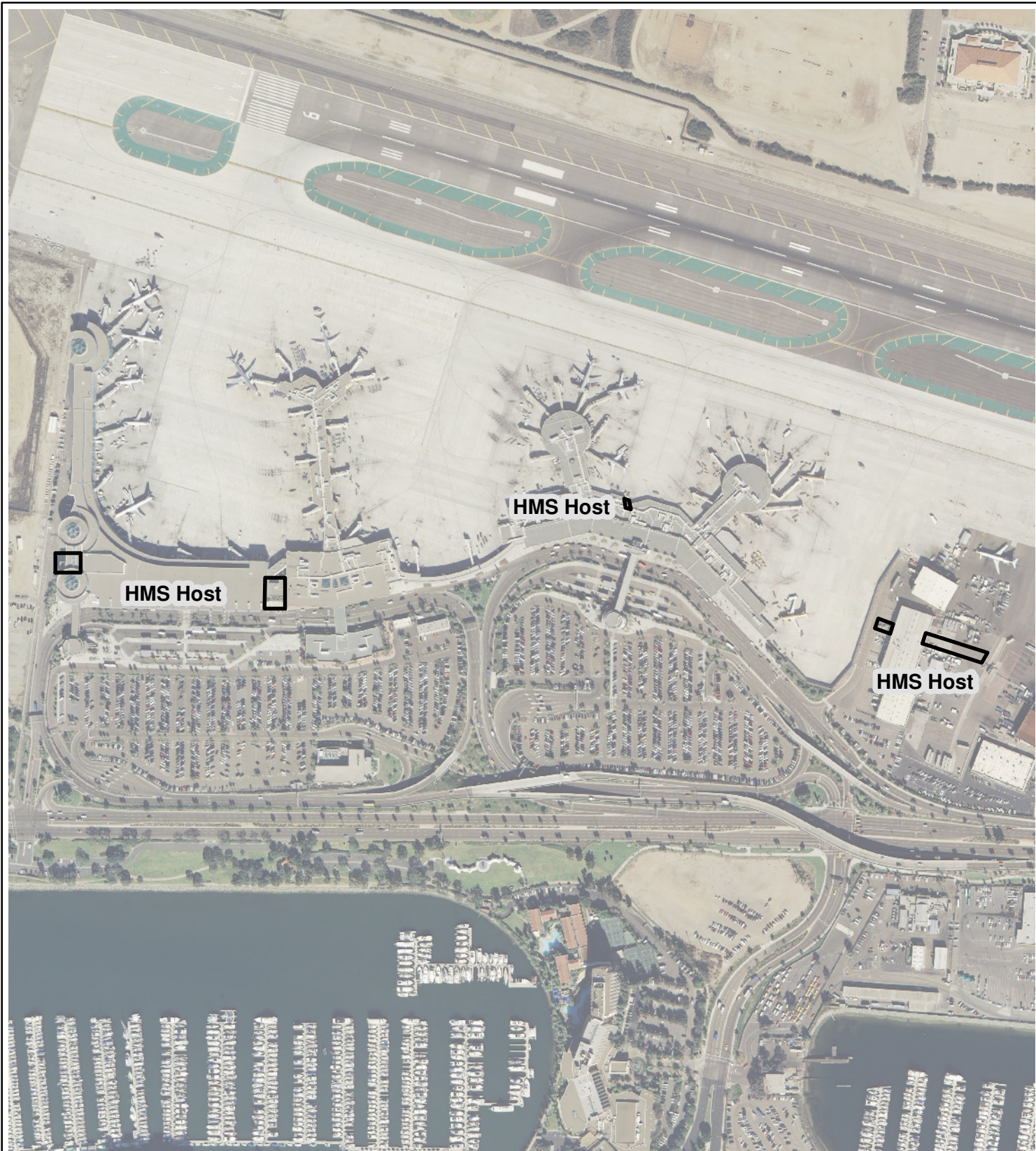
SC01 - 1, 2, 4
SC02A - 2, 1
SC02B - 3, 1, 10, 11, 12, 13, 2, 4, 5, 6, 7, 8, 9
SC03 - 1, 2, 4, 5, 6, 8
SC04 - 3, 1, 2, 4, 5, 6, 7, 8
SC06 - 1, 3, 7, 4, 6
SC07 - 12, 1, 11, 2, 3, 7
SC08 - 10, 12, 4, 5, 7, 9, 1, 11, 14, 2, 3,
SC09 - 3
SC10 - 2, 1, 3, 4
SC12 - 3, 5, 6, 7, 8

SC17 - 2, 4, 6, 7
SC18 - 1, 2, 6, 3, 4, 5, 7, 8, 9
SC19 - 1, 2
SR01 - 3, 8, 1, 10, 2, 4, 5, 6, 7, 9

Structural control measures used at HMS Host:

Large drip pans have been placed under some of the 250 gallon grease receptacles.

Portable booms are used during washing of area around grease receptacles to funnel water to collection point where it is removed before entering MS4.



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**HMS Host
Operating Areas**
San Diego International Airport

FIGURE

E-17

Tenant Summary Sheet

Tenant:

Jet Blue

SIC Code: 4512, 4522

Primary Activity: Passenger Carrier

Drainage Area: 12

Nearest MS4 inlet: 200-1000 feet

Contact: Brian Towle, General Manager

E: brian.towle@jetblue.com, P: 619-725-0807
ext1707201, F: 619-725-0807

Secondary Contact: J.R. Aguilera, Supervisor

P: 619-725-0807 ext 7202

Address: 3835 North Harbor Drive #108
San Diego, CA 92101

Tenant Description and Primary Industrial Activities:

1. JetBlue operates primarily at gate 23, and occasionally at gate 21.
2. JetBlue owns two stairs trucks and two air conditioning equipment (TLD).
3. GAT provides ground handling services.
4. Pacific Air Maintenance provides aircraft maintenance services.
5. A small amount of significant materials are stored in a flammable materials storage area located between gate 25 and gate 27.
6. 3E provides all MSDS information.
7. A spill kit is located at gate 23.
8. ASIG performs all fueling activities for JetBlue.
9. Tenant uses the Airport Storm Water Management Plan, and has a Spill Prevention Plan and a Hazardous Materials Business Plan.

Significant Materials Potentially Exposed to Storm Water:

Potential Pollutant Sources

Aircraft fueling
Aircraft maintenance
Aircraft sanitary services
Fluid leaks from aircraft
Fuel spills
Outdoor material storage

Potential Pollutants

Cleaning solutions, Fuel, Lavatory wastes,
Lavatory chemicals, Lubricants, Trash, Oil
and Grease, Dumpster Wastes, Hydraulic fluids,
Lavatory wastes,

Best Management Practices and Current Structural Controls:

The list below identifies the BMP categories and specific BMPs that are applicable to Jet Blue. Appendix B provides a description of each BMP category.

Applicable BMP Categories

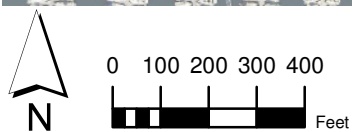
Non-Storm Water Management
Outdoor Equipment Ops and Maintenance Areas
Aircraft, Ground Vehicle and Equipment Maintenance
Aircraft, Ground Vehicle and Equipment Fueling
Outdoor/Indoor Material Storage
Employee Training
Housekeeping
Safer/Alternative Products
Spill Prevention, Control, and Clean-up

BMP Number

SC01 - 1, 2, 4
SC02A - 2, 1
SC02B - 1, 11, 4, 5, 6, 9
SC03 - 1, 2, 4, 5, 6, 8
SC07 - 2, 11, 3, 1
SC10 - 1, 2, 3, 4
SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9
SC19 - 1, 2
SR01 - 1, 3, 4, 5, 6, 7, 8, 9

Structural control measures used at Jet Blue:

Concrete curbing is used to direct stormwater away from covered storage area.



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**Jet Blue
Operating Areas**
San Diego International Airport

FIGURE

E-18

Tenant Summary Sheet

Tenant:

Landmark Aviation

SIC Code: 4512, 4522

Primary Activity: Corporate General Aviation

Drainage Area: 1, 2, 3, 5, 6, 12

Nearest MS4 inlet: 200-1000 feet

Contact: Charlie Ferraro, General Manager

Email: cferraro@landmarkaviation.com, P: 619-298-7704, C: 713-315-7075, F: 619-598-7021

Secondary Contact: Clay White

C: 713-876-5393

Address: 2904 Pacific Highway
San Diego, CA 92101

Tenant Description and Primary Industrial Activities:

1. Hangar 1 is used for offices. Hangars 2, 3 and 4 are used for aircraft parking. Outside contractors come in to perform aircraft maintenances on ramp as needed.
2. Vehicle maintenance is performed outdoors by Landmark technicians.
3. Fueling truck filling station adjacent to southwest corner of hangar 4.
4. Underground storage tank containing 15,000 gallons of av gas located under the fueling area. A 1,500 gallon Aboveground Storage Tank (AST) located at filling station is empty and has never been used due to permitting issues. Spill unit containing kitty litter, shovels, and drums, is also located at the fueling station. Daily checks are performed on the fueling areas.
5. UST is filled by an outside company using tanker trucks, about twice per month.
6. Eleven aircraft refueling trucks are parked outdoors. Fuel storage in trucks is about 30,000 gallons per day.
7. Outdoor hazardous waste accumulation area is adjacent to material storage building, covered and on spill pallets.
8. Solvent wash station and tank is located on the porch of the material storage building.
9. Outdoor hose bib at Hangar 4 is not used for outdoor wash down.
10. Asbury Environmental collects hazardous wastes, waste oil and oily materials.
11. DHL is a subtenant of Landmark Aviation, and operates next to hanger 4 of Landmark Aviation. DHL parts are stored indoors. Landmark performs fueling for DHL aircraft. DHL performs general inspections once every two weeks.
12. ABX is contracted by DHL to perform maintenance for aircraft and GSE.
13. Integrated Airline Services (IAS) is contracted by DHL to provide manpower to perform cargo loading and unloading.
14. Some of DHL's wastes are stored outdoors in the shared Waste Accumulation Area with Landmark. All have secondary containment, but some do not have overhead cover. Heritage Environmental Services collects all of DHL's hazardous waste and waste oil.
15. GSE are washed at ASIG wash rack as needed.
16. Jet Wash washes planes once or twice every three months. Wash water is captured and properly disposed of.
17. Every other day GSE is fueled with red dye diesel or unleaded fuel. This fuel is stored in fueling trucks onsite and trucks are filled once a month from an outside fueler truck.
18. Aircraft lavatories are serviced by Landmark. Landmark disposes of lavatory waste at a triturator.
19. Landmark will begin using TKS fluid (a deicing fluid) and servicing planes with it.
20. Tenant uses the Airport Storm Water Management Plan and has a Hazardous Materials Business Plan. Tenant is in process of updating the Spill Prevention, Control, and Countermeasure Plan.

Tenant Summary Sheet

Tenant:

Landmark Aviation

Significant Materials Potentially Exposed to Storm Water:

Potential Pollutant Sources

Aircraft fueling
Aircraft maintenance
Aircraft sanitary services
Aircraft washing
Building/ grounds maintenance
Chemical storage
Equipment degreasing
Equipment fueling
Equipment maintenance
Equipment storage
Fluid leaks from aircraft
Fuel spills
Outdoor waste storage
Fuel storage
Vehicle fueling
Vehicle maintenance
Vehicle parking

Potential Pollutants

Fuel, Metals, Battery acid, Antifreeze,
Lavatory wastes, Oil and Grease, Solvents,
Lubricants, Paints, Cleaning solutions,
Trash, Dumpster wastes, Lavatory chemicals,
Metals,

Best Management Practices and Current Structural Controls:

The list below identifies the BMP categories and specific BMPs that are applicable to Landmark Aviation. Appendix B provides a description of each BMP category.

Applicable BMP Categories

Non-Storm Water Management
Outdoor Equipment Ops and Maintenance Areas
Aircraft, Ground Vehicle and Equipment Maintenance

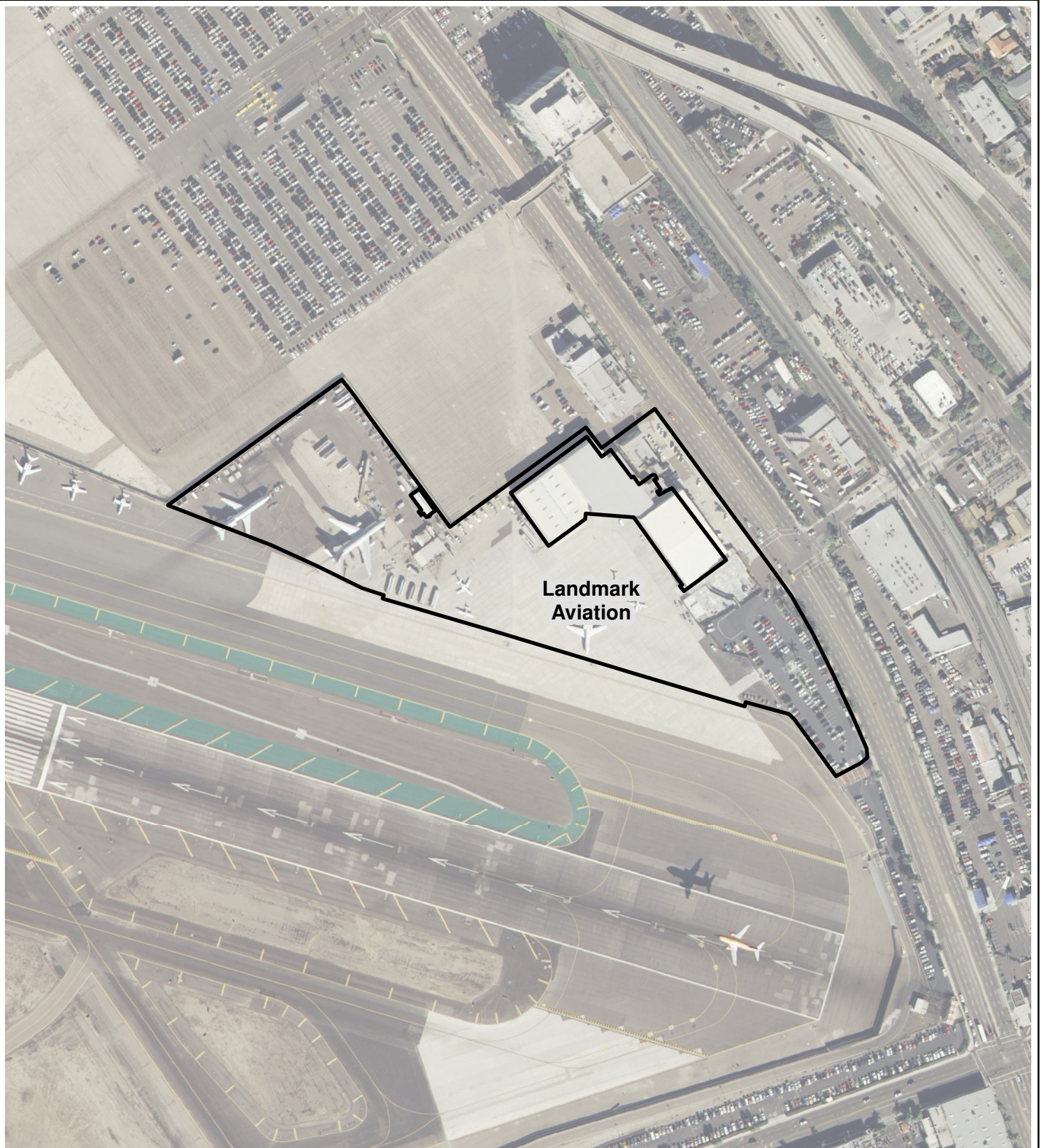
Aircraft, Ground Vehicle and Equipment Fueling
Aircraft, Ground Vehicle and Equipment Cleaning
Outdoor Loading/Unloading of Materials
Outdoor/Indoor Material Storage
Waste Handling and Disposal
Building and Grounds Maintenance
Employee Training
Lavatory Service Operation
Potable Water System Flushing
Parking Lots
Housekeeping
Safer/Alternative Products
Spill Prevention, Control, and Clean-up

BMP Number

SC01 - 1, 2, 4
SC02A - 2, 1
SC02B - 10, 3, 5, 8, 1, 11, 12, 13, 2, 4, 6, 7, 9
SC03 - 7, 1, 10, 11, 2, 3, 4, 5, 6, 8, 9
SC04 - 2, 1, 3, 4, 5, 6, 7, 8
SC06 - 3, 1, 2, 4, 6, 7
SC07 - 12, 2, 3, 8, 1, 10, 11, 6, 7, 9
SC08 - 3, 5, 1, 10, 11, 12, 14, 2, 4, 6, 7,
SC09 - 1, 2, 3
SC10 - 1, 2, 3, 4
SC11 - 4, 10, 3, 5, 7, 8, 9
SC14 - 1, 2, 3
SC16 - 1, 12, 2, 6
SC18 - 1, 4, 5, 2, 3, 6, 7, 8, 9
SC19 - 2, 1
SR01 - 6, 8, 1, 2, 3, 4, 5, 7, 9

Structural control measures used at Landmark Aviation:

Concrete secondary containment around refueling truck filling station to contain leaks and prevent contact with stormwater.



0 100 200 300 400
Feet

PROJECT NO.:
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**Landmark Aviation
Operating Areas**
San Diego International Airport

FIGURE

E-19

Tenant Summary Sheet

Tenant:

Lpi

SIC Code: 7521

Primary Activity: Parking Facility Management

Drainage Area: 6, 7, 8, 9, 10, 11

Nearest MS4 inlet: < 200 feet

Contact: Mike DeGraffenreid, General Manager

E: michael_degraffenreid@lindberghparking.com, P: 619-291-1508, F: 619-291-0083

Secondary Contact: Wendell Tanks, Assistant General Manager

C: 619-990-7202

Address: 3665 North Harbor Dr, Ste 200
San Diego, CA 92101

Tenant Description and Primary Industrial Activities:

1. LPi contracts ACE Parking Management to supply the 29 blue, red, and white airport buses, and the airport connection buses.
2. ACE contracts Fleetwash Environmental Services to wash the blue, red, and white airport buses, and the airport connection buses, in the NTC parking lot (taxi cab hold lot). Storm drains are sealed and wash water is transported offsite to Fleetwash facilities.
3. LPi has 2 dumpsters in Terminal 2 parking lot, 1 in Terminal 1 parking lot, 1 in the employee parking lot (lot 6), and 1 in the taxi hold lot (NTC). Waste Management picks up dumpster trash.
4. Golf carts and one Tennant sweeper (6500) owned by SDCRAA, but used by Lpi for daily sweeping.
5. Tenant performs as-needed maintenance of the sweeper onsite in designated maintenance area behind LPi's offices. Carts, trucks, and buses are serviced offsite.
6. Sweeper is fueled by ASIG at designated fueling area behind LPi's offices. Tenant receives fuel for Carts and stores it in a hazmat locker to fuel carts and blower. Trucks are fueled offsite at public gas stations.
7. Flammable materials storage locker has small amounts of fuel (for refueling of sweepers or carts if required before the next ASIG visit).
8. Terminal parking lots are swept daily using the Tennant 6500 sweeper, and the employee parking lots are swept weekly on Saturdays or Sundays.
9. Minor parking lot repairs are performed by LPi. However, major work would be contracted out.
10. Tenant uses the Airport Storm Water Management Plan and does not have a Hazardous Materials Business Plan.

Significant Materials Potentially Exposed to Storm Water:

Potential Pollutant Sources

Chemical storage
Equipment fueling
Equipment maintenance
Equipment storage
Fuel storage
Outdoor waste storage
Vehicle fueling
Vehicle parking
Vehicle washing

Potential Pollutants

Dumpster wastes, Lubricants, Paints,
Battery acid, Lubricants, Solvents, Sediment,
Oil and Grease, Fuel, Trash,

Best Management Practices and Current Structural Controls:

The list below identifies the BMP categories and specific BMPs that are applicable to Lpi. Appendix B provides a description of each BMP category.

Tenant Summary Sheet

Tenant:

Lpi

<u>Applicable BMP Categories</u>	<u>BMP Number</u>
Non-Storm Water Management	SC01 - 1, 3, 2, 4
Outdoor Equipment Ops and Maintenance Areas	SC02A - 1, 2
Aircraft, Ground Vehicle and Equipment Maintenance	SC02B - 11, 3, 7, 1, 2, 4, 5, 6, 8
Aircraft, Ground Vehicle and Equipment Fueling	SC03 - 1, 2, 4, 5, 6, 8
Aircraft, Ground Vehicle and Equipment Cleaning	SC04 - 2, 3, 5, 1, 4, 6, 7, 8
Outdoor/Indoor Material Storage	SC07 - 3, 1, 2, 7
Waste Handling and Disposal	SC08 - 2, 1, 12, 3, 4, 7, 8, 9
Employee Training	SC10 - 1, 2, 4
Outdoor Washdown/Sweeping (Apron Washing, Ramp Scrubbing)	SC12 - 1, 2, 3, 4, 5, 9
Parking Lots	SC16 - 1, 4, 5, 11, 2, 3, 6
Storm Drain Maintenance	SC17 - 2
Housekeeping	SC18 - 2, 4, 1, 3, 5, 6, 7, 8, 9
Safer/Alternative Products	SC19 - 1, 2
Spill Prevention, Control, and Clean-up	SR01 - 2, 6, 1, 3, 4, 5, 7, 8, 9

Structural control measures used at Lpi:

Concrete curbing is used to direct stormwater away from outdoor storage areas.

Portable booms are used during vehicle washing to funnel water to collection point where it is removed before entering MS4.



0 500 1,000 1,500
Feet

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LPI
Operating Areas
San Diego International Airport

FIGURE
E-20

Tenant Summary Sheet

Tenant:

SDCRAA

SIC Code: 4581

Primary Activity: Airport Maintenance & Operations

Drainage Area: 1 through 14

Nearest MS4 inlet: < 200 feet

Drainage Area:

Contact: Hilary Gish, Maintenance Supervisor

E: hgish@san.org, P: 619- 400-2735, F: 619-400-7276

Environmental Contact: Annie Martin

E: amartin@san.org, P: 619-400-2793

Secondary Contact: Marcos Corona, Lead Maintenance Worker

E: mcorona@san.org, P: 619-400-2747

Address: 3835 N. Harbor Drive
San Diego, CA 92101

Tenant Description and Primary Industrial Activities:

1. Road sweeping: Cannon is contracted to sweep the roads into and out of the airport Monday through Friday, 1 am - 4 am. Facilities Maintenance sweeps the ramp area 4 times a month and as needed or requested. The debris/sweepings are vacuumed up into the unit and are disposed of in the lowboy container between ARFF station and the control tower.
2. Ramp scrubbing: Facilities Maintenance performs ramp scrubbing 4 times a week using Tennant 1550 scrubbers. A biodegradable waxy soap is used; it is specifically made for oil and grease removal. This soap comes in 50 gallon drum containers and are presently stored behind the control tower in the bone yard. The scrubbing schedule separated into areas and rotates daily to cover the entire A.O.A. The areas scrubbed are: Terminal 2 West, Terminal 2 East, Terminal 1 West, Terminal 1 East, and Commuter Terminal. Other areas are done on request, including the north ramp/cargo areas. Each area gets 3 to 4 dates completed on the scheduled day. The next day, the following area is scheduled for scrubbing. The scrubber is used approximately 6 to 7 hours on the days scrubbing is scheduled precluding personnel shortages, holidays, and rainy days. The wash water and soap mixture is recycled into the machine. Water is replaced daily and waste water is disposed of at the dewatering tank located by the trash compactor close to the East Ramp. In addition to this, Cyclone Surface Cleaning, Inc is contracted to perform pressure (10,000 to 15,000 psi) cleaning for ramp areas twice a year.
3. Runway rubber removal: Is conducted by Abhe & Svoboda, every 6-8 weeks, depending on skidometer testing results. They are an all in one system which sprays on the rubber removal solution, scrubs the runway, rinses and vacuums up the rubber particles, removal solution and water. The rubber removal solution is a biodegradable chemical (DC101), 55 gallons of the solution is used for every 10,000 square feet of surface. Only the solution needed is brought on site during each rubber removal. Ocean Blue is responsible for disposal of waste and waste water generated.
4. Oil/water separators: There are 4 oil water separators at the airport that Facilities Maintenance is aware of: 2 at the north ramp, 1 northeast of the Commuter Terminal, and 1 near the ASIG wash rack and American Airlines maintenance shop. The oil water separator on the west ramp north of Terminal 2 West has been removed due to construction. Each installed oil water separator has an alarm system. If the oil reaches a certain level, or oil leaks to the ground, an alarm goes off. Alarms are checked weekly. Facilities Maintenance knew of only one time when an oil water separator was pumped out, and did not recall the contractor.
5. The Vortech unit previously located on the west end of Terminal 2 has been replaced with a filter fabric. This unit has not received any maintenance since installation and does not receive regular inspections.
6. Ocean Blue maintains a series of drain inlet inserts in the rental car lot, cell phone parking area, cargo area, across from the triturator, and the Least Tern nesting area. These are cleaned as needed in the dry season. During the rain season they are cleaned monthly and after each rain event.
7. Fire hydrant flushing: The City of San Diego is responsible for fire hydrant flushing at the airport once a year.

Tenant Summary Sheet

Tenant:

SDCRAA

8. Fire suppression system testing is done quarterly. All water flows to dirt area and evaporates or infiltrates. If no dirt area is available, then it is taken to the sewer.
9. Trash/recycling: Waste Management empties all trash and recycling bins daily. For T1 the trash compactor is emptied on a daily basis and the recycling compactor is emptied twice weekly. For T2 west the trash compactor has currently been removed due to construction. The trash compactor near American Airlines is emptied three times a week. Multiple 3-yard and 6-yard roll-off bins are spread throughout the airport. Each has a schedule for when it is emptied ranging from daily to once a week. The four 40-yard roll-off bins for wood pallets and large materials are emptied as needed.
10. FlagShip cleans the trash compactor area and collects trash and recyclables from around the airport and puts it in the trash or recycling bins. FlagShip has also been contracted to pressure wash areas around the dumpsters as needed. FlagShip uses two pressure washers and captures all waste water.
11. Spill kits: spill response materials (kits contain kitty litter, sandbags, plastic tarps, absorbent sox and pads, shovels, and brooms). They are located in various places on the Air Field. There are three spill kits. One is by the North Ramp, one by Gate 21, and one is by the Southwest trash compactors. Ocean Blue is responsible for stocking the Spill Kits when they run low on equipment.
12. Storm drain maintenance: United Storm Water, Inc. is contracted to clean out the storm water conveyance system at the airport quarterly. This is done by using 2 jetters and section by section, 200 to 300 feet per section. All debris and wastes are collected and disposed of at the dewatering bin.
13. Significant materials storage: Most significant materials are stored indoors, inside shop 22 (by gate 22), and the machining/welding shop (Shop 2 on Winship Lane). Pesticides, diesel, gasoline, and turpentine are stored in flammable materials storage lockers near the runway generator area east of the Commuter Terminal, and paints and a non-skid spray for metal steps are stored in a metal shed in the Bone yard area. Metal parts and other materials are stored in the boneyard area and near the runway generator area east of the Commuter Terminal, not all are covered and on pallets.
14. Vehicle maintenance is conducted by ASIG. Facilities Maintenance Department maintains runway signs, and Bay City Electric is contracted to maintain the light towers and generators.
15. ASIG fuels maintenance vehicles at four places: Maintenance shop at 2412, 2415 and 2417 Winship Lane, and the Commuter Terminal. They also fuel all light towers and generators.
16. Facilities Maintenance Department maintains the triturator area.
17. Roundup is used for weed control. Aztec Landscaping performs landscaping services. They bring their own pesticides and remove their landscape wastes.
18. Spill response materials are not on all vehicles.
19. Hazardous wastes are stored at the bone yard, covered on pallets. Ocean Blue is contracted to collect hazardous wastes as needed.
20. Stormwater pollution prevention training is performed annually by the Environmental Affairs Department.
21. Storm drain inspections are performed quarterly and before/after the rainy seasons.
22. FMD staff are trained to protect storm drains when performing maintenance and construction activities.
23. SDCRAA Facilities Maintenance Department uses the Airport Storm Water Management Plan and has a Hazardous Materials Business Plan.

Significant Materials Potentially Exposed to Storm Water:

Potential Pollutant Sources

Building/ grounds maintenance
Chemical storage
Equipment fueling
Equipment maintenance
Equipment storage
Equipment washing
Fuel spills
Fuel storage

Potential Pollutants

Turpentine, Lubricants, Fuel, Pesticides/
herbicides/ fertilizers, Metals, Paints,
Landscape wastes, Oil and Grease,
Dumpster wastes, Hydraulic fluids,
Antifreeze, Cleaning Solutions, Fuel,
Solvents, Trash, Fire fighting foam (AFFF),

Tenant Summary Sheet

Tenant:
SDCRAA

Significant Materials Potentially Exposed to Storm Water:

Potential Pollutant Sources

Materials loading/unloading
Outdoor apron wash
Outdoor waste storage
Pesticide/ herbicide usage
Ramp/ taxiway scrubbing
Runway rubber removal
Trash collection
Vehicle fueling
Vehicle parking

Potential Pollutants

Asphalt debris, Dumpster wastes, Lavatory chemicals, Lavatory wastes, Lubricants, Rubber particulates, Metals, Purple K, Battery Acid, Landscape wastes, Brake fluid, Cement, Adhesives, Silicone sealer
Galvanizing compound, Caulking,

Best Management Practices and Current Structural Controls:

The list below identifies the BMP categories and specific BMPs that are applicable to SDCRAA. Appendix B provides a description of each BMP category.

Applicable BMP Categories

Non-Storm Water Management
Outdoor Equipment Ops and Maintenance Areas
Aircraft, Ground Vehicle and Equipment Maintenance

Aircraft, Ground Vehicle and Equipment Fueling
Aircraft, Ground Vehicle and Equipment Cleaning
Outdoor Loading/Unloading of Materials
Outdoor/Indoor Material Storage
Waste Handling and Disposal

Building and Grounds Maintenance
Employee Training
Lavatory Service Operation
Outdoor Washdown/Sweeping (Apron Washing, Ramp Scrubbing)
Runway Rubber Removal
Parking Lots
Storm Drain Maintenance
Housekeeping
Safer/Alternative Products
Spill Prevention, Control, and Clean-up
Treatment Controls

BMP Number

SC01 - 3, 4, 1, 2
SC02A - 1, 2
SC02B - 10, 11, 12, 13, 1, 2, 3, 4, 5, 6, 7, 8, 9
SC03 - 1, 10, 11, 2, 3, 4, 5, 6, 8
SC04 - 1, 2
SC06 - 2, 3, 1, 4, 6, 7
SC07 - 12, 2, 3, 4, 1, 10, 11, 6, 7, 8, 9
SC08 - 5, 6, 7, 8, 1, 10, 11, 12, 13, 14, 2, 3, 4, 9
SC09 - 1, 2, 3, 4
SC10 - 1, 2, 3, 4
SC11 - 1, 2
SC12 - 1, 5, 2, 3, 4, 6, 7, 8, 9

SC15 - 4, 1, 2, 3
SC16 - 1, 2, 11, 12, 3, 4, 5, 6
SC17 - 1, 4, 2, 3, 5, 6, 7
SC18 - 2, 3, 5, 7, 1, 4, 6, 8, 9
SC19 - 1, 2
SR01 - 6, 8, 1, 10, 2, 3, 4, 5, 7, 9
TC01 - 1, 2, 4

Tenant Summary Sheet

Tenant:

SDCRAA

Structural control measures used at SDCRAA:

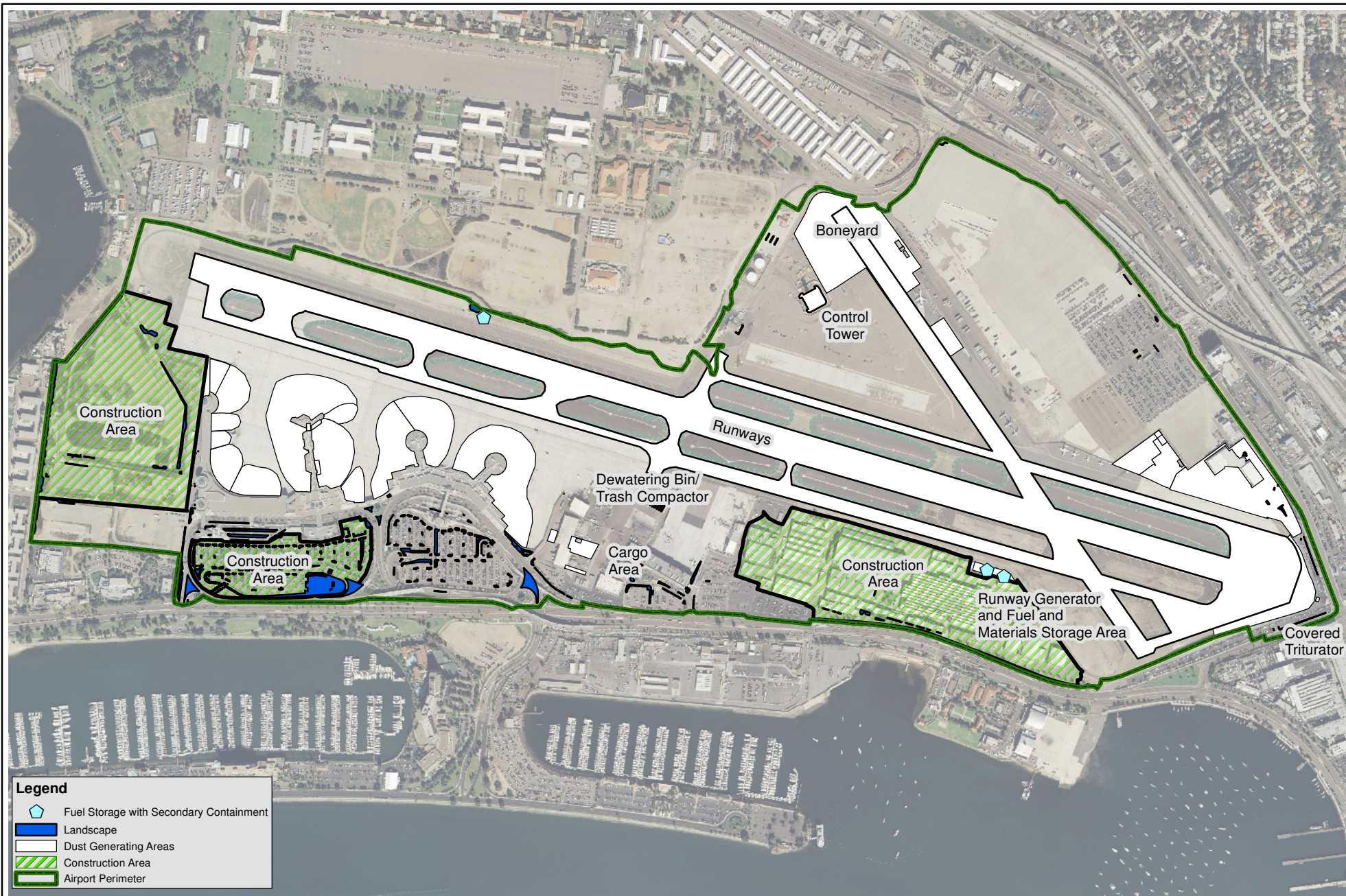
Concrete curbing is used to direct stormwater away from covered storage area and trash compactor area.

Concrete curbing with valves around diesel storage tanks to contain leaks.






Portable booms are used during washing of dumpster areas to funnel water to collection point where it is removed before entering MS4.

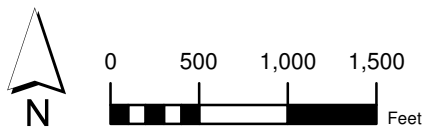
Trench drain in Terminal 2 West dumpster area is connected to sanitary sewer.

Triturator area is covered and sloped to prevent contact with storm water.



Legend

-  Fuel Storage with Secondary Containment
-  Landscape
-  Dust Generating Areas
-  Construction Area
-  Airport Perimeter



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SDCRAA
Operating Areas
 San Diego International Airport

FIGURE
E-21

Tenant Summary Sheet

Tenant:

SkyWest

SIC Code: 4512, 4522

Primary Activity: Passenger Carrier

Drainage Area: 6

Nearest MS4 inlet: 200-1000 feet

Contact: Roy Gourley, Station Manager

E: roy.gourley@skywest.com, P: 619-291-0160 X11

Address: 3225 North Harbor Drive, #104
San Diego, CA 92101

Tenant Description and Primary Industrial Activities:

1. SkyWest runs United Express. SkyWest which is part of the Delta and United group.
2. SkyWest operates out of the Commuter Terminal, as well at Terminal 1 at Gate 12 and occasionally at Gate 11.
3. Minor ground equipment maintenance is conducted outdoors near the bag room by SkyWest's mechanics from LA on an as-needed basis. Equipment is driven into the truck for maintenance and all waste is taken.
4. Minor aircraft maintenance is conducted on ramp.
5. ASIG fuels aircraft, vehicles, and ground support equipment on ramp.
6. No washing of planes or vehicles takes place.
7. One eyewash station and shower, which are rarely used.
8. A small amount of significant materials including oil, coolant, and paint are stored inside the storage room located northeast of the Commuter Terminal. The materials have secondary containment.
9. Waste from airplane maintenance is disposed by contractor or mechanic.
10. ASIG is contracted to handle all spill response.
11. Sky West does not have a spill kit. The nearest spill kit is owned by ASIG.
12. Materials utilized outdoors are stored near the blast fence.
13. Outdoor sweeping is conducted as needed.
14. Tenant has been recommended to use the Storm Water Management Plan of the Authority. Does not possess a Hazardous Materials Business Plan.

Significant Materials Potentially Exposed to Storm Water:

Potential Pollutant Sources

Aircraft fueling
Aircraft maintenance
Aircraft sanitary services
Equipment fueling
Equipment maintenance
Equipment storage
Fluid leaks from aircraft
Fuel spills
Vehicle fueling
Vehicle parking

Potential Pollutants

Lavatory wastes, Oil and Grease, Fuel,
Antifreeze, Lubricants, Cleaning solutions,
Paints, Lavatory chemicals, Hydraulic
fluids, Brake fluid, Adhesives, Dumpster
Wastes, Trash, Acetone, Paints,

Best Management Practices and Current Structural Controls:

The list below identifies the BMP categories and specific BMPs that are applicable to SkyWest. Appendix B provides a description of each BMP category.

Applicable BMP Categories

Non-Storm Water Management
Outdoor Equipment Ops and Maintenance Areas

BMP Number

SC01 - 1, 2, 4
SC02A - 2, 1

Tenant Summary Sheet

Tenant:

SkyWest

Applicable BMP Categories

Aircraft, Ground Vehicle and Equipment Maintenance

Aircraft, Ground Vehicle and Equipment Fueling

Aircraft, Ground Vehicle and Equipment Cleaning

Outdoor/Indoor Material Storage

Waste Handling and Disposal

Employee Training

Lavatory Service Operation

Housekeeping

Safer/Alternative Products

Spill Prevention, Control, and Clean-up

BMP Number

SC02B - 10, 11, 3, 4, 6, 1, 2, 5, 9

SC03 - 1, 11, 2, 3, 4, 5, 6, 8

SC04 - 1

SC07 - 1, 12, 2, 3, 7

SC08 - 5, 7, 1, 10, 11, 12, 2, 3, 4, 8, 9

SC10 - 1, 2, 3, 4

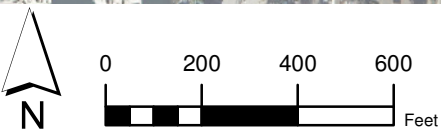
SC11 - 4, 6, 8, 10, 3, 5, 7, 9

SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9

SC19 - 1, 2

SR01 - 2, 4, 6, 1, 3, 7, 8, 9

Structural control measures used at SkyWest:



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**Sky West
Operating Areas**
San Diego International Airport

FIGURE

E-22

Tenant Summary Sheet

Tenant:

Southwest

SIC Code: 4512, 4522

Primary Activity: Passenger Carrier

Drainage Area: 7, 8

Nearest MS4 inlet: < 200 feet

Contact: Cheryl Black, Station Manager

E: Cheryl.black@wnco.com, P: 619-231-7345, F: 619-231-3733

Secondary Contact: George Parker, Lead Maintenance – GSE

P: 619-298-3005

Address: 3665 North Harbor Drive, Terminal 1
San Diego, CA 92101

Tenant Description and Primary Industrial Activities:

1. Southwest operates out of gates 1 through 10 of Terminal 1.
2. Most ground support equipment and vehicle maintenance (including painting) is conducted inside the Maintenance Shop. Some minor vehicle and ground support equipment maintenance is performed on ramp.
3. Aircraft maintenance is performed on ramp by Pacific Aircraft Maintenance.
4. ASIG fuels aircraft, vehicles, and ground support equipment.
5. There is a hose at the hose bib near Gate 9. It is used only to fill up containers for watering plants in the office.
6. Potable water is allowed to run for 1 minute then turned off and linked to aircraft. This is performed as far away from the storm drains as possible, and the water evaporates before reaching storm drain.
7. Southwest has spill bins at Gates 1 and 10. These bins contain absorbents, brooms, shovels, and disposal drums.
8. Aircraft cleaning is performed offsite (Phoenix, Oakland, and Dallas).
9. Significant materials are stored in flammable materials storage lockers.
10. Wastes are stored in Hazardous Waste Accumulation Areas in the gate area and inside the Maintenance Shop.
11. Hazardous wastes are picked up every 3 months. Evergreen recycles oil, Toxguard recycles antifreeze, and Ashland collects all other hazardous wastes.
12. ABM Services, a subtenant to Southwest, performs cabin services for Southwest and other airlines.
13. Pacific Aircraft Maintenance, a subtenant to Southwest, performs aircraft maintenance for various airlines at the gate areas.
14. Tenant has a Storm Water Pollution Prevention Plan and a Hazardous Materials Business Plan.

Significant Materials Potentially Exposed to Storm Water:

Potential Pollutant Sources

Aircraft Deicing
Aircraft fueling
Aircraft maintenance
Aircraft sanitary services
Cargo handling
Chemical storage
Equipment fueling
Equipment maintenance
Equipment storage
Fluid leaks from aircraft
Fuel spills
Outdoor waste storage
Vehicle fueling
Vehicle maintenance
Vehicle parking
Vehicle washing

Potential Pollutants

Oil and Grease, Fuel, Battery Acid, Solvents,
Lavatory wastes, Antifreeze, Lavatory
chemicals, Paints, Trash, Cleaning solutions,
Carburetor cleaner, Hydraulic fluids,
Transmission fluid, Lubricants

Tenant Summary Sheet

Tenant:

Southwest

Best Management Practices and Current Structural Controls:

The list below identifies the BMP categories and specific BMPs that are applicable to Southwest. Appendix B provides a description of each BMP category.

<u>Applicable BMP Categories</u>	<u>BMP Number</u>
Non-Storm Water Management	SC01 - 1, 2, 4
Outdoor Equipment Ops and Maintenance Areas	SC02A - 1, 2
Aircraft, Ground Vehicle and Equipment Maintenance	SC02B - 13, 2, 3, 4, 6, 1, 10, 11, 12, 5, 7, 8, 9
Aircraft, Ground Vehicle and Equipment Fueling	SC03 - 1, 2, 4, 5, 6, 8
Aircraft, Ground Vehicle and Equipment Cleaning	SC04 - 1, 2
Aircraft Deicing/Anti-Icing	SC05 - 1, 2, 3, 4
Outdoor Loading/Unloading of Materials	SC06 - 2, 1, 4, 6, 7
Outdoor/Indoor Material Storage	SC07 - 1, 11, 12, 2, 3
Waste Handling and Disposal	SC08 - 5, 7, 1, 10, 11, 12, 14, 2, 3, 4, 8, 9
Employee Training	SC10 - 1, 2, 3, 4
Lavatory Service Operation	SC11 - 10, 6, 3, 4, 5, 7, 8, 9
Potable Water System Flushing	SC14 - 1, 2, 3
Housekeeping	SC18 - 1, 2, 3, 4, 5, 6, 7, 8, 9
Safer/Alternative Products	SC19 - 1, 2
Spill Prevention, Control, and Clean-up	SR01 - 6, 1, 2, 3, 4, 5, 7, 8, 9

Structural control measures used at Southwest:

Vehicle washing area is sloped to divert wash water into sump connected to the sanitary sewer.



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**Southwest
Operating Areas**
San Diego International Airport

FIGURE

E-23

Tenant Summary Sheet

Tenant:

Sun Country

SIC Code: 4512, 4522

Primary Activity: Passenger Carrier

Drainage Area: 12

Nearest MS4 inlet: < 200 feet

Contact: Bassel Sakkab, Supervisor

E: bassel.h.sakkab@delta.com, P: 619-491-2885, F: 619-491-2803

Secondary Contact: Darwin Schussler, Sun Country Station Manager

E: darwain.schussler@suncountry.com, C-619-807-6846

Address: 3835 North Harbor Drive #107
San Diego, CA 92101

Tenant Description and Primary Industrial Activities:

1. Sun Country operates at gate 38.
2. Sun Country does not have on-site contacts, and rely on Delta to handle all operations.
3. All operations are performed the same as Delta flights.
4. Fueling performed by ASIG.
5. Tenant uses Delta's Storm Water Pollution Prevention Plan, Hazardous Materials Business Plan, Hazardous Waste Emergency Plan, Hazardous Waste Management Plan, and FOD Plan.

Significant Materials Potentially Exposed to Storm Water:

Potential Pollutant Sources

Aircraft Fueling
Aircraft Maintenance
Aircraft sanitary services
Fluid leaks from aircraft
Fuel spills

Potential Pollutants

Oil and Grease, Antifreeze, Fuel, Fuel,
Antifreeze, Paints, Battery acid, Lubricants,
Cleaning Solutions

Best Management Practices and Current Structural Controls:

The list below identifies the BMP categories and specific BMPs that are applicable to Sun Country. Appendix B provides a description of each BMP category.

Applicable BMP Categories

Non-Storm Water Management
Outdoor Equipment Ops and Maintenance Areas
Aircraft, Ground Vehicle and Equipment Maintenance
Aircraft, Ground Vehicle and Equipment Fueling
Waste Handling and Disposal
Employee Training
Housekeeping
Safer/Alternative Products
Spill Prevention, Control, and Clean-up

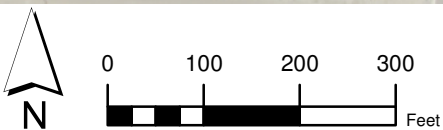
BMP Number

SC01 - 1, 2, 4
SC02A - 2, 1
SC02B - 3, 1, 2, 4, 5
SC03 - 1, 2, 4, 5, 6, 8
SC08 - 1, 2
SC10 - 1, 2, 3, 4
SC18 - 1, 2, 3, 4, 5
SC19 - 1, 2
SR01 - 6, 1, 2, 3, 4, 5, 7, 8, 9

Structural control measures used at Sun Country:



Sun Country



PROJECT NO.:
5013-11-0003

DATE:
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**Sun Country
Operating Areas**
San Diego International Airport

FIGURE

E-24

Tenant Summary Sheet

Tenant:

United

SIC Code: 4512, 4522

Primary Activity: Passenger Carrier

Drainage Area: 7, 8

Nearest MS4 inlet: < 200 feet

Contact: John Woodard, Airport Operations Supervisor

E: john.woodward@united.com, P: 619-231-5641, F: 619-231-5688

Secondary Contact: Sean Clinton, Maintenance Mechanic
P: 619-231-5627

Address: 3665 North Harbor Drive # 223
San Diego, CA 92101

Tenant Description and Primary Industrial Activities:

1. United operates out of gates 11-15 of Terminal 1.
2. United performs maintenance of its own GSE equipment at their maintenance shop located next to the cargo loading/unloading building.
3. Jetstream, a subtenant to United, conducts cargo loading/unloading.
4. Timco, a subtenant to United, is responsible for maintenance of aircraft on the ramp.
5. U.S. Aviation, a subtenant to United, is responsible for cleaning of aircraft interior and dumping lavatory waste.
6. AccuFleet, a subtenant to United, performs aircraft washing at the gates or remote parking at night. All wash water is vacuumed up and disposed of at the Triturator. AccuFleet equipment is parked by United GSE maintenance shop.
7. Waste is stored in a Hazardous Waste Accumulation Area outside United's maintenance shop.
8. Lavatory deodorant is stored outdoors, at GSE shop with secondary containment.
9. Lavatory deodorant is added to the lavatory truck at the GSE shop and water is added at the outdoor hose bib located between Gates 11 and 12.
10. Safety Kleen collects and disposes of hazardous waste and waste oil.
11. Gate Gourmet provides food service for United.
12. ASIG provides aircraft and equipment fueling at the gates or remote parking areas that the vehicles are parked.
13. Tenant uses the Airport Storm Water Management Plan, and has a Hazardous Materials Business Plan.

Significant Materials Potentially Exposed to Storm Water:

Potential Pollutant Sources

Aircraft fueling
Aircraft maintenance
Aircraft sanitary services
Aircraft washing
Cargo handling
Chemical storage
Equipment fueling
Equipment maintenance
Equipment storage
Fluid leaks from aircraft
Fuel spills
Outdoor waste storage
Vehicle fueling
Vehicle maintenance
Vehicle parking
Vehicle washing

Potential Pollutants

Fuel, Antifreeze, Solvents, Paints,
Lubricants, Metals, Propane,
Lavatory chemicals, Coolant, Lavatory
wastes, Dumpster wastes, Cleaning solutions,
Battery acid, Trash,

Tenant Summary Sheet

Tenant:

United

Best Management Practices and Current Structural Controls:

The list below identifies the BMP categories and specific BMPs that are applicable to United. Appendix B provides a description of each BMP category.

<u>Applicable BMP Categories</u>	<u>BMP Number</u>
Non-Storm Water Management	SC01 - 1, 2, 4
Outdoor Equipment Ops and Maintenance Areas	SC02A - 2, 1
Aircraft, Ground Vehicle and Equipment Maintenance	SC02B - 10, 2, 3, 5, 1, 11, 12, 13, 4, 6, 8,
Aircraft, Ground Vehicle and Equipment Fueling	SC03 - 1, 2, 4, 5, 6, 8
Aircraft, Ground Vehicle and Equipment Cleaning	SC04 - 1, 2, 3, 4, 5, 6, 7, 8
Outdoor Loading/Unloading of Materials	SC06 - 2, 3, 6, 1, 4, 7
Outdoor/Indoor Material Storage	SC07 - 2, 7, 1, 11, 12, 3
Waste Handling and Disposal	SC08 - 12, 5, 7, 8, 1, 10, 11, 14, 2, 3, 4, 9
Employee Training	SC10 - 1, 2, 3, 4
Lavatory Service Operation	SC11 - 10, 4, 5, 3, 7, 8, 9
Housekeeping	SC18 - 2, 4, 7, 1, 3, 5, 6, 8, 9
Safer/Alternative Products	SC19 - 2
Spill Prevention, Control, and Clean-up	SR01 - 4, 6, 1, 10, 2, 3, 5, 7, 8, 9

Structural control measures used at United:

Portable booms are used during washing to funnel water to collection point where it is removed before entering MS4.



0 100 200 300 400
Feet

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United
Operating Areas
San Diego International Airport

FIGURE

E-25

Tenant Summary Sheet

Tenant:

UPS

SIC Code: 4513

Primary Activity: Cargo Handling and Shipment

Drainage Area: 5, 6

Nearest MS4 inlet: < 200 feet

Contact: James Bailey, Environmental Coordinator

E:jhbailey@ups.com, P: 909-974-7909, C: 858-967-0950

Secondary Contact: Juan Gomez, Plant Engineering Supervisor

E:jcgomez@ups.com, P: 858-541-2336, C: 858-518-8229

Address: 3140 E. Jurupa St. G105, Ontario, CA 91761

Tenant Description and Primary Industrial Activities:

1. UPS loads and unloads its aircraft at the north ramp next to ATI/IAS.
2. A spill kit, located next to the loading/unloading area, contains absorbent pads, booms, and a spill response manual.
3. UPS's own technicians perform maintenance of aircraft and equipment.
4. Most maintenance of tugs and loading equipment occurs outside, including oil changes for tugs. Aircraft maintenance is performed outside.
5. ASIG fuel UPS aircraft, vehicles, and ground support equipment.
6. Integrated Airline Services (IAS) provide man power for loading/unloading services.
7. Evergreen picks up hazardous wastes and waste oil from UPS. ToxGard reclaims antifreeze onsite.
8. GAT performs lavatory services twice a week.
9. James Bailey is the new environmental contact.
10. Tenant uses the Airport Storm Water Management Plan and has a Hazardous Materials Business Plan.

Significant Materials Potentially Exposed to Storm Water:

Potential Pollutant Sources

Aircraft fueling
Aircraft maintenance
Cargo handling
Equipment fueling
Equipment maintenance
Equipment storage
Fluid leaks from aircraft
Fuel spills
Vehicle fueling

Potential Pollutants

Oil and Grease, Fuel, Trash, Sediment,
Solvents, Hydraulic Fluid, Lubricants

Best Management Practices and Current Structural Controls:

The list below identifies the BMP categories and specific BMPs that are applicable to UPS. Appendix B provides a description of each BMP category.

Applicable BMP Categories

Non-Storm Water Management
Outdoor Equipment Ops and Maintenance Areas
Aircraft, Ground Vehicle and Equipment Maintenance

Aircraft, Ground Vehicle and Equipment Fueling
Aircraft, Ground Vehicle and Equipment Cleaning
Outdoor Loading/Unloading of Materials
Outdoor/Indoor Material Storage
Waste Handling and Disposal

BMP Number

SC01 - 1, 2, 4
SC02A - 2, 1
SC02B - 10, 11, 3, 1, 12, 13, 2, 4, 5, 6, 7, 8, 9
SC03 - 1, 2, 4, 5, 6, 8
SC04 - 1
SC06 - 1, 2, 4, 7
SC07 - 6, 1, 11, 12, 2, 3, 7
SC08 - 7, 1, 10, 11, 12, 14, 2, 3, 4, 5, 8, 9

Tenant Summary Sheet

Tenant:

UPS

Employee Training

SC10 - 1, 2, 3, 4

Parking Lots

SC16 - 1, 12, 2, 11, 4, 6

Housekeeping

SC18 - 2, 4, 1, 3, 5, 6, 7, 8, 9

Safer/Alternative Products

SC19 - 1, 2

Spill Prevention, Control, and Clean-up

SR01 - 6, 1, 2, 3, 4, 5, 7, 8, 9

Structural control measures used at UPS:



0 100 200 300
Feet

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UPS
Operating Areas
San Diego International Airport

FIGURE

E-26

Tenant Summary Sheet

Tenant:

US Airways

SIC Code: 4512, 4522

Primary Activity: Passenger Carrier

Drainage Area: 12

Nearest MS4 inlet: 200-1000 feet

Contact: Shawn Carroll, Maintenance Supervisor

E: shawn.carroll@usairways.com, P: 619-295-3047, C: 619-559-0276, F: 619-295-3143

Secondary Contact: Lynn Silva, Station Manager

E: lynn.silva@usairways.com, P: 619-222-9001

Address: 3835 North Harbor Drive # 128, San Diego, CA 92101

Tenant Description and Primary Industrial Activities:

1. US Airways operates at Gates 33, 34, 37 and occasionally 21.
2. Maintenance of GSE is done at US Airways shop. Vehicle painting is done indoors with a paint roller. GAT, a subtenant to US Airways, also performs maintenance to the US Airways shop.
3. Maintenance of airplanes occurs at the gates.
4. New oils and some tires are stored under the breezeway between Gates 33 and 34.
5. One flammable material storage locker inside the maintenance department by Gate 36 contains small amount of paint, oil, lubricant, cleaning solutions.
6. US Airways contracts Jetstream, a subtenant of United Airlines, to handle cargo.
7. A spill cart is located by Gate 33. It contains absorbent towels, litter, brooms, and dust pans. A spill cart is also located by Gate 21.
8. There are two hazardous waste and waste oil accumulation areas; one is inside the maintenance shop, the other is under the breezeway between gates 33 and 34.
9. Ocean Blue collects and recycles hazardous wastes and waste oil once every 2 - 3 months.
10. ASIG fuels vehicles and airplanes.
11. DAL Global cleans interior of planes.
12. GES provides maintenance to equipment.
13. Tenant uses the Airport Storm Water Management Plan and has a Hazardous Materials Business Plan.

Significant Materials Potentially Exposed to Storm Water:

Potential Pollutant Sources

Aircraft fueling
Aircraft maintenance
Aircraft sanitary services
Cargo handling
Chemical storage
Equipment fueling
Equipment maintenance
Equipment storage
Fluid leaks from aircraft
Fuel spills
Outdoor waste storage
Vehicle fueling
Vehicle maintenance
Vehicle parking

Potential Pollutants

Battery Acid, Oil and Grease, Lubricants,
Trash, Fuel, Cleaning Solutions, Hydraulic fluids,
Lavatory Truck Wash Water, Lavatory wastes,
Lavatory chemicals, Antifreeze, Trash,

Best Management Practices and Current Structural Controls:

The list below identifies the BMP categories and specific BMPs that are applicable to US Airways. Appendix B provides a description of each BMP category.

Tenant Summary Sheet

Tenant:

US Airways

<u>Applicable BMP Categories</u>	<u>BMP Number</u>
Non-Storm Water Management	SC01 - 1, 2, 4
Outdoor Equipment Ops and Maintenance Areas	SC02A - 2, 1
Aircraft, Ground Vehicle and Equipment Maintenance	SC02B - 10, 3, 5, 6, 7, 1, 11, 12, 13, 2, 4, 8, 9
Aircraft, Ground Vehicle and Equipment Fueling	SC03 - 1, 2, 4, 5, 6, 8
Aircraft, Ground Vehicle and Equipment Cleaning	SC04 - 1
Outdoor/Indoor Material Storage	SC07 - 1, 11, 12, 2, 3, 7
Waste Handling and Disposal	SC08 - 10, 12, 7, 9, 1, 11, 14, 2, 3, 4, 5, 8
Employee Training	SC10 - 1, 2, 3, 4
Lavatory Service Operation	SC11 - 10, 3, 4, 5, 6, 7, 8, 9
Potable Water System Flushing	SC14 - 1, 2, 3
Housekeeping	SC18 - 1, 2, 4, 3, 5, 6, 7, 8, 9
Safer/Alternative Products	SC19 - 1, 2
Spill Prevention, Control, and Clean-up	SR01 - 6, 1, 2, 3, 5, 7, 8, 9

Structural control measures used at US Airways:

Concrete curbing is used to direct stormwater away from covered storage area.

Portable booms are used during washing to funnel water to collection point where it is removed before entering MS4.



0 200 400 600
Feet

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**US Airways
Operating Areas**
San Diego International Airport

FIGURE

E-27

Tenant Summary Sheet

Tenant:

Virgin America

SIC Code: 4512, 4522

Primary Activity: Passenger Carrier

Drainage Area: 12

Nearest MS4 inlet: < 200 feet

Contact: Ron Cook or Barbara Russell, Environmental Contact

E: Ron.cook@virginamerica.com,
barbara.russell@virginamerica.com, P: 619-220-6770, F:
619-683-2124

Secondary Contact: Nadya Benitez, Supervisor

E: nadya.benitez@virginamerica.com, P: 619-220-6771

Address: 3707 N. Harbor Dr. T2E, Ste 104
San Diego, CA 92101

Tenant Description and Primary Industrial Activities:

1. Virgin America operates at gate 25.
2. DAL Global Services (DGS) performs ground handling. Certified Aviation Services (CAS) performs aircraft maintenance at gate.
3. ASIG performs maintenance of equipment and fueling.
4. A small amount of universal waste collected by airport security checks are stored in a flammable locker inside the bag room outside Virgin America's office. Ocean Blue picks up as needed.
5. One spill cart is located by Gate 25.
6. Tenant uses the Airport Storm Water Management Plan and has a Hazardous Business Plan.

Significant Materials Potentially Exposed to Storm Water:

Potential Pollutant Sources

Aircraft fueling
Aircraft maintenance
Aircraft sanitary services
Fluid leaks from aircraft
Fuel spills

Potential Pollutants

Fuel, Antifreeze, Oil and Grease,
Lubricants, Oil and Grease, Lubricants,
Antifreeze, Lubricants, Oil and Grease,
Fuel, Antifreeze, Lavatory chemicals

Best Management Practices and Current Structural Controls:

The list below identifies the BMP categories and specific BMPs that are applicable to Virgin America. Appendix B provides a description of each BMP category.

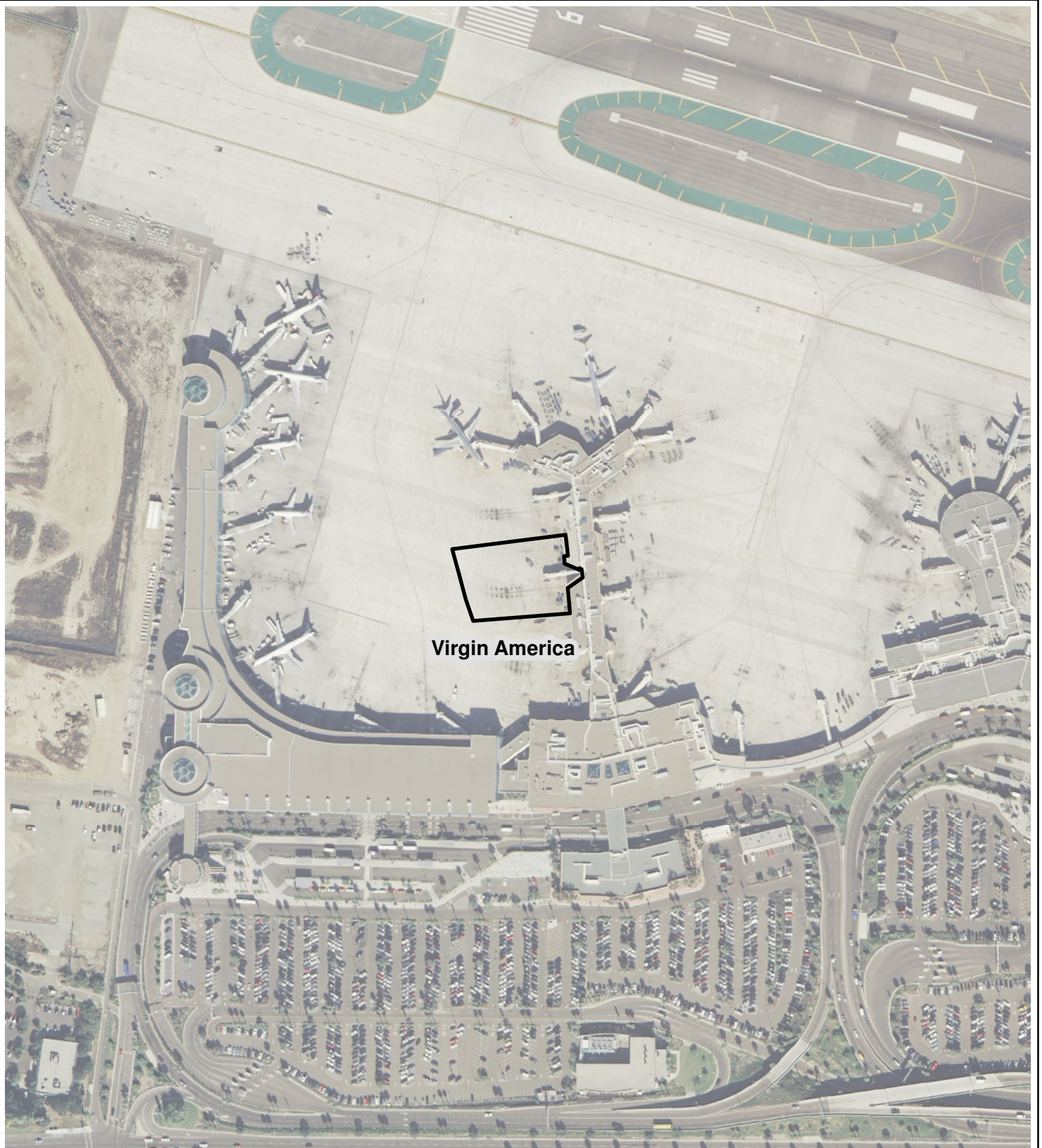
Applicable BMP Categories


Non-Storm Water Management
Outdoor Equipment Ops and Maintenance Areas
Aircraft, Ground Vehicle and Equipment Maintenance
Aircraft, Ground Vehicle and Equipment Fueling
Outdoor/Indoor Material Storage
Waste Handling and Disposal
Employee Training
Storm Drain Maintenance
Housekeeping
Safer/Alternative Products
Spill Prevention, Control, and Clean-up

BMP Number

SC01 - 1, 2, 4
SC02A - 2, 1
SC02B - 10, 3, 7, 1, 11, 12, 2, 4, 5, 6, 8, 9
SC03 - 1, 2, 4, 5, 6, 8
SC07 - 1, 2, 3
SC08 - 1, 10, 12, 2, 3, 4, 7, 8, 9
SC10 - 2, 4, 1
SC17 - 2
SC18 - 1, 4, 2, 3, 5, 6, 7, 8, 9
SC19 - 1, 2
SR01 - 2, 1, 3, 4, 5, 6, 7, 8, 9

Structural control measures used at Virgin America:



0 100 200 300
 Feet

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**Virgin America
 Operating Areas**
San Diego International Airport

FIGURE

E-28

Tenant Summary Sheet

Tenant:

West Jet

SIC Code: 4512, 4522

Primary Activity: Passenger Carrier

Drainage Area: 12

Nearest MS4 inlet: 200-1000 feet

Contact: Phil Delk, Station Manager

E: pdelk@atsstl.com, P: 619-220-0164, C: 310-227-7331

Secondary Contact: Alioune Sow, Regional Manager

P: 310-849-9935

Address: 3707 N. Harbor Dr. T2E
San Diego, CA 92101

Tenant Description and Primary Industrial Activities:

1. Operate out of Gate 22 but occasionally use 21. Gate 22 is shared by multiple airlines. Hawaiian and Allegiant also use Gate 22.
2. All equipment maintenance is done in the GES maintenance shop area by GES. Daily vital fluid checks are performed by ATS staff and monthly Preventive Maintenance Inspections are conducted by Tom Mescuranis of GES.
3. Fueling is conducted by ASIG at the Gate. ATS conducts monthly station safety audits which include observing fueling. ATS requests a poundage of fuel to be put into the aircraft prior to each fueling.
4. Cleaning of vehicles is done at the triturator facility. No aircraft cleaning is performed at SIDA.
5. All ground handling activities are performed by ATS.
6. All aircraft maintenance is performed by Pacific Aviation.
7. Tenant uses the Airport Storm Water Management Plan and does not have a Hazardous Business Plan.

Significant Materials Potentially Exposed to Storm Water:

Potential Pollutant Sources

Aircraft fueling
Aircraft maintenance
Aircraft sanitary services
Fluid leaks from aircraft
Fuel spills

Potential Pollutants

Lavatory wastes, Battery acid, Lavatory chemicals,
Oil and Grease, Lubricants, Fuel, Sediment,
Antifreeze,

Best Management Practices and Current Structural Controls:

The list below identifies the BMP categories and specific BMPs that are applicable to West Jet. Appendix B provides a description of each BMP category.

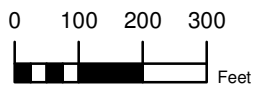
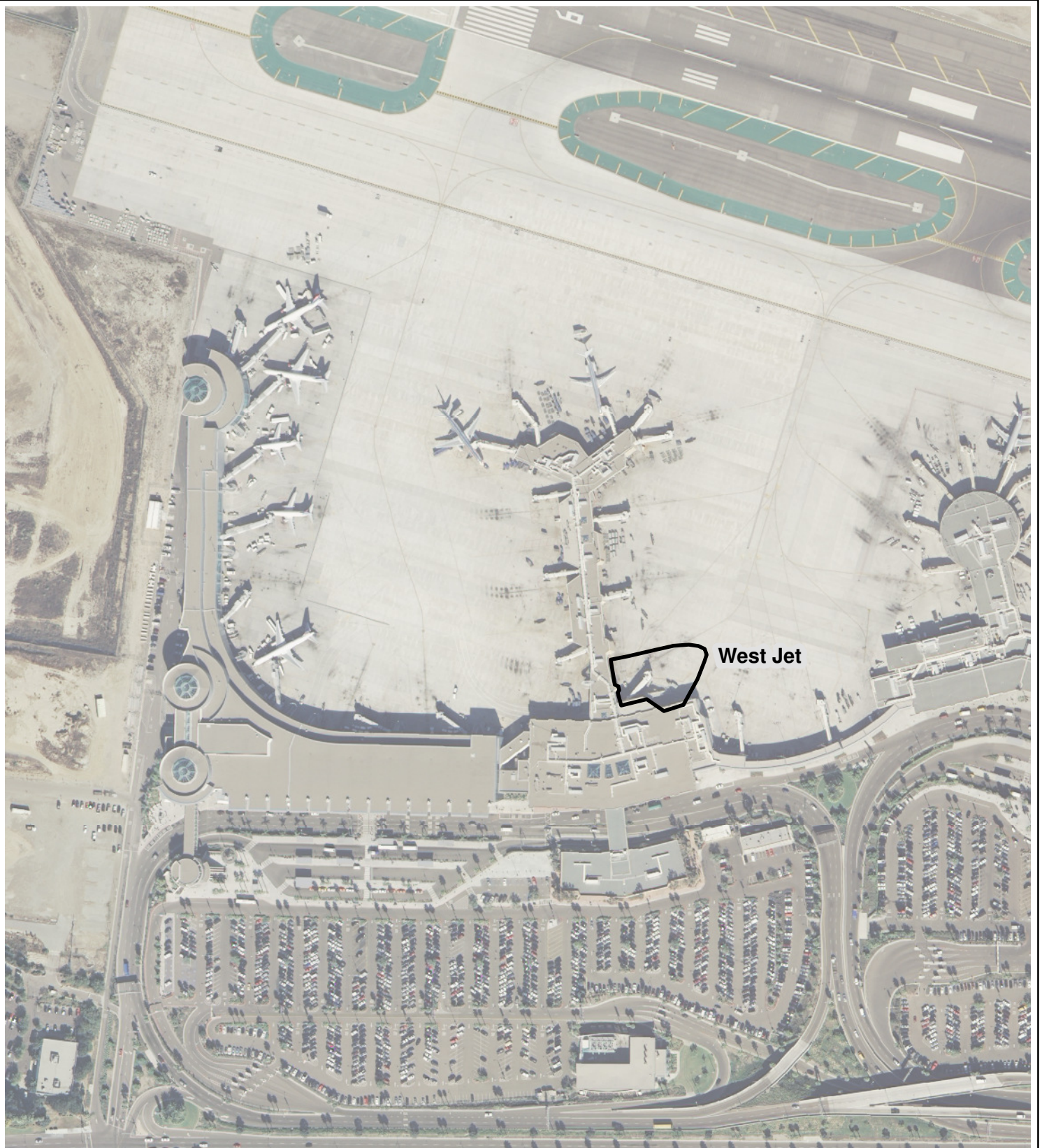
Applicable BMP Categories

Non-Storm Water Management
Outdoor Equipment Ops and Maintenance Areas
Aircraft, Ground Vehicle and Equipment Maintenance
Aircraft, Ground Vehicle and Equipment Fueling
Aircraft, Ground Vehicle and Equipment Cleaning
Employee Training
Housekeeping
Safer/Alternative Products
Spill Prevention, Control, and Clean-up

BMP Number

SC01 - 1, 2, 4
SC02A - 2, 1
SC02B - 10, 11, 2, 3, 7, 1, 13, 2, 4, 5, 6, 8
SC03 - 1, 2, 4, 5, 6, 8
SC04 - 1
SC10 - 2, 3, 1, 4
SC18 - 1, 4, 2, 3, 5
SC19 - 1, 2
SR01 - 2, 6, 1, 3, 5, 8, 9

Structural control measures used at West Jet:



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**West Jet
Operating Areas**
San Diego International Airport

FIGURE

E-29

APPENDIX F
AUTHORITY RULES AND REGULATIONS

- ◆ Storm Water Code
- ◆ Standard Tenant Leasehold Agreement

Appendix F – Authority Rules and Regulations



SAN DIEGO COUNTY REGIONAL AIRPORT AUTHORITY

CODES

ARTICLE	8	-	GENERAL OPERATIONS
PART	8.7	-	STORM WATER CONTROL
SECTION	8.70	-	GENERAL PROVISIONS

(a) General. Sections 8.70 to 8.80 of this Code shall be known as the “**San Diego County Regional Airport Authority Storm Water Management and Discharge Control**” and the “**Storm Water Code**” and may be so cited. Capitalized terms not otherwise defined in this Section are defined in Section 8.71 of the Storm Water Code.

(b) Objectives. The Storm Water Code sets forth uniform requirements and prohibitions for dischargers and places of discharge to the Storm Water Conveyance System, and the Receiving Waters, necessary to adequately enforce and administer all laws and lawful standards and orders or special orders, that provide for the protection, enhancement and restoration of water quality. Through a program employing watershed-based approaches that includes environmental and economic considerations, the San Diego County Regional Airport Authority (the “**Authority**”) seeks to reduce pollution entering San Diego Bay from Storm Water Discharges and to protect and promote the public health, safety and general prosperity of its tenants, the public and to protect the natural resources and environment with the attainment of the following objectives:

- (1) To reduce Storm Water Runoff pollution;
- (2) To reduce Non-Storm Water Discharge to the Storm Water Conveyance System and Receiving Waters to the Maximum Extent Practicable;
- (3) To comply with all federal and state laws, lawful standards and orders applicable to Storm Water and Urban Runoff pollution control;
- (4) To prohibit any discharge which may interfere with the operation of, or cause damage to the Storm Water Conveyance System, or contribute to the impairment of the beneficial use or violation of a water quality objective of the Receiving Waters;
- (5) To prohibit Illegal Discharges and illicit connections to the Storm Water Conveyance System and Receiving Waters; and
- (6) To develop and implement effective educational outreach programs designed to educate the public, Authority employees and tenants on issues of Storm Water and Urban Runoff pollution prevention.

(c) Scope. The Storm Water Code provides for the prevention, control, treatment,

diversion and regulation of Discharges to the Storm Water Conveyance System and Receiving Waters, through a program of education and enforcement of general and specific prohibitions and requirements. The Storm Water Code applies to all dischargers and places located on property within the Authority's jurisdiction that discharge Storm Water or non-Storm Water into any Storm Water Conveyance System or Receiving Waters. Except as otherwise provided herein, the Authority's Executive Director or his or her designee shall administer, implement and enforce the provisions of the Storm Water Code.

(d) Violations. Any person violating any of the provisions or failing to comply with the mandatory requirements of the Storm Water Code, shall be guilty of a misdemeanor unless such violation or failure is declared herein to be an infraction.

[Resolution No. 2002-02 dated September 20, 2002.]

[Superceded by Resolution No. _____ dated _____.]

SAN DIEGO COUNTY REGIONAL AIRPORT AUTHORITY

CODES

ARTICLE 8	- GENERAL OPERATIONS
PART 8.7	- STORM WATER CONTROL
SECTION 8.71	- DEFINITIONS AND ABBREVIATIONS

(a) For the purpose of Sections 8.70 to 8.80 of this Code (the “**Storm Water Code**”), the following words and phrases are defined and shall be construed as hereinafter set out, unless it is apparent from the context that they have a different meaning:

(1) “**Authority**” means the San Diego County Regional Airport Authority, a local entity of regional government.

(2) “**Basin Plan**” means the Comprehensive Water Quality Control Plan for the San Diego Basin, adopted by the California Regional Water Quality Control Board, San Diego Region in September 1994, and all subsequent amendments.

(3) “**Best Management Practices**” (BMPs) means schedules of activities, prohibition of practices, general good housekeeping practices, pollution prevention and educational practices, maintenance procedures, structural or hardscape features that detoxify and remove pollutants or reduce flow, and other management practices to prevent or reduce to the Maximum Extent Practicable (MEP) the discharge of pollutants directly or indirectly to waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage and leaks, sludge or waste disposal, or drainage from raw materials storage.

(4) “**Clean Water Act**” (CWA) means the Federal Water Pollution Control Act enacted in 1972 by Public Law 92-500 and amended by the Water Quality Act of 1987. The Clean Water Act prohibits the discharge of pollutants to waters of the United States unless said discharge is in accordance with a NPDES Permit.

(5) “**Commercial Activity**” means any public or private activity involved in the storage, transportation, distribution, exchange or sale of goods and/or commodities or providing professional and/or non-professional services.

(6) “**Construction Activity**” is defined as clearing, grading or excavation that results in soil disturbance. Construction activity does not include routine maintenance to maintain original line and grade, hydraulic capacity or the original purpose of the facility, nor does it include emergency construction activities required to immediately protect public health and/or safety.

(7) “**Control**” means to minimize, reduce or eliminate by technological, legal,

contractual or other means, the discharge of pollutants from an activity or activities.

(8) “**Discharge**” means any release, spill, leak, pump, flow, escape, dumping, or disposal of any liquid, semi-solid or solid substance.

(9) “**Executive Director**” means the Executive Director of the Authority or his duly authorized representative(s) designated to administer, implement and enforce the provisions of the Storm Water Code.

(10) “**Hazardous Material(s)**” means any material(s) defined as hazardous by Division 20, Chapter 6.95 of the California Health and Safety Code.

(11) “**Illegal Discharge**” means any Discharge to the Storm Water Conveyance System that is prohibited under federal, state or local statutes, ordinances, codes or regulations or degrades the quality of Receiving Waters. Illegal Discharges include all Non-Storm Water Discharges except Discharges pursuant to an NPDES Permit or Discharges that are exempted or conditionally exempted by such NPDES Permit or granted as a special waiver or exemption by the Regional Water Quality Control Board.

(12) “**Illicit Connection**” means any man-made conveyance that is connected directly to the Storm Water Conveyance System or Receiving Waters, excluding roof-drains and other similar connections, that serves as a pathway for any Illegal Discharge.

(13) “**Impervious Surface**” means any man-made or modified surface that prevents or significantly reduces the entry of water into the underlying soil, resulting in runoff from the surface in greater quantities and/or at an increased rate, when compared to natural conditions prior to development. Examples of places that commonly exhibit impervious surfaces include parking lots, driveways, roadways, storage areas and rooftops. The imperviousness of these areas commonly results from paving, compacted gravel, compacted earth and oiled earth.

(14) “**Industrial Activity**” means any public or private activity which is associated with any of the 11 categories of activities defined in 40 CFR 122.26(b)(14) and required to obtain a NPDES Permit.

(15) “**Industrial/Commercial Facility**” means any facility involved and/or used in either the production, manufacture, storage, transportation, distribution, exchange or sale of goods and/or commodities, and any facility involved and/or used in providing professional or non-professional services. This category of facility includes, but is not limited to, any facility defined by the Standard Industrial Classifications (SIC). Facility ownership (federal, state, municipal, private) and profit motive of the facility are not factors in this definition.

(16) “**Maximum Extent Practicable**” (MEP) means the standard for implementation of Storm Water management programs to reduce Pollutants in Storm Water. MEP refers to Storm Water management programs taken as a whole. It is the MEP taking into account equitable considerations and competing facts, including but not limited to, the gravity of the problem, public health risk, societal concern, environmental benefits, Pollutant removal effectiveness, regulatory compliance, public acceptance, ability to implement, cost and technical feasibility. Section 402(p) of the CWA requires that municipal permits “. . . shall require controls

to reduce the discharge of Pollutants to the MEP, including management practices, control techniques and systems, design and engineering methods, and such other provisions as the Administrator of the United States Environmental Protection Agency or the state determines appropriate for the control of said Pollutants.”

(17) “**NPDES Permit**” means a permit relating to the National Pollutant Discharge Elimination System issued by the U.S. EPA, State Water Resources Control Board, or the California Regional Water Quality Control Board pursuant to the CWA that authorizes Discharges to waters of the United States and requires the reduction of Pollutants in the Discharge.

(18) “**Non-Storm Water Discharge**” means any Discharge to a municipal Storm Water Conveyance System or Receiving Waters that is not composed entirely of Storm Water.

(19) “**Pollutant**” means any “pollutant” defined in Section 502(6) of the CWA or incorporated into the California Water Code Section 13373. Pollutants may include, but are not limited to the following:

(A) Residential, commercial and industrial waste (such as fuels, solvents, detergents, plastic pellets, hazardous substances, fertilizers, pesticides, slag, ash and sludge);

(B) Metals such as cadmium, lead, zinc, silver, nickel, chromium, copper and non-metals such as phosphorous and arsenic;

(C) Petroleum hydrocarbons (such as fuels, lubricants, surfactants, waste oils, solvents, coolants and grease);

(D) Excessive eroded soil, sediment and particulate materials in amounts that may adversely affect the beneficial use of the receiving waters, flora or fauna of the state;

(E) Animal wastes (such as discharge from confinement facilities, kennels, pens, recreational facilities, stables and show facilities; and

(F) Substances having characteristics such as pH less than six or greater than nine, or unusual coloration or turbidity, or excessive levels of fecal coliform, or fecal streptococcus, or enterococcus.

(20) “**Pollution Prevention**” means source reduction, preventing or reducing waste where it originates, at the source, including practices that conserve natural resources by reducing or eliminating pollutants through increased efficiency in the use of raw materials, energy, water and land.

(21) “**Receiving Waters**” means all surface bodies of water as described in NPDES Permit No. CA 0108758 of the California Regional Water Quality Control Board, San Diego Region, which serve as discharge points for the Storm Water Conveyance System,

including San Diego Bay, its tributaries and the Pacific Ocean.

(22) “**Regional Board**” means the California Regional Water Quality Control Board, San Diego Region.

(23) “**Storm Water**” or “**Stormwater**” means water that originates from atmospheric moisture (rainfall or snowfall) and that falls onto land, water or other surfaces. Without any change in its meaning, this term can be spelled or written as one word or two separate words.

(24) “**Storm Water Code**” means Sections 8.70 to 8.80 of this Code.

(25) “**Storm Water Conveyance System**” means any facilities or any part thereof, including streets, gutters, conduits, natural and artificial drains, channels and watercourses that are used for the purpose of collecting, storing, transporting or disposing of Storm Water and are located within the Jurisdiction of the Authority.

(26) “**Storm Water Pollution Prevention Plan**” (SWPPP) means a document which describes the on-site program activities to eliminate or reduce, to the maximum extent practicable (MEP), Pollutant Discharges to the Storm Water Conveyance System.

(27) “**Storm Water Runoff**” means that part of precipitation (rainfall or snowmelt) which travels across a surface to the Storm Water Conveyance System or Receiving Waters.

(28) “**Toxic Materials**” means any material(s) or combination of materials which directly or indirectly causes or contributes to acute or chronic toxicity in the water column.

(29) “**Untreated**” means non-Storm Water runoff, wastewater or wash waters that have not been subjected to any applicable treatment control, Best Management Practices or are not in compliance with conditions of a separate or general NPDES Permit.

(30) “**Urban Runoff**” means surface water flow produced by storm and non-storm events. Non-storm events include flow from residential, commercial or industrial activities involving the use of potable and non-potable water.

[Resolution No. 2002-02 dated September 20, 2002.]

[Superceded by Resolution No. _____ dated _____.]

SAN DIEGO COUNTY REGIONAL AIRPORT AUTHORITY

CODES

ARTICLE 8 - GENERAL OPERATIONS
PART 8.7 - STORM WATER CONTROL
SECTION 8.72 - POLLUTANT DISCHARGE CONTROL

(a) General Discharge Prohibitions. No person shall Discharge, cause, permit or contribute to the Discharge of any of the following to the Storm Water Conveyance System or Receiving Waters (capitalized terms used in this Section are defined in Section 8.71 of this Code):

(1) Any liquids, solids or gases which by reason of their nature or quantity are flammable, reactive, explosive, corrosive or radioactive, or by interaction with other materials could result in fire, explosion or injury;

(2) Any solid or viscous materials that could cause obstruction to the flow or operation of the Storm Water Conveyance System or Receiving Waters;

(3) Any noxious or malodorous liquid, gas or solid in sufficient quantity, either singly or by interaction with other materials, which creates a public nuisance, hazard to life, or inhibits authorized entry of any person into the Storm Water Conveyance System or Receiving Waters;

(4) Any medical, infectious, toxic or hazardous material or waste; or

(5) Other Pollutants that injure or constitute a hazard to human, animal, plant, or fish life, or create a public nuisance.

(b) Controlling the Discharge of Pollutants Associated with Industrial or Commercial Activities. Except as allowed under a general or separate NPDES Permit, the following prohibitions apply to all persons operating or performing any industrial or commercial activities within the jurisdiction of the Authority.

(1) No person shall Discharge, cause or permit the discharge of Untreated wastewater from steam cleaning, mobile auto washing, mobile carpet cleaning, acoustic ceiling application and paint or paint wash-down from other such mobile commercial or industrial operations into the Storm Water Conveyance System or Receiving Waters.

(2) No person shall discharge, cause or permit any Discharge of Untreated runoff containing grease, oil, antifreeze, other fluids from machinery, equipment, tools or motor vehicles, or hazardous substances into the Storm Water Conveyance System or Receiving Waters.

(3) No person shall discharge, cause or permit the Discharge of Untreated runoff from the washing of Toxic Materials from paved or unpaved areas into the Storm Water Conveyance System or Receiving Waters.

(4) No person shall Discharge, cause or permit the Discharge of wastewater from washing out of concrete trucks into the Storm Water Conveyance System or Receiving Waters.

(5) Violation of any of the following prohibitions within this subdivision shall be punishable as an infraction:

(A) No person shall Discharge, cause or permit the Discharge of Untreated wash water from gas stations, auto repair garages or from other types of automotive facilities into the Storm Water Conveyance System or Receiving Waters;

(B) No person shall Discharge, cause or permit the Discharge of Untreated runoff from the washing of impervious surfaces into the Storm Water Conveyance System. This provision shall apply unless the washing is specifically required by state or local health and safety codes or unless the Discharge is conditionally exempt as street or sidewalk washing as provided in the Storm Water Code; or

(C) No person shall Discharge, cause or permit the Discharge of food wastes from the washing of any floor coverings such as duck boards, grates, mats or rugs from any commercial kitchen, or from any other commercial food preparation or processing activity, into the Storm Water Conveyance System or Receiving Waters.

(6) Other Pollutants that injure or constitute a hazard to human, animal, plant, or fish life, or create a public nuisance.

(c) Controlling Spills, Dumping or Disposal of Materials to the Storm Water Conveyance System. This subsection applies to all persons within the jurisdiction of the Authority and is in addition to any other anti-littering provisions provided in this Storm Water Code.

(1) The following prohibitions apply to all persons within the jurisdiction of the Authority and any violation of this subsection shall be punishable as a misdemeanor:

(A) No person shall throw, deposit, leave, cause or permit to be thrown, deposited, placed or left, any refuse, rubbish, garbage, or other discarded or abandoned objects, articles and accumulations, in or upon any street, gutter, alley, sidewalk, storm drain, inlet, catch basin, conduit or other drainage structures, business place, or upon any public or private lot of land owned, leased or controlled by the Authority;

(B) No person shall dispose or cause the disposal of leaves, dirt or other landscape debris into the Storm Water Conveyance System or Receiving Waters;

(C) No person shall spill, dump or dispose any pesticide, fungicide or herbicide, into the Storm Water Conveyance System or onto any surface from where they could

reach the Storm Water Conveyance System or the Receiving Waters;

(D) No person shall leave, dispose, cause or permit the disposal of hazardous wastes in such a manner that results in a spill, leak or drainage of such wastes onto any sidewalk, street or gutter that Discharges into, or flows with any other runoff into the Storm Water Conveyance System or Receiving Waters;

(E) No person shall store fuels, chemicals, fuel and chemical wastes, animal wastes, garbage, batteries and any toxic or hazardous materials in a manner which allows the runoff of Pollutants from such materials or wastes into the Storm Water Conveyance System or Receiving Waters; and

(F) No person shall dispose, Discharge, or permit the Discharge of any sanitary or septage wastes from any source into the Storm Water Conveyance System or Receiving Waters.

(d) Controlling Pollutants From Parking Lots. Any owner or operator of industrial/commercial motor vehicle parking lots with more than 25 parking spaces that are located in areas potentially exposed to Storm Water or Non-Storm Water flows shall be required through regular sweeping or other effective measures to remove all debris during the period between October 1 and April 15. Violation of this subsection shall be punishable as an infraction.

[Resolution No. 2002-02 dated September 20, 2002.]

[Superceded by Resolution No. _____ dated _____.]

SAN DIEGO COUNTY REGIONAL AIRPORT AUTHORITY

CODES

ARTICLE 8	- GENERAL OPERATIONS
PART 8.7	- STORM WATER CONTROL
SECTION 8.73	- ELIMINATION OF ILLEGAL DISCHARGES AND ILLICIT CONNECTIONS

(a) Prohibition of Illegal Discharges. No person shall Discharge Non-Storm Water to the Storm Water Conveyance System, unless authorized by a separate or general NPDES Permit or if the Discharge is exempted or conditionally exempted by the Municipal Storm Water and Urban Runoff NPDES Permit, as provided or as subsequently amended or if granted as a special waiver or exemption by the Regional Board. Capitalized terms not defined in this Section are defined in Section 8.71 of this Storm Water Code.

(1) Exempt Discharges. The following Non-Storm Water Discharges are exempt from obtaining a separate or general NPDES Permit and are allowed to be Discharged into the Storm Water Conveyance System or Receiving Waters:

- (A) Flows from riparian habitats or wetlands;
- (B) Diverted stream flows;
- (C) Flows from natural springs;
- (D) Rising ground waters or tidal action;
- (E) Uncontaminated groundwater infiltration; and
- (F) Discharge or flows from emergency fire fighting activities.

(2) Conditionally Exempt Discharges. The following Non-Storm Water Discharges may be allowed to be Discharged into the Storm Water Conveyance System, subject to all appropriate BMPs, as may be authorized and approved by the Executive Director.

- (A) Discharges from lawn and landscape irrigation in areas that utilize integrated pest management practices or do not use chemical pesticides or herbicides;
- (B) Water line flushing;
- (C) Discharges from potable water sources;
- (D) Foundation drains;
- (E) Footing drains;

- (F) Air conditioning condensate;
- (G) Irrigation water;
- (H) Water from crawl space pumps;
- (I) Dechlorinated swimming pool discharges;
- (J) Debris from street sweeping (including sidewalk washing); and
- (K) Other categories approved by the Executive Officer of the Regional Board or an authorized representative.

(b) Illicit Connections. It is prohibited to establish, use, maintain or continue illicit drainage connections to the Authority's Storm Water Conveyance System, and to commence or continue any Illegal Discharges to the Authority's Storm Water Conveyance System. This prohibition applies to connections made in the past. Improperly installed or defective rain diversion systems or devices that release Pollutants into the Storm Water Conveyance System shall be considered illicit connections and shall be subject to removal or modifications. Six months after the effective date of the Storm Water Code and after notification of the illicit connection, a person has 60 days to remove or modify such connection. Any extension of time for removal or modification must be approved by the Executive Director.

(c) Storm Water Conveyance Connection Written Approval. No approval for any Storm Water conveyance connection shall be issued until the Executive Director is satisfied that the Discharge from the permitted connection will be in compliance with the provisions of the Storm Water Code and all applicable federal and state Discharge regulations or requirements.

[Resolution No. 2002-02 dated September 20, 2002.]
[Superseded by Resolution No. _____ dated _____.]

SAN DIEGO COUNTY REGIONAL AIRPORT AUTHORITY

CODES

- ARTICLE 8 - GENERAL OPERATIONS**
PART 8.7 - STORM WATER CONTROL
SECTION 8.74 - REDUCTION OF POLLUTANTS IN STORM WATER
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To provide for the public health, safety and general welfare and to protect the natural resources, any person engaged in activities which will, or may, result in Pollutants entering Storm Water, Storm Water Conveyance System or Receiving Waters, shall undertake measures to reduce Pollutant Discharges to the MEP. Capitalized terms not defined in this Section are defined in Section 8.71 of this Code. The following minimal requirements shall apply:

(a) Pollutant Discharge, BMPs and Pollutant Discharge Prevention Procedures.

(1) Business Related Activities. All owners or operators of premises where Pollutants from business related activities may enter the Storm Water Conveyance System must reduce such Pollutants to the MEP. If the Executive Director determines that Pollutants are not reduced to the MEP, the Executive Director may require the business to develop and implement an SWPPP. Business activities that may require a SWPPP include maintenance, repair, storage, manufacturing, assembly, equipment operations, vehicle loading or fueling, or cleanup procedures which are carried out partially or wholly out of doors.

(2) Parking Lots and Impervious Surfaces. Persons owning or operating a parking lot or impervious surfaces used for similar purposes shall clean those structures frequently and thoroughly to prevent the Discharge of Pollutants to the Storm Water Conveyance System. Sweepings or cleaning residue from parking lots or other impervious surfaces shall not be swept or otherwise made or allowed to go into any gutter or roadway.

(3) New Development and Redevelopments. Any person performing construction work on property owned, leased, or controlled by the Authority shall, to the MEP, prevent Pollutants from entering the Storm Water Conveyance System by complying with all applicable local ordinances, the Standard Specifications for Public Works Construction when performing public work, and applicable provisions of any General Construction NPDES Permit issued by the State Water Resources Control Board and Municipal Storm Water NPDES Permit No. CA 0108758. The Executive Director may establish controls on the volume and rate of Storm Water runoff from new developments and redevelopments as may be reasonably necessary to minimize the Discharge and transport of Pollutants.

(4) Compliance with General Permits. Each industrial discharger, discharger associated with construction activity, or other discharger subject to any general or individual Storm Water NPDES Permit issued by the United States Environmental Protection Agency, the State Water Resources Control Board, or the Regional Board, shall comply with all the requirements of such permit.

(5) Compliance with Best Management Practices. Every person undertaking any activity or use of a premise which may cause or contribute to Storm Water pollution or contamination, illegal discharges or Non-Storm Water Discharges, shall comply with BMPs guidelines or pollution control requirements as may be reasonably established by the Executive Director.

(6) Containment and Notification of Spills. Any person owning or occupying a premises who has knowledge of any significant release of Pollutants or Non-Storm Water from those premises which might enter the Storm Water Conveyance System shall immediately take all necessary action to contain the release and minimize any Non-Storm Water Discharge. Such person shall notify the Executive Director of the occurrence and/or San Diego County Department of Environmental Health, and any other appropriate agency, within 24 hours of the incident's occurrence.

(b) Identification and Reduction of Pollutant Discharge. Use of testing, monitoring, sampling, and mitigation procedures to identify and reduce Pollutant Discharge may be required by the Executive Director as follows:

(1) Testing, Monitoring and Mitigation. Testing, monitoring and/or mitigation (similar to State SWPPP requirements in the state construction and industrial permits) may be ordered if:

(A) Illegal Discharges have not been eliminated after written notice from an authorized representative of the Executive Director;

(B) Repeat violations have been documented by written notices from an authorized representative of the Executive Director; and/or

(C) The Executive Director determines there is a threat or potential threat to human health or the environment.

(2) Monitoring Elements. Monitoring ordered pursuant to this section may include the following:

(A) Routine visual monitoring of Non-Storm Water flows;

(B) Routine visual monitoring of premises for spills or Pollutant Discharges;

(C) Maintaining a log of monitoring dates, potential Pollutant sources and mitigation measures taken; and/or

(D) Reasonable laboratory monitoring for Pollutants, if determined to be necessary.

(3) Cessation of Monitoring. Required sampling, testing, monitoring and/or mitigation may be stopped after conditions requiring monitoring no longer exist and the Executive Director has been provided written notice at least 60 days prior to cessation. The

required activity may not cease if written notice to continue is issued by the Executive Director.

(4) Consistency with other Agencies. BMPs and other Pollutant reduction elements shall be compatible with other agency's programs and procedures. The Storm Water Code is not intended to duplicate, diminish or take precedence over other agency program requirements.

[Resolution No. 2002-02 dated September 20, 2002.]

[Superceded by Resolution No. _____ dated _____.]

SAN DIEGO COUNTY REGIONAL AIRPORT AUTHORITY

CODES

ARTICLE 8 - GENERAL OPERATIONS
PART 8.7 - STORM WATER CONTROL
SECTION 8.75 - AUTHORITY TO INSPECT

(a) Authority to Inspect. Whenever it is necessary to investigate the source of any Discharge to any street, inlet, gutter or Storm Water Conveyance System within the jurisdiction of the San Diego County Regional Airport Authority (the “**Authority**”), to verify compliance with this Storm Water Code, or to enforce any of its provisions, or perform any duty imposed by this Storm Water Code or other applicable law, the Executive Director is hereby authorized to enter such property at any reasonable time and perform such inspection or investigation. Prior to performing any authorized inspections, entry to property shall be obtained as follows:

(1) If such building or premises is occupied, the Executive Director shall first present proper credentials of identification and obtain either the consent of the owner or occupant of the property or shall obtain an administrative warrant or criminal search warrant; or

(2) If such building or premises is unoccupied, the Executive Director shall make a reasonable effort to locate the owner or other persons having charge or control of the building or premises and request entry, explaining the reasons therefor. If such entry is refused or cannot be obtained because the owner or other person having charge or control of the building or premises cannot be found, the Executive Director shall have recourse to every remedy provided by law to secure entry and inspect the building or premises.

(3) Notwithstanding the foregoing, if the Executive Director has reasonable belief that the Discharges emanating from the premises are so hazardous, unsafe or dangerous as to require immediate inspection or remedial actions to abate conditions that endanger the public health and safety, the Executive Director shall have the right to immediately enter the premises. Any reasonable means may be used to effect such entry to make the necessary inspection or abate the dangerous condition, whether the property is occupied or unoccupied and whether or not formal permission to inspect has been obtained. If the property is occupied, the Executive Director shall first present proper credentials of identification to the occupant and demand entry, explaining the reasons therefor and the purpose of the inspection.

(A) In accordance with this subsection, no person shall refuse, resist, restrict, delay or interfere with the Executive Director in the performance of his or her duties.

(b) Inspection Duties. Upon securing entry into a property, the Executive Director shall be allowed to perform the following duties during an inspection:

(1) To inspect, take samples of any area runoff, process Discharge or materials within any exposed waste storage area and perform tests for the purpose of determining

the potential for the contribution of Pollutants to the Storm Water Conveyance System or Receiving Waters;

(2) To place on the property of the inspected facility or site any such devices as are necessary to sample, monitor, measure and record flows of Discharge or threatened Discharge;

(3) To inspect, examine and copy all records of the owner or occupant of inspected property that pertains to any Discharge to the Storm Water Conveyance System, including records relating to chemicals or processes presently or previously occurring on the site, NPDES Permit, Notice of Intent to comply with a general NPDES Permit, waste Discharge records, waste manifests, SWPPPs, monitoring plans, test results, any records or plans relating to Discharge connections to the Storm Water Conveyance System and any other information required to carry out the provisions of this Storm Water Code;

(4) To photograph any materials, storage or process areas, wastes, waste containers, vehicles, connections, BMPs, treatment systems, Discharge locations or any violations discovered during the inspection; and

(5) To abate, correct or prevent Pollutants from entering the Storm Water Conveyance System or surface waters.

(c) Defined Terms. Capitalized terms not defined in this Section are defined in Section 8.71 of this Code.

[Resolution No. 2002-02 dated September 20, 2002.]

[Superceded by Resolution No. _____ dated _____.]

SAN DIEGO COUNTY REGIONAL AIRPORT AUTHORITY

CODES

ARTICLE	8	-	GENERAL OPERATIONS
PART	8.7	-	STORM WATER CONTROL
SECTION	8.76	-	ENFORCEMENT

(a) Violations Deemed a Public Nuisance. Violations of this Storm Water Code are deemed a threat to public health, safety and welfare, and are identified as public nuisances. This Storm Water Code grants the Executive Director authority to enforce this Storm Water Code and abate public nuisances as follows:

(1) Cease and Desist Orders. Issue written and/or verbal orders to stop Illegal Discharges and/or remove Illicit Connections;

(2) Notice and Order to Clean, Test or Abate. Issue written and/or verbal orders to perform activities listed in the Storm Water Code, if Pollutants are detected; and/or

(3) Public Nuisance Abatement. If actions ordered under the Storm Water Code are not performed, the Executive Director (or its contractor) may abate any public nuisance pursuant to the Uniform Public Nuisance Abatement Procedure.

(b) Judicial Authority, Arrest and Issuance of Citations. If use of any administrative authority under the Storm Water Code is not effective, the assistance of an authorized officer may be enlisted to arrest violators as provided in California Penal Code, Chapter 5, 5c, and 5d, Title 3, Part 2 (or as amended) and/or a citation and notice to appear as prescribed in Chapter 5c, Title 3, Part 2 of the California Penal Code, including immunities prescribed in Section 836.5 of the California Penal Code are applicable to the Executive Director acting in course and scope to this Storm Water Code.

(c) Concealment and Continuing Violations. Causing, permitting, aiding, or abetting non-compliance with any part of this Storm Water Code constitutes a violation.

(1) Concealment. Concealing a violation of this Storm Water Code is a violation.

(2) Continued Non-Compliance. A separate violation may be considered to have taken place for each day non-compliance with this Storm Water Code exists.

(d) Penalties.

(1) Violations. All Pollution detection and abatement costs are in addition to other penalties, shall be borne by the property owner or tenant, and may be made in lien against the owner's or tenant's property in accordance with the Uniform Public Nuisance Abatement

Procedure.

(2) Misdemeanors. Non-compliance with any part of this Storm Water Code constitutes a misdemeanor, unless specifically identified as an infraction in the Storm Water Code, and may be enforced and punished as prescribed in the State statutes and other applicable laws.

(3) Infractions. The Executive Director may charge any violation of this Storm Water Code as an infraction at its discretion. Violation of any provision of this Storm Water Code that is provided herein to be an infraction shall be punishable as follows: every violation that is charged as an infraction is punishable by a fine not to exceed \$100.00 for the first violation and \$250.00 for the second violation of the same provision within one year of the first violation. Any subsequent violation(s) of the same violation, occurring any time after the second violation of the same provision, shall be punishable as a misdemeanor.

(4) Civil Actions. In addition to other penalties and remedies permitted in this Storm Water Code, a violation of this Storm Water Code may result in civil actions.

(5) Remedies Not Exclusive. Penalties and remedies under this Storm Water Code are in addition to and do not supersede or limit any and all other remedies provided by law. The remedies provided herein are cumulative and not exclusive.

(e) Capitalized terms not defined in this Section are defined in Section 8.71 of this Code.

[Resolution No. 2002-02 dated September 20, 2002.]

[Superceded by Resolution No. _____ dated _____.]

SAN DIEGO COUNTY REGIONAL AIRPORT AUTHORITY

CODES

ARTICLE 8 - GENERAL OPERATIONS
PART 8.7 - STORM WATER CONTROL
SECTION 8.77 - CIVIL PENALTIES TO BE DEPOSITED IN THE STORM WATER REVENUE FUND

(a) Any civil penalties collected by the San Diego County Regional Airport Authority (the “**Authority**”) as a result of violations of this Storm Water Code shall be deposited in the Storm Water Program Revenue Fund or such other fund as determined by the Authority’s Executive Director or his or her designee.

[Resolution No. 2002-02 dated September 20, 2002.]
[Superceded by Resolution No. _____ dated _____.]

SAN DIEGO COUNTY REGIONAL AIRPORT AUTHORITY

CODES

ARTICLE 8	-	GENERAL OPERATIONS
PART 8.7	-	STORM WATER CONTROL
SECTION 8.78	-	STORM WATER AND URBAN RUNOFF POLLUTION EDUCATION

(a) As part of the Storm Water Management Program of the San Diego County Regional Airport Authority (the “**Authority**”), the Authority’s Executive Director or his or her designee shall develop and implement a public informational outreach program to educate tenants and business persons who operate within the jurisdiction of the Authority, including Authority employees, about the provisions of this Storm Water Code, the detrimental effects of Storm Water and Urban Runoff Pollution and the means for controlling such Pollution and adverse effects from the velocity and volume of storm flows. This program shall include, but not be limited to written or printed materials, audio and visual materials, posters, signs, films, videos, training courses, workshops, public service announcements and any other applicable or appropriate educational tools or materials. Capitalized terms not defined in this Section are defined in Section 8.71 of this Code.

[Resolution No. 2002-02 dated September 20, 2002.]

[Superseded by Resolution No. _____ dated _____.]

SAN DIEGO COUNTY REGIONAL AIRPORT AUTHORITY

CODES

ARTICLE 8 - GENERAL OPERATIONS
PART 8.7 - STORM WATER CONTROL
SECTION 8.79 - CONSTRUCTION, APPLICATION AND SEVERABILITY

(a) This Storm Water Code shall be construed to assure consistency with the requirements of the Federal Clean Water Act and acts amendatory thereof or supplementary thereto, applicable implementing regulations, and NPDES Permit No. CA 0108758 and any amendment, revision or reissuance thereof.

(b) Should any portion of this Storm Water Code be declared invalid by a court of competent jurisdiction, the remainder shall continue in full force and effect and shall be interpreted in such manner as to effectuate the objectives set forth in this Storm Water Code.

[Resolution No. 2002-02 dated September 20, 2002.]

[Superceded by Resolution No. _____ dated _____.]

Appendix F – Authority Rules and Regulations



USE AND OCCUPANCY PERMIT

THIS PERMIT, granted this _____ day of _____, 20____, by the SAN DIEGO COUNTY REGIONAL AIRPORT AUTHORITY, a local governmental entity of regional government, hereinafter "Authority", and *, a *, hereinafter "Tenant", WITNESSETH:

The San Diego Unified Port District, hereinafter "District", is the trustee of certain tidelands owned by the State of California, including the San Diego International Airport at Lindbergh Field, hereinafter "Airport", located in the City of San Diego, California.

The San Diego County Regional Airport Authority Act, hereinafter "Act", establishes Authority as a local governmental entity of regional government, with the exclusive power and authority to oversee the establishment, operation and coordination of airport facilities within the County of San Diego, as well as study, plan and implement any improvements, expansion, or enhancements at existing or future airports within its control.

Pursuant to the Act, District and Authority entered into a ground lease dated December 17, 2002 bearing Authority's Document No. AA-0008, whereby District leased to Authority the Airport and other real property related thereto, hereinafter "Master Lease".

Authority, for the considerations hereinafter set forth, hereby grants to Tenant, upon the terms and conditions and for the purpose and uses hereinafter set forth, the right to use and occupy a portion of those lands conveyed to Authority pursuant to the Act, which lands are more particularly described as follows:

Approximately * square feet of airport land area, including approximately * square feet of building and underlying land located at * in the City of San Diego, California at San Diego International Airport, more particularly described on Drawing No. * dated *, attached hereto as Exhibit "A" and by this reference made a part hereof, hereinafter "Premises".

This Permit is granted upon the following terms and conditions:

1. **TERM:** The term of this Permit shall be for *, commencing on the * day * of 200*, and ending on the * day of *, 20* unless earlier terminated as herein provided.
2. **RENTAL:** As and for the rental, Tenant agrees to pay to Authority the sum of * Dollars (\$*) per month, payable in advance on or before the tenth day of each and every month during the term of this Permit.

All payments shall be delivered to the Treasurer of Authority. Checks shall be made payable to San Diego County Regional Airport Authority and mailed to the Office of the Treasurer, San Diego County Regional Airport Authority, P.O. Box 81323, San Diego, CA 92138-1323, or delivered to the Office of the Treasurer, San Diego County Regional Airport Authority, Commuter Terminal, 3225 North Harbor Drive, 3rd floor, San Diego, California. The designated place of payment and filing may be

changed at any time by Authority upon ten (10) days' written notice to Tenant. Tenant assumes all risk of loss and responsibilities for late charges, as herein described, if payments are made by mail.

Tenant hereby acknowledges that late payment by Tenant to Authority of rent and other sums due hereunder will cause Authority to incur costs not contemplated by this Permit. Accordingly, in the event Tenant is delinquent in remitting the rent due in accordance with the rent provisions of this Permit, Tenant shall pay, in addition to the unpaid rent, five percent (5%) of the delinquent rent. If rent is still unpaid at the end of fifteen (15) days, Tenant shall pay an additional five percent (5%) [being a total of ten percent (10%)]. The parties hereby agree that said late charges are appropriate to compensate Authority for loss resulting from rent delinquency including, without limitation, lost interest, opportunities, legal costs, and the cost of servicing the delinquent account. Acceptance of such late charges and any portion of the late payment by Authority shall in no event constitute a waiver of Tenant's default with respect to such overdue amount, nor prevent Authority from exercising any of its other rights and remedies. The President/CEO of Authority shall have the right to waive for good cause any late charges upon written application of Tenant for any such delinquency period.

All payments by Tenant to Authority shall be by a good and sufficient check. No payment made by Tenant or receipt or acceptance by Authority of a lesser amount than the correct amount of rent due under this Permit shall be deemed to be other than a payment on account of the earliest rent due hereunder, nor shall any endorsement or statement on any check or any letter accompanying any check or payment be deemed an accord and satisfaction, and Authority may accept such check or payment without prejudice to Authority's right to recover the balance or pursue any other available remedy.

3. **USE:** The Premises shall be used only and exclusively for the purpose of * and for no other purpose whatsoever without the prior written consent of the President/CEO of Authority in each instance.
4. **ASSIGNMENT-SUBLEASE-ENCUMBRANCE:** Tenant shall not encumber this Permit, the Premises thereof and the improvements thereon by a deed of trust, mortgage, or any other security instrument without the express written consent of Authority, obtained in each instance in accordance with Authority policies. Furthermore, neither the whole nor any part of the Premises nor any of the rights or privileges granted by this Permit shall be assignable or transferable in any way without such consent. Nor shall Tenant grant any permission to any other person to occupy any portion of the Premises without such consent. Any such purported assignment, transfer, sublease, encumbrance, or permission given without such consent shall be void as to Authority.
5. **IMPROVEMENTS:** Tenant acknowledges prior examination of the Premises and the condition thereof, and agrees that the improvements thereon, if any, are, in their present condition, satisfactory and usable for Tenant's purposes and that no

representations as to value or condition have been made by or on behalf of Authority.

Tenant agrees that it shall make no changes or alterations in the Premises, nor make, erect, or install any machines, signs, or other improvements thereon without the consent in writing of the President/CEO of Authority. Tenant further agrees to provide proper containers for trash and to keep the premises free and clear of rubbish, debris, and litter at all times.

6. **MAINTENANCE:** Tenant hereby agrees that the Premises are in a good and tenantable condition, that Tenant will take good care of the Premises and appurtenances, including any personal property belonging to Authority; and that Tenant, as a part of the consideration for the rental stated above, will at Tenant's sole cost and expense keep and maintain said Premises, appurtenances, and personal property in good and sanitary condition and repair during the term of this Permit, subject to normal and ordinary wear and tear resulting from the use of the Premises as herein provided. Authority shall at no time during the term of this Permit be required to make any improvements or repairs to the Premises.
7. **TITLE TO IMPROVEMENTS:** On the commencement date of the term of this Permit, all existing structures, buildings, installations, and improvements of any kind located on the Premises are owned by and title thereto is vested in *. All structures, buildings, installations, and improvements placed on the Premises by Tenant subsequent to the commencement date of the term of this Permit shall at the option of Authority be removed by Tenant at Tenant's expense within thirty (30) days after the expiration of the term of this Permit or earlier termination thereof; provided, however, Tenant agrees to repair any and all damage occasioned by the removal thereof. Authority may exercise said option as to any or all of the structures, buildings, installations, and improvements, either before or after the expiration or earlier termination of this Permit. If Authority exercises such option and Tenant fails to remove such structures, buildings, installations and improvements within said thirty (30) days, the Authority shall have the right to have such structures, buildings, installations, and improvements removed at the expense of Tenant. As to any or all structures, buildings, installations, and improvements owned by Tenant for which Authority does not exercise said option for removal, title thereto shall vest in Authority, without cost to Authority and without payment to Tenant.

Machines, appliances, equipment, and trade fixtures of any kind placed on the Premises by Tenant are owned by and title thereto is vested in Tenant and shall be removed by Tenant within thirty (30) days after the expiration of the term of this Permit or earlier termination thereof; provided, however, Tenant agrees to repair any and all damage occasioned by the removal thereof. If any such machines, appliances, equipment, and trade fixtures are not removed within thirty (30) days after the termination of this Permit, the same may be considered abandoned and shall thereupon become the property of Authority without cost to the Authority and without payment to Tenant, except that Authority shall have the right to have the same removed at the expense of Tenant.

During any period of time employed by Tenant under this paragraph to remove structures, buildings, installations, improvements, machines, appliances, equipment and trade fixtures, Tenant shall continue to pay the full rental to Authority in accordance with this Permit which said rental shall be prorated daily.

8. **REMOVAL OF MATERIALS:** Tenant hereby agrees that upon the expiration of this Permit or the earlier termination as herein provided, it will remove within thirty (30) days all debris, surplus, and salvage materials from the land area forming a part of or adjacent to the Premises, so as to leave the same in as good condition as when first occupied by Tenant, subject to reasonable wear and tear; provided, however, that if any said debris, surplus, and salvage materials shall not be so removed within thirty (30) days by Tenant, Authority may remove, sell, or destroy the same at the expense of Tenant; and Tenant hereby agrees to pay to Authority the cost of such removal, sale, or destruction; or at the option of Authority, the title to said debris, surplus, and salvage materials not removed shall become the property of Authority.

During any period of time employed by Tenant under this paragraph to remove debris, surplus and salvage materials, or test for and/or remediate Contaminants (as described below) as required in this Permit, Tenant shall continue to pay the full rental to Authority in accordance with this Permit which said rental shall be prorated daily.

9. **TERMINATION:** This Permit may be terminated by the President/CEO of Authority or his/her duly authorized representative or Tenant as a matter of right and without cause at any time upon the giving of thirty (30) days' notice in writing to the other party of such termination.
10. **HOLD HARMLESS:** Tenant shall, to the fullest extent permitted by law, defend, indemnify and hold harmless Authority and its officers, officials, Board members, employees, agents, representatives and volunteers (collectively, the "Authority-Related Parties"), from and against any and all liabilities, liens, claims, judgments, demands, causes of action, losses, damages, costs and expenses (including reasonable attorneys' fees and costs) (collectively, the "Liabilities"), arising out of, related to, or in any way connected with, directly or indirectly: (i) the Premises; (ii) any actions or omissions of Tenant or Authority; (iii) any obligations or activities undertaken in connection with this Agreement; (iv) any damage to any person or property, or injury to or death to any person, including without limitation any claim or action alleging latent and other defects, whether or not discoverable by Tenant or Authority; (v) alleged or actual breach of any federal, state or local laws or regulations; and (vi) Tenant's duties under easements or contracts with third parties; except that this Paragraph shall not apply to any Liabilities arising through the sole active negligence or willful misconduct of Authority. These indemnity obligations shall apply for the entire time that any third party can make a claim against or sue the Authority-Related Parties and shall survive the termination of this Permit. Tenant and Authority agree to promptly provide notice to each other of any Liabilities following the learning thereof by such party. Tenant shall not settle or compromise

any claim or matter pursuant to this Paragraph without first obtaining Authority's written consent.

11. **INSURANCE:** Tenant shall maintain "OCCURRENCE" form Commercial General Liability Insurance covering the Premises and Tenant's operations in the amount of not less than Two Million Dollars (\$2,000,000) combined single limit per occurrence for bodily injury, personal injury and property damage suffered or alleged to be suffered by any person or persons whatsoever resulting directly or indirectly from any act or activities of Tenant, of any person acting for it or under its control or direction, or any person authorized by it to use the Premises. The general aggregate of Two Million Dollars (\$2,000,000) limit shall apply separately to this location as evidenced by a per location aggregate endorsement for insurance policies that cover more than one of the Tenant's locations, or the general aggregate limit shall be Four Million Dollars (\$4,000,000).

All required insurance shall be in force the first day of the term of this Permit. All insurance companies must be satisfactory to Authority, and the cost of all required insurance shall be borne by Tenant. Certificates in a form acceptable to Authority evidencing the existence of the necessary insurance policies, and original endorsements effecting coverage required by this Paragraph 11, shall be kept on file with Authority during the entire term of this Permit. Certificates for each insurance policy are to be signed by a person authorized by that insurer to issue evidence of coverage on its behalf. Endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. Authority reserves the right to require complete, certified copies of all required policies at any time.

All liability insurance policies will name, or be endorsed to name, the Authority-Related Parties as additional insureds and protect the Authority-Related Parties against any legal costs in defending claims. All insurance policies will be endorsed to state that coverage will not be suspended, voided, canceled, reduced in coverage or in limits except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to Authority. And, all insurance policies will be endorsed to state that Tenant's insurance is primary and not excess or contributing to any insurance issued in the name of Authority.

Any deductibles or self-insured retentions must be declared and acceptable to Authority. At the option of Authority, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the Authority-Related Parties; or, Tenant shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.

Authority shall retain the right at any time to review the coverage, form, and amount of the insurance required hereby. If, in the opinion of Authority, the insurance provisions in this Permit do not provide adequate protection for Authority and/or for members of the public, Authority may require Tenant to obtain insurance sufficient in coverage, form and amount to provide adequate protection. Authority's requirements shall be reasonable but shall be designed to ensure protection from

and against the kind and extent of risk which exist at the time a change in insurance is required.

Authority shall notify Tenant in writing of changes in the insurance requirements and, if Tenant does not deposit certificates evidencing acceptable insurance policies with Authority incorporating such changes within sixty (60) days of receipt of such notice, this Permit shall be in default without further notice to Tenant, and Authority shall be entitled to all legal remedies.

The procuring of such required policies of insurance shall not be construed to limit Tenant's liability hereunder, or to fulfill the indemnification provisions and requirements of this Permit. Notwithstanding said policies of insurance, Tenant shall be obligated for the full and total amount of any damage, injury, or loss caused by negligence or neglect connected with this Permit or with the use or occupancy of the Premises.

12. **TAXES AND UTILITIES:** This Permit may result in a taxable possessory interest and be subject to the payment of property taxes. Tenant agrees to and shall pay before delinquency all taxes and assessments of any kind assessed or levied upon Tenant or the Premises by reason of this Permit or of any buildings, machines, or other improvements of any nature whatsoever erected, installed, or maintained by Tenant or by reason of the business or other activities of Tenant upon or in connection with the Premises. Tenant shall also pay any fees imposed by law for licenses or permits for any business or activities of Tenant upon the Premises or under this Permit, and shall pay before delinquency any and all charges for utilities at or on the Premises.
13. **CONFORMANCE WITH RULES AND REGULATIONS:** In all activities on or in connection with the Premises and in all uses thereof, including activities and uses relating to aviation, Tenant shall abide by and conform to all provisions of the San Diego County Regional Airport Authority Act; any ordinances of the city in which the Premises are located, including the Building Code thereof; any ordinances, rules, and regulations of Authority; and any applicable laws of the State of California or Federal Government; as any of the same now exist or may hereafter be adopted or amended. In particular and without limitation, Tenant shall have the sole and exclusive obligation and responsibility to comply with the requirements of (i) Article 8 of Authority Code entitled "Storm Water Code" and (ii) the Americans With Disabilities Act of 1990, and Authority shall have no obligations or responsibilities as to the Premises.

Authority shall not be liable to Tenant for any diminution or deprivation of its rights hereunder on account of any such laws, ordinances, statutes, rules, regulations, orders, limitations, restrictions, or prohibitions. In the event, however, that any such laws, ordinances, statutes, rules, regulations, orders, limitations, restrictions, or prohibitions shall so interfere with the conduct of Tenant's activities and business operations under this Permit by operation of law in accordance with the laws of the State of California, Tenant shall have the right to terminate this Permit by giving thirty

(30) days' notice in writing of such termination. Such termination, however, shall not relieve the Tenant of any of its obligations and duties arising out of this Permit during Tenant's use and occupancy of the Premises, including without limitation its responsibility and liability regarding hazardous substances and wastes, and its obligation to defend, indemnify and hold the Authority harmless as provided in this Permit.

14. **DEFAULT:** If any default be made in the payment of the rental herein provided or in the fulfillment of any terms, covenants, or conditions hereof, and said default is not cured within ten (10) days after written notice thereof, this Permit shall immediately terminate and Tenant shall have no further rights hereunder and shall immediately remove from said Premises; and Authority shall immediately thereupon, without recourse to the courts, have the right to reenter and take possession of said Premises. Authority shall further have all other rights and remedies as provided by law, including without limitation the right to recover damages from Tenant in the amount necessary to compensate Authority for all the detriment proximately caused by Tenant's failure to perform its obligations under this Permit or which in the ordinary course of things would be likely to result therefrom.
15. **LIENS:** Tenant shall keep the Premises free and clear of any mechanics liens and and/or materialmen's liens arising out of any improvements, repairs, or alterations to the Premises performed by or on behalf of Tenant. Tenant agrees that it will at all times indemnify, defend and hold harmless the Authority-Related Parties from and against any and all mechanics' liens and/or materialmen's liens arising out of, related to, or in any way connected with, directly or indirectly, any improvements, repairs, or alterations to the Premises performed by or on behalf of Tenant.
16. **BANKRUPTCY:** In the event that a petition is filed by or against Tenant (i) in any bankruptcy or other insolvency proceeding; (ii) seeking any relief under any state or federal debtor relief law; (iii) for the appointment of a liquidator or receiver for all or substantially all of Tenant's property or for Tenant's interest in this Permit; or (iv) for the reorganization or modification of Tenant's capital structure, this Permit shall at the option of Authority immediately terminate and all rights of Tenant hereunder shall immediately cease and terminate.
17. **EASEMENTS:** This Permit and all rights given hereunder shall be subject to all easements and rights-of-way now existing or heretofore granted or reserved in, to, or over the Premises for any purpose whatsoever, and shall be subject to such rights-of-way for reasonable access, sewers, pipelines, conduits, and such telephone, telegraph, light, heat, or power lines as may from time to time be determined by Authority to be in the best interests of the development of Authority property.

Authority agrees that such easements and rights-of-way shall be so located and installed as to produce a minimum amount of interference to the business of Tenant.

18. **TITLE OF AUTHORITY:** Authority's title is derived from the provisions of the San Diego County Regional Airport Authority Act and the Master Lease. This Permit is granted subject to the terms and conditions of said Act and the Master Lease.
19. **JOINT AND SEVERAL LIABILITY:** If Tenant, as a party to this Permit, is a partnership or joint venture, or is comprised of more than one party or entity or a combination thereof, the obligations imposed on Tenant under this Permit shall be joint and several, and each general partner, joint venturer, party, or entity of Tenant shall be jointly and severally liable for said obligations. Furthermore, nothing contained herein shall be deemed or construed as creating a partnership or joint venture between Authority and Tenant or between Authority and any other entity or party, or cause Authority to be responsible in any way for the debts or obligations of Tenant, or any other party or entity.
20. **ENTIRE UNDERSTANDING:** This Permit contains the entire understanding of the parties, and Tenant, by accepting the same, acknowledges that there is no other written or oral understanding between the parties in respect to the Premises. No modification, amendment, or alteration of this Permit shall be valid unless it is in writing and signed by the parties hereto.
21. **PEACEABLE SURRENDER:** Upon the termination of this Permit, either by the expiration thereof or earlier termination as provided by the terms of this Permit, Tenant will peaceably surrender said Premises in as good condition, subject to normal and ordinary wear and tear resulting from the use of such Premises as herein provided, as the same may be at the time Tenant takes possession thereof, and to allow Authority to take peaceable possession thereof.
22. **HOLDOVER:** This Agreement shall terminate without further notice at expiration of the term. Any holding over by Tenant after either expiration or termination shall not constitute a renewal or extension or give Tenant any rights in or to the Premises. If Tenant, with the prior written consent of Authority, remains in possession of the Premises after expiration of the term or after the date in any notice given by Authority to Tenant terminating this Agreement, then such possession by Tenant shall be deemed to be a month-to-month tenancy terminable on thirty (30) days' notice which may be given at any time by either party.

However, if Tenant, without the prior written consent of Authority, remains in possession of the Premises after expiration of the term or after the date in any notice given by Authority to Tenant terminating this Agreement, then such possession by Tenant shall be deemed to be a tenant at sufferance, only at a per diem rental rate equal to twice the then current daily rental rate, and otherwise upon the terms, covenants and conditions herein specified. In the case where Authority does not provide its prior written consent to Tenant to remain in possession of the Premises after expiration of the term or after the date in any notice given by Authority to Tenant terminating this Agreement, acceptance by Authority of per diem rent after such expiration or earlier termination shall not constitute a consent to a holdover hereunder or result in a renewal.

The foregoing provisions of this Paragraph are in addition to and do not affect Authority's rights hereunder or as otherwise provided by law or in equity. Tenant shall indemnify and hold Authority harmless from any loss or liability resulting from any delay by Tenant in surrendering the Premises, including, without limitation, any claims made by any succeeding tenant based on such delay.

- 23. ACCEPTANCE OF PREMISES:** By signing this Permit, Tenant represents and warrants that it has independently inspected the Premises and made all tests, investigations and observations necessary to satisfy itself of the condition of the Premises. Tenant agrees it is relying solely on such independent inspection, tests, investigations and observations in making this Permit. Tenant also acknowledges that the Premises are in the condition called for by this Permit, that Authority has performed all work with respect to Premises and that Tenant does not hold Authority responsible for any defects in the Premises. Tenant furthermore accepts and shall be responsible for any risk of harm to any person and property, including without limitation employees of Tenant, from any latent defects in the Premises.
- 24. WARRANTIES-GUARANTEES:** Authority makes no warranty, guarantee, covenant, including but not limited to covenants of title and quiet enjoyment, or averment of any nature whatsoever concerning the condition of the Premises, including the physical condition thereof, or any condition which may affect the Premises; and it is agreed that Authority will not be responsible for any loss or damage or costs which may be incurred by Tenant by reason of any such condition or conditions.
- 25. SECURITY DEPOSIT:** Tenant shall provide Authority a security deposit in the sum of * Dollars (\$*) on or before the commencement date of the term of this Agreement. The security deposit shall be held by Authority and used for the purpose of remedying any defaults by Tenant under this Agreement, including, but not limited to; the payment of rent, fees and other charges; repair of damages to the Premises; cleaning the Premises upon termination of this Agreement; reimbursing Authority for costs incurred as a result of Tenant's failure to perform any of its obligations under this Agreement; and inability to renew any Letters of Credit required under this Agreement, whether or not prior notice is given.

Except as provided below, the security deposit shall be in the form of an Irrevocable Standby Letter of Credit drawn on a bank having a branch in San Diego County or having a Moody's Long Term Letter of Credit rating of single A or higher and a Moody's Long Term Deposit rating of single A or higher. The principal sum shall be made payable to Authority. The Letter of Credit shall be valid for the period commencing on the commencement date of this Agreement and ending on the date which is three (3) months after the expiration of this Agreement as provided in Paragraph 1 above (the "Letter of Credit Period").

If the stated term of a Letter of Credit is not valid for the entire Letter of Credit Period, then such Letter of Credit shall be extended or renewed at least ninety (90) days prior to its expiration. If Tenant fails to replace a Letter of Credit in a timely manner as

required by this Paragraph 23, Authority shall be entitled thereupon without further notice to Tenant to draw upon the full amount of the expiring Letter of Credit, and the cash proceeds therefrom shall be treated for all purposes of this Agreement as the Security Deposit. All or any portion of the principal sum of the Letter of Credit shall be available unconditionally to Authority for the purposes and uses hereinabove provided. Authority shall have the right, and Tenant shall take all actions necessary to enable Authority, to draw upon the full amount of any and all outstanding Letter(s) of Credit. The bank, and the form and provisions of the Letter of Credit shall be acceptable to the President/CEO of Authority, and if not so acceptable, may be rejected. The Letter of Credit and Drawing Certificate shall not be acceptable if it requires Authority to send written notice of default or request or demand payment from Tenant after default, prior to Authority drawing on any funds under the Letter of Credit.

Notwithstanding the above, if said security deposit or the cumulative total amount of security deposits required by Authority under this Permit and other leases, permits and agreements between Authority and Tenant does not exceed Twenty-Five Thousand Dollars (\$25,000), Tenant may elect to provide said security deposit in the form of cash.

The amount of the security deposit may be adjusted from time to time at the discretion of the President/CEO of Authority. Following any such adjustment, the amount of the security deposit may not exceed three months' rent and fees under the then current rent and fee requirements of the Permit. In the event the amount of the security deposit is increased, Tenant shall submit the additional security deposit within thirty (30) days of being notified in writing of the increase.

Tenant shall maintain the required security deposit continuously throughout the Permit term. Failure to do so shall be deemed a default and shall be grounds for immediate termination of this Permit in accordance with Paragraph 14.

The security deposit or the remaining portion thereof, shall be rebated, released, assigned, surrendered, or endorsed to Tenant, as applicable, within ninety (90) days after the termination of this Permit.

26. FEDERAL AVIATION ADMINISTRATION REGULATIONS:

- A. Tenant for itself, its heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree "as a covenant running with the land" that in the event facilities are constructed, maintained, or otherwise operated on the Premises for a purpose for which a DOT program or activity is extended or for another purpose involving the provisions of similar services or benefits, Tenant shall maintain and operate such facilities and services in compliance with all other requirements imposed pursuant to Title 49, Code of Federal Regulations, DOT, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally Assisted Programs of the Department of Transportation - Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations may be amended.

- B. Tenant for itself, its personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree "as a covenant running with the land" that: (i) no person on the grounds of race, color, or national origin shall be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities; (ii) that in the construction of any improvements on, over, or under such land and the furnishing of services thereon, no person on the grounds of race, color, or national origin shall be excluded from participation in, denied the benefits of, or otherwise be subject to discrimination; and (iii) that Tenant shall use the Premises in compliance with all other requirements imposed by or pursuant to Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally Assisted Programs of the Department of Transportation - Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations may be amended.
- C. That in the event of breach of any of the above nondiscrimination covenants, Authority shall have the right to terminate this Permit and to reenter and repossess said land and the facilities thereon, and hold the same as if said Permit had never been made or issued. This provision does not become effective until the procedures of 49 CFR Part 21 are followed and completed including expiration of appeal rights.
- D. Tenant shall furnish its accommodations and/or services on a fair, equal and not unjustly discriminatory basis to all users thereof and it shall charge fair, reasonable and not unjustly discriminatory prices for each unit or service; provided that Tenant may be allowed to make reasonable and nondiscriminatory discounts, rebates or other similar type of price reductions to volume purchasers.
- E. Noncompliance with Provision (d) above shall constitute a material breach thereof and in the event of such noncompliance Authority shall have the right to terminate this Permit and the estate hereby created without liability therefore or at the election of Authority or the United States either or both said Governments shall have the right to judicially enforce Provisions.
- F. Tenant agrees that it shall insert Provisions (a), (b), (c), (d), and (e) above in any agreement by which said Tenant grants a right or privilege to any person, firm or corporation to render accommodations and/or services to the public on the Premises herein covered by this Permit.
- G. Tenant assures that it will undertake an affirmative action program as required by 14 CFR Part 152, Subpart E, to ensure that no person shall on the grounds of race, creed, color, national origin, or sex be excluded from participating in any employment activities covered in 14 CFR Part 152, Subpart E. Tenant assures that no person shall be excluded on these

grounds from participating in or receiving the services or benefits of any program or activity covered by this subpart. Tenant assures that it will require that its covered suborganizations provide assurances to Tenant that they similarly will undertake affirmative action programs and that they will require assurances from their suborganizations, as required by 14 CFR 152, Subpart E, to the same effort.

- H. Authority reserves the right to further develop or improve the landing area of San Diego International Airport as it sees fit, regardless of the desires or view of Tenant and without interference or hindrance.
- I. Authority reserves the right, but shall not be obligated to Tenant to maintain and keep in repair the landing area of San Diego International Airport and all publicly owned facilities of said airport, together with the right to direct and control all activities of Tenant in this regard.
- J. This Permit shall be subordinate to the provisions and requirements of any existing or future agreement between Authority and the United States, relative to the development, operation or maintenance of San Diego International Airport.
- K. There is hereby reserved to Authority, its successors and assigns, for the use and benefit of the public, a right of flight for the passage of aircraft in the airspace above the surface of the Premises herein covered by this Permit. This public right of flight shall include the right to cause in said airspace any noise inherent in the operation of any aircraft used for navigation or flight through the said airspace or landing at, taking off from or operation on the San Diego International Airport.
- L. Tenant agrees to comply with the notification and review requirements covered in Part 77 of the Federal Aviation Regulations in the event future construction of a building is planned for the Premises covered by this Permit, or in the event of any planned modification or alteration of any present or future building or structure situated on the Premises covered by this Permit.
- M. Tenant by accepting this expressly agrees for itself, its successors and assigns that it will not erect nor permit the erection of any structure or object, nor permit the growth of any tree on the land rented hereunder above the mean sea level elevation of * (*) feet. In the event the aforesaid covenants are breached, Authority reserves the right to enter upon the land covered by this Permit and to remove the offending structure or object and cut the offending tree, all of which shall be at the expense of Tenant.
- N. Tenant by accepting this Permit agrees for itself, its successors and assigns that it will not make use of the Premises covered by this Permit in any manner which might interfere with the landing and taking off of aircraft from San Diego International Airport or otherwise constitute a hazard. In the event the

aforesaid covenant is breached, Authority reserves the right to enter upon the Premises hereby covered by this Permit and cause the abatement of such interference at the expense of Tenant.

- O. It is understood and agreed that nothing herein contained shall be construed to grant or authorize the granting of an exclusive right within the meaning of Section 308a of the Federal Aviation Act of 1958 (49 U.S.C.40103; P.L. 103-272; 108 STAT. 1102, and as may be amended).
 - P. To the extent that this Permit constitutes a concession agreement covered by 49 CFR 26, Tenant acknowledges and agrees as follows; it is the policy of the Department of Transportation that disadvantaged business enterprises as defined in 49 CFR 26 shall have the maximum opportunity to participate in the performance of leases as defined in 49 CFR 26. Tenant is charged with knowledge and understanding of 49 CFR 26, and compliance with its provisions is a material part of the agreed upon performance of this Permit.
 - Q. Tenant hereby assures that no person shall be excluded from participation in, denied the benefits of or otherwise discriminated against in connection with the award and performance of any contract, including leases, covered by 49 CFR 26 on the grounds of race, color, national origin or sex.
 - R. Tenant hereby assures that it will include the above provisions (p) and (q) in all subleases and cause sublessees to similarly include said provisions in further subsubleases.
 - S. This Permit is subject to the requirements of the U.S. Department of Transportation's Regulations, 49 CFR Part 23, Subpart F. Tenant agrees that it will not discriminate against any business owner because of the owner's race, color, national origin, or sex in connection with the award or performance of any concession agreement covered by 49 CFR Part 23, Subpart F.
 - T. Tenant agrees to include the above statements in any subsequent concession agreements that it enters and cause those businesses to similarly include the statements in further concession agreements.
- 27. ATTORNEY'S FEES:** In the event any suit is commenced to enforce, protect or establish any right or remedy of any of the terms and conditions hereof, including without limitation a summary action commenced by Authority under the laws of the State of California relating to the unlawful detention of property, the prevailing party shall be entitled to have and recover from the losing party reasonable attorney's fees and costs of suit.
- 28. HAZARDOUS MATERIALS:** Tenant shall comply with all laws regarding hazardous substances, materials or wastes, or petroleum products or fraction thereof (herein collectively referred to as "Contaminants") relative to occupancy and use of the

Premises. Tenant shall be liable and responsible for any Contaminants arising out of the occupancy or use of the Premises by Tenant. Such liability and responsibility shall include, but not be limited to, (i) removal from the Premises of any such Contaminants; (ii) removal from any area outside the Premises, including but not limited to surface and groundwater, any such Contaminants generated as part of the operations on the Premises; (iii) damages to persons, property and the Premises; (iv) all claims resulting from those damages; (v) fines imposed by any governmental agency, and (vi) any other liability as provided by law. Tenant shall defend, indemnify and hold harmless the Authority, its officials, officers, agents, and employees from any and all such responsibilities, damages, claims, fines, liabilities, including without limitation any costs, expenses and attorney's fees therefore. Authority shall have a direct right of action against Tenant even if no third party has asserted a claim. Furthermore, Authority shall have the right to assign said indemnity.

If Tenant has in the past or continues to use, dispose, generate, or store Contaminants on the Premises, Authority, or its designated representatives, at Authority's sole discretion, may at any time during the term of this Permit, enter upon the Premises and make any inspections, tests or measurements Authority deems necessary in order to determine if a release of Contaminants has occurred. Authority shall give Tenant a minimum of twenty-four (24) hours' notice in writing prior to conducting any inspections or tests, unless, in Authority's sole judgment, circumstances require otherwise, and such tests shall be conducted in a manner so as to attempt to minimize any inconvenience and disruption to Tenant's operations. If such tests indicate a release of Contaminants, then Authority, at Authority's sole discretion, may require Tenant, at Tenant's sole expense, and at any time during the term of this Permit, to have tests for such Contaminants conducted by a qualified party or parties on the Premises. If Authority has reason to believe that any Contaminants that originated from a release on the Premises have contaminated any area outside the Premises, including but not limited to surface and groundwater, then Authority, at Authority's sole discretion, may require Tenant, at Tenant's sole expense, and at any time during the term of this Permit, to have tests for such Contaminants conducted by a qualified party or parties on said area outside the Premises.

The tests conducted by Tenant's qualified party shall include, but not be limited to, applicable comprehensive soil, emission, or groundwater sampling test or other procedures to determine any actual or possible contamination. Tenant shall expeditiously, but no longer than thirty (30) days after Authority's request for such tests, furnish to Authority the results of said tests, sampling plans, and analysis thereof identifying any Contaminants which exceed then applicable levels permitted by federal, state, or local laws. Tenant shall report such contamination to the Authority within seventy-two (72) hours and shall diligently proceed to identify the extent of contamination, how it will be remediated, when it will be remediated, by whom, and the cost of such remediation.

- 29. UNDERGROUND STORAGE TANKS:** In the event any underground storage tanks are located on the Premises or hereinafter placed on the Premises by any party during the term or extension of this Permit, Tenant shall be responsible for tank monitoring of all such underground storage tanks as required by the County of San Diego Hazardous Material Management Division (HMMD) or any other responsible agency. Tenant further agrees to take responsibility for reporting unauthorized releases to HMMD and the Authority within twenty-four (24) hours of such unauthorized release. Tenant will be responsible for all fees and costs related to the unauthorized release of Contaminants including but not limited to investigative, surface and groundwater cleanup, and expert and agency fees. Tenant shall maintain evidence of financial responsibility for taking corrective action and for compensating third parties for bodily injury and property damage caused by a release from the underground tank system. Tenant further agrees to be responsible for maintenance and repair of the storage tanks, obtaining tank permits, filing a business plan with HMMD or other responsible agency and for paying underground storage tank fees, permit fees, and other regulatory agency fees relating to underground storage tanks.

Tenant agrees to keep complete and accurate records on the Premises for a period of not less than thirty-six (36) months from the applicable events, including, but not limited to permit applications, monitoring, testing, equipment installation, repairing and closure of the underground storage tanks, and any unauthorized releases of Contaminants and make such records available for Authority or responsible agency inspection. Tenant further agrees to include a copy of Health and Safety Code, Chapter 6.7, Section 25299, as part of any agreement between Tenant and any Operator of such underground storage tanks.

Furthermore, Tenant shall be responsible for compliance with all other laws and regulations presently existing or hereinafter enacted applicable to underground storage tanks, including without limitation any such laws and regulations which alter any of the above requirements.

- 30. ABOVEGROUND STORAGE TANKS:** Tenant shall be responsible for any aboveground storage tanks on the Premises. Tenant shall, in accordance with this Permit and applicable laws and regulations, secure and pay for all necessary permits and approvals, prepare a spill prevention control counter measure plan and conduct periodic inspections to ensure compliance therewith, including conformance with the latest version of said laws and regulations. In addition, Tenant shall maintain and repair said tanks and conform and comply with all other applicable laws and regulations for aboveground storage tanks, including without limitation all of the requirements of Health & Safety Code, Sections 25270 through 25170.13 as presently existing or as hereinafter amended, including without limitation conducting daily visual inspection of said tanks, allowing the San Diego Regional Water Quality Control Board, Authority, or responsible agency, to conduct periodic inspections and complying with valid orders of said Board, filing the required storage tank statement and payment of the fee therefore, establishing and maintaining the required monitoring program and systems, reporting spills as required, and payment of

lawfully imposed penalties as provided therein and as otherwise provided by law. Tenant shall be responsible for all costs associated with an unauthorized release from such tanks, including but not limited to, investigative, surface and groundwater cleanup, expert and agency fees.

31. **NOTICES:** Any notice or notices provided for by this Permit or by law to be given or served upon Tenant may be given or served by certified or registered letter addressed to Tenant at * and deposited in the United States mail, or may be served personally upon said Tenant or any person hereafter authorized by it in writing to receive such notice; and that any notice or notices provided for by this Permit or by law to be served upon Authority may be given or served by certified or registered letter addressed to President/CEO of Authority at the administrative offices of the San Diego County Regional Airport Authority, Post Office Box 82776, San Diego, California 92138-2776, and deposited in the United States mail, or may be served personally upon said President/CEO or his/her duly authorized representative; and that any notice or notices given or served as provided herein, shall be effectual and binding for all purposes upon the parties so served.
32. **SECTION HEADINGS:** The section headings contained herein are for convenience in reference and are not intended to define or limit the scope of any provision hereof.
33. **SIGNATURE OF PARTIES:** It is an express condition of this Permit that said Permit shall not be complete nor effective until signed by either the President/CEO or his/her authorized designee on behalf of Authority and by other party.

APPROVED AS TO FORM

**SAN DIEGO COUNTY REGIONAL
AIRPORT AUTHORITY**

By: _____

Office of General Counsel

By: _____

Name:

Title:

COMPANY NAME

By: _____

Print Name: _____

Print Title: _____

By: _____

Print Name: _____

Print Title: _____

APPENDIX G
MISCELANEOUS SUPPORT MATERIALS

Appendix G – Miscellaneous Support Materials



State of California
STATE WATER RESOURCES CONTROL BOARD

2006-2007
ANNUAL REPORT
FOR
STORM WATER DISCHARGES ASSOCIATED
WITH INDUSTRIAL ACTIVITIES

Reporting Period July 1, 2006 through June 30, 2007

An annual report is required to be submitted to your local Regional Water Quality Control Board (Regional Board) by July 1 of each year. This document must be certified and signed, under penalty of perjury, by the appropriate official of your company. Many of the Annual Report questions require an explanation. Please provide explanations on a separate sheet as an attachment. **Retain a copy of the completed Annual Report for your records.**

Please circle or highlight any information contained in Items A, B, and C below that is new or revised so we can update our records. Please remember that a Notice of Termination and new Notice of Intent are required whenever a facility operation is relocated or changes ownership.

If you have any questions, please contact your Regional Board Industrial Storm Water Permit Contact. The names, telephone numbers and e-mail addresses of the Regional Board contacts, as well as the Regional Board office addresses can be found at <http://www.waterboards.ca.gov/stormwtr/contact.html>. To find your Regional Board information, match the first digit of your WDID number with the corresponding number that appears in parenthesis on the first line of each Regional Board office.

GENERAL INFORMATION:

A. Facility Information:

Facility Business Name: _____
Physical Address: _____
City: _____
Standard Industrial Classification (SIC) Code(s): _____

Facility WDID No: _____

Contact Person: _____
e-mail: _____
CA Zip: _____ Phone: _____

B. Facility Operator Information:

Operator Name: _____
Mailing Address: _____
City: _____

Contact Person: _____
e-mail: _____
State: ____ Zip: _____ Phone: _____

C. Facility Billing Information:

Operator Name: _____
Mailing Address: _____
City: _____

Contact Person: _____
e-mail: _____
State: ____ Zip: _____ Phone: _____

2006-2007
ANNUAL REPORT

SPECIFIC INFORMATION

MONITORING AND REPORTING PROGRAM

D. SAMPLING AND ANALYSIS EXEMPTIONS AND REDUCTIONS

1. For the reporting period, was your facility exempt from collecting and analyzing samples from **two** storm events in accordance with sections B.12 or 15 of the General Permit?

☐ **YES** Go to Item D.2

☐ **NO** Go to Section E

2. Indicate the reason your facility is exempt from collecting and analyzing samples from **two** storm events. Attach a copy of the first page of the appropriate certification if you check boxes ii, iii, iv, or v.

- i. ☐ Participating in an Approved Group Monitoring Plan

Group Name: _____

- ii. ☐ Submitted **No Exposure Certification (NEC)**

Date Submitted: ____ / ____ / ____

Re-evaluation Date: ____ / ____ / ____

Does facility continue to satisfy NEC conditions?

☐

YES

☐

NO

- iii. ☐ Submitted **Sampling Reduction Certification (SRC)**

Date Submitted: ____ / ____ / ____

Re-evaluation Date: ____ / ____ / ____

Does facility continue to satisfy SRC conditions?

☐

YES

☐

NO

- iv. ☐ Received Regional Board Certification

Certification Date: ____ / ____ / ____

- v. ☐ Received Local Agency Certification

Certification Date: ____ / ____ / ____

3. If you checked boxes i or iii above, were you scheduled to sample **one** storm event during the reporting year?

☐ **YES** Go to Section E

☐ **NO** Go to Section F

4. If you checked boxes ii, iv, or v, go to Section F.

E. SAMPLING AND ANALYSIS RESULTS

1. How many storm events did you sample? _____

If less than 2, **attach explanation** (if you checked item D.2.i or iii. above, only attach explanation if you answer "0").

2. Did you collect storm water samples from the first storm of the wet season that produced a discharge during scheduled facility operating hours? (Section B.5 of the General Permit)

☐ **YES**

☐

NO **attach explanation** (Please note that if you do not sample the first storm event, you are still required to sample 2 storm events)

3. How many storm water discharge locations are at your facility? _____

2006-2007
ANNUAL REPORT

4. For each storm event sampled, did you collect and analyze a sample from each of the facility's' storm water discharge locations? ☐ YES, go to Item E.6 ☐ NO
5. Was sample collection or analysis reduced in accordance with Section B.7.d of the General Permit? ☐ YES ☐ NO, **attach explanation**

If "YES", **attach documentation** supporting your determination that two or more drainage areas are substantially identical.

Date facility's drainage areas were last evaluated ____ / ____ / ____

6. Were all samples collected during the first hour of discharge? ☐ YES ☐ NO, **attach explanation**
7. Was all storm water sampling preceded by three (3) working days without a storm water discharge? ☐ YES ☐ NO, **attach explanation**
8. Were there any discharges of storm water that had been temporarily stored or contained? (such as from a pond) ☐ YES ☐ NO, go to Item E.10
9. Did you collect and analyze samples of temporarily stored or contained storm water discharges from two storm events? (or one storm event if you checked item D.2.i or iii. above) ☐ YES ☐ NO, **attach explanation**

10. Section B.5. of the General Permit requires you to analyze storm water samples for pH, Total Suspended Solids (TSS), Specific Conductance (SC), Total Organic Carbon (TOC) or Oil and Grease (O&G), other pollutants likely to be present in storm water discharges in significant quantities, and analytical parameters listed in Table D of the General Permit.

- a. Does Table D contain any additional parameters related to your facility's SIC code(s)? ☐ YES ☐ NO, Go to Item E.11
- b. Did you analyze all storm water samples for the applicable parameters listed in Table D? ☐ YES ☐ NO
- c. If you did not analyze all storm water samples for the applicable Table D parameters, check one of the following reasons:

_____ In prior sampling years, the parameter(s) have not been detected in significant quantities from two consecutive sampling events. **Attach explanation**

_____ The parameter(s) is not likely to be present in storm water discharges and authorized non-storm water discharges in significant quantities based upon the facility operator's evaluation. **Attach explanation**

_____ Other. **Attach explanation**

11. For each storm event sampled, attach a copy of the laboratory analytical reports and report the sampling and analysis results using **Form 1** or its equivalent. The following must be provided for each sample collected:

- | | |
|---|---|
| • Date and time of sample collection | • Testing results |
| • Name and title of sampler | • Test methods used |
| • Parameters tested | • Test detection limits |
| • Name of analytical testing laboratory | • Date of testing |
| • Discharge location identification | • Copies of the laboratory analytical results |

2006-2007
ANNUAL REPORT

F. QUARTERLY VISUAL OBSERVATIONS

1. Authorized Non-Storm Water Discharges

Section B.3.b of the General Permit requires quarterly visual observations of all authorized non-storm water discharges and their sources.

- a. Do authorized non-storm water discharges occur at your facility?

☐ **YES** ☐ **NO** Go to Item F.2

- b. Indicate whether you visually observed all authorized non-storm water discharges and their sources during the quarters when they were discharged. **Attach an explanation for any "NO" answers.** Indicate "N/A" for quarters without any authorized non-storm water discharges.

July-September ☐ **YES** ☐ **NO** ☐ **N/A** October-December ☐ **YES** ☐ **NO** ☐ **N/A**

January-March ☐ **YES** ☐ **NO** ☐ **N/A** April-June ☐ **YES** ☐ **NO** ☐ **N/A**

- c. Use **Form 2** to report quarterly visual observations of authorized non-storm water discharges or provide the following information:

- i. name of each authorized non-storm water discharge
- ii. date and time of observation
- iii. source and location of each authorized non-storm water discharge
- iv. characteristics of the discharge at its source and impacted drainage area/discharge location
- v. name, title, and signature of observer
- vi. **any** new or revised BMPs necessary to reduce or prevent pollutants in authorized non-storm water discharges. Provide new or revised BMP implementation date.

2. Unauthorized Non-Storm Water Discharges

Section B.3.a of the General Permit requires quarterly visual observations of all drainage areas to detect the presence of unauthorized non-storm water discharges and their sources.

- a. Indicate whether you visually observed all drainage areas to detect the presence of unauthorized non-storm water discharges and their sources. **Attach an explanation for any "NO" answers.**

July-September ☐ **YES** ☐ **NO** October-December ☐ **YES** ☐ **NO**

January-March ☐ **YES** ☐ **NO** April-June ☐ **YES** ☐ **NO**

- b. Based upon the quarterly visual observations, were any unauthorized non-storm water discharges detected?

☐ **YES** ☐ **NO** Go to Item F.2.d

- c. Have each of the unauthorized non-storm water discharges been eliminated or permitted?

☐ **YES** ☐ **NO** **Attach explanation**

- d. Use **Form 3** to report quarterly unauthorized non-storm water discharge visual observations or provide the following information:

- i. name of each unauthorized non-storm water discharge
- ii. date and time of observation
- iii. source and location of each unauthorized non-storm water discharge
- iv. characteristics of the discharge at its source and impacted drainage area/discharge location
- v. name, title, and signature of observer
- vi. **any** corrective actions necessary to eliminate the source of each unauthorized non-storm water discharge and to clean impacted drainage areas. Provide date unauthorized non-storm water discharge(s) was eliminated or scheduled to be eliminated.

2006-2007
ANNUAL REPORT

G. MONTHLY WET SEASON VISUAL OBSERVATIONS

Section B.4.a of the General Permit requires you to conduct monthly visual observations of storm water discharges at all storm water discharge locations during the wet season. These observations shall occur during the first hour of discharge or, in the case of temporarily stored or contained storm water, at the time of discharge.

1. Indicate below whether monthly visual observations of storm water discharges occurred at all discharge locations. **Attach an explanation for any "NO" answers.** Include in this explanation whether any eligible storm events occurred during scheduled facility operating hours that did not result in a storm water discharge, and provide the date, time, name and title of the person who observed that there was no storm water discharge.

	YES	NO		YES	NO
October	<input type="checkbox"/>	<input type="checkbox"/>	February	<input type="checkbox"/>	<input type="checkbox"/>
November	<input type="checkbox"/>	<input type="checkbox"/>	March	<input type="checkbox"/>	<input type="checkbox"/>
December	<input type="checkbox"/>	<input type="checkbox"/>	April	<input type="checkbox"/>	<input type="checkbox"/>
January	<input type="checkbox"/>	<input type="checkbox"/>	May	<input type="checkbox"/>	<input type="checkbox"/>

2. Report monthly wet season visual observations using **Form 4** or provide the following information:

- date, time, and location of observation
- name and title of observer
- characteristics of the discharge (i.e., odor, color, etc.) and source of any pollutants observed
- any** new or revised BMPs necessary to reduce or prevent pollutants in storm water discharges. Provide new or revised BMP implementation date.

ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION (ACSCE)

H. ACSCE CHECKLIST

Section A.9 of the General Permit requires the facility operator to conduct one ACSCE in each reporting period (July 1- June 30). Evaluations must be conducted within 8-16 months of each other. The SWPPP and monitoring program shall be revised and implemented, as necessary, within 90 days of the evaluation. The checklist below includes the minimum steps necessary to complete a ACSCE. Indicate whether you have performed each step below. **Attach an explanation for any "NO" answers.**

1. Have you inspected all potential pollutant sources and industrial activities areas? ☐ YES ☐ NO
The following areas should be inspected:
- | | |
|--|--|
| <ul style="list-style-type: none">• areas where spills and leaks have occurred during the last year• outdoor wash and rinse areas• process/manufacturing areas• loading, unloading, and transfer areas• waste storage/disposal areas• dust/particulate generating areas• erosion areas | <ul style="list-style-type: none">• building repair, remodeling, and construction• material storage areas• vehicle/equipment storage areas• truck parking and access areas• rooftop equipment areas• vehicle fueling/maintenance areas• non-storm water discharge generating areas |
|--|--|
2. Have you reviewed your SWPPP to assure that its BMPs address existing potential pollutant sources and industrial activities areas? ☐ YES ☐ NO
3. Have you inspected the entire facility to verify that the SWPPP's site map is up-to-date? The following site map items should be verified: ☐ YES ☐ NO
- | | |
|---|---|
| <ul style="list-style-type: none">• facility boundaries• outline of all storm water drainage areas• areas impacted by run-on• storm water discharges locations | <ul style="list-style-type: none">• storm water collection and conveyance system• structural control measures such as catch basins, berms, containment areas, oil/water separators, etc. |
|---|---|

2006-2007
ANNUAL REPORT

4. Have you reviewed all General Permit compliance records generated since the last annual evaluation?

☐ YES

☐ NO

The following records should be reviewed:

- | | |
|---|--|
| • quarterly authorized non-storm water discharge visual observations | • quarterly unauthorized non-storm water discharge visual observations |
| • monthly storm water discharge visual observation | • Sampling and Analysis records |
| • records of spills/leaks and associated clean-up/response activities | • preventative maintenance inspection and maintenance records |

5. Have you reviewed the major elements of the SWPPP to assure compliance with the General Permit?

☐ YES

☐ NO

The following SWPPP items should be reviewed:

- | | |
|--|--|
| • pollution prevention team | • assessment of potential pollutant sources |
| • list of significant materials | • identification and description of the BMPs to be implemented for each potential pollutant source |
| • description of potential pollutant sources | |

6. Have you reviewed your SWPPP to assure that a) the BMPs are adequate in reducing or preventing pollutants in storm water discharges and authorized non-storm water discharges, and b) the BMPs are being implemented?

☐ YES

☐ NO

The following BMP categories should be reviewed:

- | | |
|-------------------------------|---|
| • good housekeeping practices | • preventative maintenance |
| • spill response | • material handling and storage practices |
| • employee training | • waste handling/storage |
| • erosion control | • structural BMPs |
| • quality assurance | |

7. Has all material handling equipment and equipment needed to implement the SWPPP been inspected?

☐ YES

☐ NO

I. ACSCE EVALUATION REPORT

The facility operator is required to provide an evaluation report that includes:

- | | |
|---|--|
| • identification of personnel performing the evaluation | • schedule for implementing SWPPP revisions |
| • the date(s) of the evaluation | • any incidents of non-compliance and the corrective actions taken |
| • necessary SWPPP revisions | |

Use **Form 5** to report the results of your evaluation or develop an equivalent form.

J. ACSCE CERTIFICATION

The facility operator is required to certify compliance with the Industrial Activities Storm Water General Permit. To certify compliance, both the SWPPP and Monitoring Program must be up to date and be fully implemented.

Based upon your ACSCE, do you certify compliance with the Industrial Activities Storm Water General Permit?

☐ YES

☐ NO

If you answered "NO" **attach an explanation** to the ACSCE Evaluation Report why you are not in compliance with the Industrial Activities Storm Water General Permit.

2006-2007
ANNUAL REPORT

ATTACHMENT SUMMARY

Answer the questions below to help you determine what should be attached to this annual report. Answer NA (Not Applicable) to questions 2-4 if you are not required to provide those attachments.

- | | | | |
|--|--|-----------------------------|-----------------------------|
| 1. Have you attached Forms 1,2,3,4, and 5 or their equivalent? | <input type="checkbox"/> YES (Mandatory) | | |
| 2. If you conducted sampling and analysis, have you attached the laboratory analytical reports? | <input type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> NA |
| 3. If you checked box II, III, IV, or V in item D.2 of this Annual Report, have you attached the first page of the appropriate certifications? | <input type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> NA |
| 4. Have you attached an explanation for each "NO" answer in items E.1, E.2, E.5-E.7, E.9, E.10.c, F.1.b, F.2.a, F.2.c, G.1, H.1-H.7, or J? | <input type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> NA |

ANNUAL REPORT CERTIFICATION

I am duly authorized to sign reports required by the INDUSTRIAL ACTIVITIES STORM WATER GENERAL PERMIT (see Standard Provision C.9) and I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those person directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Printed Name: _____

Signature: _____ Date: _____

Title: _____

2006-2007
ANNUAL REPORT

DESCRIPTION OF BASIC ANALYTICAL PARAMETERS

The Industrial Activities Storm Water General Permit (General Permit) requires you to analyze storm water samples for at least four parameters. These are pH, Total Suspended Solids (TSS), Specific Conductance (SC), and Total Organic Carbon (TOC). Oil and Grease (O&G) may be substituted for TOC. In addition, you must monitor for any other pollutants which you believe to be present in your storm water discharge as a result of industrial activity and analytical parameters listed in Table D of the General Permit. There are no numeric limitations for the parameters you test for.

The four parameters which the General Permit requires to be tested are considered *indicator* parameters. In other words, regardless of what type of facility you operate, these parameters are nonspecific and general enough to usually provide some indication whether pollutants are present in your storm water discharge. The following briefly explains what each of these parameters mean:

pH is a numeric measure of the hydrogen-ion concentration. The neutral, or acceptable, range is within 6.5 to 8.5. At values less than 6.5, the water is considered acidic; above 8.5 it is considered alkaline or basic. An example of an acidic substance is vinegar, and a alkaline or basic substance is liquid antacid. Pure rainfall tends to have a pH of a little less than 7. There may be sources of materials or industrial activities which could increase or decrease the pH of your storm water discharge. If the pH levels of your storm water discharge are high or low, you should conduct a thorough evaluation of all potential pollutant sources at your site.

Total Suspended Solids (TSS) is a measure of the undissolved solids that are present in your storm water discharge. Sources of TSS include sediment from erosion of exposed land, and dirt from impervious (i.e. paved) areas. Sediment by itself can be very toxic to aquatic life because it covers feeding and breeding grounds, and can smother organisms living on the bottom of a water body. Toxic chemicals and other pollutants also adhere to sediment particles. This provides a medium by which toxic or other pollutants end up in our water ways and ultimately in human and aquatic life. TSS levels vary in runoff from undisturbed land. It has been shown that TSS levels increase significantly due to land development.

Specific Conductance (SC) is a numerical expression of the ability of the water to carry an electric current. SC can be used to assess the degree of mineralization, salinity, or estimate the total dissolved solids concentration of a water sample. Because of air pollution, most rain water has a SC a little above zero. A high SC could affect the usability of waters for drinking, irrigation, and other commercial or industrial use.

Total Organic Carbon (TOC) is a measure of the total organic matter present in water. (All organic matter contains carbon) This test is sensitive and able to detect small concentrations of organic matter. Organic matter is naturally occurring in animals, plants, and man. Organic matter may also be man made (so called synthetic organics). Synthetic organics include pesticides, fuels, solvents, and paints. Natural organic matter utilizes the oxygen in a receiving water to biodegrade. Too much organic matter could place a significant oxygen demand on the water, and possibly impact its quality. Synthetic organics either do not biodegrade or biodegrade very slowly. Synthetic organics are a source of toxic chemicals that can have adverse affects at very low concentrations. Some of these chemicals bioaccumulate in aquatic life. If your levels of TOC are high, you should evaluate all sources of natural or synthetic organics you may use at your site.

Oil and Grease (O&G) is a measure of the amount of oil and grease present in your storm water discharge. At very low concentrations, O&G can cause a sheen (that floating "rainbow") on the surface of water (1 qt. of oil can pollute 250,000 gallons of water). O&G can adversely affect aquatic life and create unsightly floating material and film on water, thus making it undrinkable. Sources of O&G include maintenance shops, vehicles, machines and roadways.

If you have any questions regarding whether or not your constituent concentrations are too high, please contact your local Regional Board office. The United States Environmental Protection Agency (USEPA) has published stormwater discharge benchmarks for a number of parameters. These benchmarks may be helpful when evaluating whether additional BMPs are appropriate. These benchmarks can be accessed at our website at <http://www.waterboards.ca.gov>. It is contained in the Sampling and Analysis Reduction Certification.

See Storm Water Contacts at

<http://www.waterboards.ca.gov/stormwtr/contact.html>

2006 - 2007
ANNUAL REPORT

SIDE A

FORM 1-SAMPLING & ANALYSIS RESULTS

FIRST STORM EVENT

- If analytical results are less than the detection limit (or non detectable), show the value as less than the numerical value of the detection limit (example: <.05)
- If you did not analyze for a required parameter, do not report "0". Instead, leave the appropriate box blank
- When analysis is done using portable analysis (such as portable pH meters, SC meters, etc.), indicate "PA" in the appropriate test method used box.
- Make additional copies of this form as necessary.

NAME OF PERSON COLLECTING SAMPLE(S): _____ TITLE: _____ SIGNATURE: _____

DESCRIBE DISCHARGE LOCATION Example: NW Out Fall	DATE/TIME OF SAMPLE COLLECTION	TIME DISCHARGE STARTED	ANALYTICAL RESULTS For First Storm Event										
			BASIC PARAMETERS					OTHER PARAMETERS					
			PH	TSS	SC	O&G	TOC						
	____/____/____ <input type="checkbox"/> AM <input type="checkbox"/> PM	____:____ <input type="checkbox"/> AM <input type="checkbox"/> PM											
	____/____/____ <input type="checkbox"/> AM <input type="checkbox"/> PM	____:____ <input type="checkbox"/> AM <input type="checkbox"/> PM											
	____/____/____ <input type="checkbox"/> AM <input type="checkbox"/> PM	____:____ <input type="checkbox"/> AM <input type="checkbox"/> PM											
	____/____/____ <input type="checkbox"/> AM <input type="checkbox"/> PM	____:____ <input type="checkbox"/> AM <input type="checkbox"/> PM											
TEST REPORTING UNITS:			pH Units	mg/l	umho/cm	mg/l	mg/l						
TEST METHOD DETECTION LIMIT:													
TEST METHOD USED:													
ANALYZED BY (SELF/LAB):													

TSS - Total Suspended Solids

SC - Specific Conductance

O&G - Oil & Grease

TOC - Total Organic Carbon

2006 - 2007
ANNUAL REPORT

SIDE B

FORM 1-SAMPLING & ANALYSIS RESULTS

SECOND STORM EVENT

- If analytical results are less than the detection limit (or non detectable), show the value as less than the numerical value of the detection limit (example: <.05)
- If you did not analyze for a required parameter, do not report "0". Instead, leave the appropriate box blank
- When analysis is done using portable analysis (such as portable pH meters, SC meters, etc.), indicate "PA" in the appropriate test method used box.

NAME OF PERSON COLLECTING SAMPLE(S): _____ TITLE: _____ SIGNATURE: _____

DESCRIBE DISCHARGE LOCATION Example: NW Out Fall	DATE/TIME OF SAMPLE COLLECTION	TIME DISCHARGE STARTED	ANALYTICAL RESULTS For Second Storm Event										
			BASIC PARAMETERS					OTHER PARAMETERS					
			PH	TSS	SC	O&G	TOC						
	____ / ____ / ____ <input type="checkbox"/> AM <input type="checkbox"/> PM	____ : ____ <input type="checkbox"/> AM <input type="checkbox"/> PM											
	____ / ____ / ____ <input type="checkbox"/> AM <input type="checkbox"/> PM	____ : ____ <input type="checkbox"/> AM <input type="checkbox"/> PM											
	____ / ____ / ____ <input type="checkbox"/> AM <input type="checkbox"/> PM	____ : ____ <input type="checkbox"/> AM <input type="checkbox"/> PM											
	____ / ____ / ____ <input type="checkbox"/> AM <input type="checkbox"/> PM	____ : ____ <input type="checkbox"/> AM <input type="checkbox"/> PM											
TEST REPORTING UNITS:			pH Units	mg/l	umho/cm	mg/l	mg/l						
TEST METHOD DETECTION LIMIT:													
TEST METHOD USED:													
ANALYZED BY (SELF/LAB):													

TSS - Total Suspended Solids

SC - Specific Conductance

O&G - Oil & Grease

TOC - Total Organic Carbon

2006 - 2007
ANNUAL REPORT

SIDE A

FORM 2-QUARTERLY VISUAL OBSERVATIONS OF AUTHORIZED
NON-STORM WATER DISCHARGES (NSWDs)

- Quarterly dry weather visual observations are required of each authorized NSWD.
- Observe each authorized NSWD source, impacted drainage area, and discharge location.

- Authorized NSWDs must meet the conditions provided in Section D (pages 5-6), of the General Permit.
- Make additional copies of this form as necessary.

<p>QUARTER:</p> <p>JULY-SEPT.</p> <p>DATE:</p> <p>____/____/____</p>	<p>Observers Name: _____</p> <p>Title: _____</p> <p>Signature: _____</p>	<p>WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?</p> <p><input type="checkbox"/> YES If YES, complete reverse side of this form.</p> <p><input type="checkbox"/> NO</p>
<p>QUARTER:</p> <p>OCT.-DEC.</p> <p>DATE:</p> <p>____/____/____</p>	<p>Observers Name: _____</p> <p>Title: _____</p> <p>Signature: _____</p>	<p>WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?</p> <p><input type="checkbox"/> YES If YES, complete reverse side of this form.</p> <p><input type="checkbox"/> NO</p>
<p>QUARTER:</p> <p>JAN.-MARCH</p> <p>DATE:</p> <p>____/____/____</p>	<p>Observers Name: _____</p> <p>Title: _____</p> <p>Signature: _____</p>	<p>WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?</p> <p><input type="checkbox"/> YES If YES, complete reverse side of this form.</p> <p><input type="checkbox"/> NO</p>
<p>QUARTER:</p> <p>APRIL-JUNE</p> <p>DATE:</p> <p>____/____/____</p>	<p>Observers Name: _____</p> <p>Title: _____</p> <p>Signature: _____</p>	<p>WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?</p> <p><input type="checkbox"/> YES If YES, complete reverse side of this form.</p> <p><input type="checkbox"/> NO</p>

2006 - 2007
ANNUAL REPORT

SIDE B

FORM 2-QUARTERLY VISUAL OBSERVATIONS OF AUTHORIZED
NON-STORM WATER DISCHARGES (NSWDs)

DATE /TIME OF OBSERVATION	SOURCE AND LOCATION OF AUTHORIZED NSWD <u>EXAMPLE:</u> Air conditioner Units on Building C	NAME OF AUTHORIZED NSWD <u>EXAMPLE:</u> Air conditioner condensate	DESCRIBE AUTHORIZED NSWD CHARACTERISTICS Indicate whether authorized NSWD is clear, cloudy, or discolored, causing staining, contains floating objects or an oil sheen, has odors, etc.		DESCRIBE ANY REVISED OR NEW BMPs AND PROVIDE THEIR IMPLEMENTATION DATE
			At the NSWD Source	At the NSWD Drainage Area and Discharge Location	
____ / ____ / ____ ____ : ____ <input type="checkbox"/> AM <input type="checkbox"/> PM					
____ / ____ / ____ ____ : ____ <input type="checkbox"/> AM <input type="checkbox"/> PM					
____ / ____ / ____ ____ : ____ <input type="checkbox"/> AM <input type="checkbox"/> PM					
____ / ____ / ____ ____ : ____ <input type="checkbox"/> AM <input type="checkbox"/> PM					
____ / ____ / ____ ____ : ____ <input type="checkbox"/> AM <input type="checkbox"/> PM					

ANNUAL REPORT
FORM 3-QUARTERLY VISUAL OBSERVATIONS OF UNAUTHORIZED
NON-STORM WATER DISCHARGES (NSWDs)

- Unauthorized NSWDS are discharges (such as wash or rinse waters) that do not meet the conditions provided in Section D (pages 5-6) of the General Permit.
- Quarterly visual observations are required to observe current and detect prior unauthorized NSWDS.
- Quarterly visual observations are required during dry weather and at all facility drainage areas.
- Each unauthorized NSWDS source, impacted drainage area, and discharge location must be identified and observed.
- Unauthorized NSWDS that can not be eliminated within 90 days of observation must be reported to the Regional Board in accordance with Section A.10.e of the General Permit.
- Make additional copies of this form as necessary.

QUARTER: JULY-SEPT. DATE/TIME OF OBSERVATIONS ____/____/____ :____ <input type="checkbox"/> AM ____/____/____ :____ <input type="checkbox"/> PM	Observers Name: _____ Title: _____ Signature: _____	WERE UNAUTHORIZED NSWDS OBSERVED? <input type="checkbox"/> YES <input type="checkbox"/> NO WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDS? <input type="checkbox"/> YES <input type="checkbox"/> NO	If YES to either question, complete reverse side.
QUARTER: OCT.-DEC. DATE/TIME OF OBSERVATIONS ____/____/____ :____ <input type="checkbox"/> AM ____/____/____ :____ <input type="checkbox"/> PM	Observers Name: _____ Title: _____ Signature: _____	WERE UNAUTHORIZED NSWDS OBSERVED? <input type="checkbox"/> YES <input type="checkbox"/> NO WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDS? <input type="checkbox"/> YES <input type="checkbox"/> NO	If YES to either question, complete reverse side.
QUARTER: JAN.-MARCH DATE/TIME OF OBSERVATIONS ____/____/____ :____ <input type="checkbox"/> AM ____/____/____ :____ <input type="checkbox"/> PM	Observers Name: _____ Title: _____ Signature: _____	WERE UNAUTHORIZED NSWDS OBSERVED? <input type="checkbox"/> YES <input type="checkbox"/> NO WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDS? <input type="checkbox"/> YES <input type="checkbox"/> NO	If YES to either question, complete reverse side.
QUARTER: APRIL-JUNE DATE/TIME OF OBSERVATIONS ____/____/____ :____ <input type="checkbox"/> AM ____/____/____ :____ <input type="checkbox"/> PM	Observers Name: _____ Title: _____ Signature: _____	WERE UNAUTHORIZED NSWDS OBSERVED? <input type="checkbox"/> YES <input type="checkbox"/> NO WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDS? <input type="checkbox"/> YES <input type="checkbox"/> NO	If YES to either question, complete reverse side.

2006 - 2007
ANNUAL REPORT

SIDE B

**FORM 3 QUARTERLY VISUAL OBSERVATIONS OF UNAUTHORIZED
NON-STORM WATER DISCHARGES (NSWDs)**

OBSERVATION DATE (FROM REVERSE SIDE)	NAME OF UNAUTHORIZED NSWD EXAMPLE: Vehicle Wash Water	SOURCE AND LOCATION OF UNAUTHORIZED NSWD EXAMPLE: NW Corner of Parking Lot	DESCRIBE UNAUTHORIZED NSWD CHARACTERISTICS Indicate whether unauthorized NSWD is clear, cloudy, discolored, causing stains; contains floating objects or an oil sheen, has odors, etc.		DESCRIBE CORRECTIVE ACTIONS TO ELIMINATE UNAUTHORIZED NSWD AND TO CLEAN IMPACTED DRAINAGE AREAS. PROVIDE UNAUTHORIZED NSWD ELIMINATION DATE.
			AT THE UNAUTHORIZED NSWD SOURCE	AT THE UNAUTHORIZED NSWD AREA AND DISCHARGE LOCATION	
____ / ____ / ____ ____ : ____ <input type="checkbox"/> AM <input type="checkbox"/> PM					
____ / ____ / ____ ____ : ____ <input type="checkbox"/> AM <input type="checkbox"/> PM					
____ / ____ / ____ ____ : ____ <input type="checkbox"/> AM <input type="checkbox"/> PM					
____ / ____ / ____ ____ : ____ <input type="checkbox"/> AM <input type="checkbox"/> PM					

2006 - 2007
ANNUAL REPORT
FORM 4-MONTHLY VISUAL OBSERVATIONS OF

SIDE

A

STORM WATER DISCHARGES

- Storm water discharge visual observations are required for at least one storm event per month between October 1 and May 31.
- Visual observations must be conducted during the first hour of discharge at all discharge locations.
- Discharges of temporarily stored or contained storm water must be observed at the time of discharge.

- Indicate "None" in the first column of this form if you did not conduct a monthly visual observation.
- Make additional copies of this form as necessary.
- Until a monthly visual observation is made, record any eligible storm events that do not result in a storm water discharge and note the date, time, name, and title of who observed there was no storm water discharge.

Observation Date: October ____ 2006 Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	#1	#2	#3	#4	
	Observation Time	:	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.
	Time Discharge Began	:	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	
	Observation Date: November ____ 2006 Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	#1	#2	#3	#4
Observation Time		:	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.
Time Discharge Began		:	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.
Were Pollutants Observed (If yes, complete reverse side)		YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	
Observation Date: December ____ 2006 Observers Name: _____ Title: _____ Signature: _____		Drainage Location Description	#1	#2	#3	#4
	Observation Time	:	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.
	Time Discharge Began	:	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	
	Observation Date: January ____ 2007 Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	#1	#2	#3	#4
Observation Time		:	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.
Time Discharge Began		:	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.
Were Pollutants Observed (If yes, complete reverse side)		YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	

2006 - 2007
ANNUAL REPORT

SIDE B

FORM 4-MONTHLY VISUAL OBSERVATIONS OF
STORM WATER DISCHARGES

DATE/TIME OF OBSERVATION (From Reverse Side)	DRAINAGE AREA DESCRIPTION <u>EXAMPLE:</u> Discharge from material storage Area #2	DESCRIBE STORM WATER DISCHARGE CHARACTERISTICS Indicate whether storm water discharge is clear, cloudy, or discolored; causing staining; containing floating objects or an oil sheen, has odors, etc.	IDENTIFY AND DESCRIBE SOURCE(S) OF POLLUTANTS <u>EXAMPLE:</u> Oil sheen caused by oil dripped by trucks in vehicle maintenance area.	DESCRIBE ANY REVISED OR NEW BMPs AND THEIR DATE OF IMPLEMENTATION
/ / : <input type="checkbox"/> AM <input type="checkbox"/> PM				
/ / : <input type="checkbox"/> AM <input type="checkbox"/> PM				
/ / : <input type="checkbox"/> AM <input type="checkbox"/> PM				
/ / : <input type="checkbox"/> AM <input type="checkbox"/> PM				
/ / : <input type="checkbox"/> AM <input type="checkbox"/> PM				

2006 - 2007
ANNUAL REPORT
FORM 4 (Continued)-MONTHLY VISUAL OBSERVATIONS OF
STORM WATER DISCHARGES

SIDE A

- Storm water discharge visual observations are required for at least one storm event per month between October 1 and May 31.
- Visual observations must be conducted during the first hour of discharge at all discharge locations.
- Discharges of temporarily stored or contained storm water must be observed at the time of discharge.

- Indicate "None" in the first column of this form if you did not conduct a monthly visual observation.
- Make additional copies of this form as necessary.
- Until a monthly visual observation is made, record any eligible storm events that do not result in a storm water discharge and note the date, time, name, and title of who observed there was no storm water discharge.

Observation Date: February ____ 2007 Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	#1	#2	#3	#4
	Observation Time	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.
	Time Discharge Began	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>
Observation Date: March ____ 2007 Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	#1	#2	#3	#4
	Observation Time	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.
	Time Discharge Began	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>
Observation Date: April ____ 2007 Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	#1	#2	#3	#4
	Observation Time	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.
	Time Discharge Began	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>
Observation Date: May ____ 2007 Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	#1	#2	#3	#4
	Observation Time	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.
	Time Discharge Began	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>

2006 - 2007
ANNUAL REPORT

SIDE B

FORM 4 (Continued)-MONTHLY VISUAL OBSERVATIONS OF
STORM WATER DISCHARGES

DATE/TIME OF OBSERVATION (From Reverse Side)	DRAINAGE AREA DESCRIPTION <u>EXAMPLE:</u> Discharge from material storage Area #2	DESCRIBE STORM WATER DISCHARGE CHARACTERISTICS Indicate whether storm water discharge is clear, cloudy, or discolored; causing staining; containing floating objects or an oil sheen, has odors, etc.	IDENTIFY AND DESCRIBE SOURCE(S) OF POLLUTANTS <u>EXAMPLE:</u> Oil sheen caused by oil dripped by trucks in vehicle maintenance area.	DESCRIBE ANY REVISED OR NEW BMPs AND THEIR DATE OF IMPLEMENTATION
<div>_ / _ / _</div> <div> <div>_: _</div> <div><input type="checkbox"/></div> AM <div><input type="checkbox"/></div> PM </div>				
<div>_ / _ / _</div> <div> <div>_: _</div> <div><input type="checkbox"/></div> AM <div><input type="checkbox"/></div> PM </div>				
<div>_ / _ / _</div> <div> <div>_: _</div> <div><input type="checkbox"/></div> AM <div><input type="checkbox"/></div> PM </div>				
<div>_ / _ / _</div> <div> <div>_: _</div> <div><input type="checkbox"/></div> AM <div><input type="checkbox"/></div> PM </div>				
<div>_ / _ / _</div> <div> <div>_: _</div> <div><input type="checkbox"/></div> AM <div><input type="checkbox"/></div> PM </div>				

2006 - 2007
ANNUAL REPORT

SIDE A

FORM 5-ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION
POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY BMP STATUS

EVALUATION DATE: ____ / ____ / ____ INSPECTOR NAME: _____ TITLE: _____ SIGNATURE: _____

POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP)	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? <input type="checkbox"/> YES <input type="checkbox"/> NO	If yes, to either question, complete the next two columns of this form	Describe deficiencies in BMPs or BMP implementation	Describe additional/revised BMPs or corrective actions and their date(s) of implementation
	ARE ADDITIONAL/REVISED BMPs NECESSARY? <input type="checkbox"/> YES <input type="checkbox"/> NO			
POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP)	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? <input type="checkbox"/> YES <input type="checkbox"/> NO	If yes, to either question, complete the next two columns of this form	Describe deficiencies in BMPs or BMP implementation	Describe additional/revised BMPs or corrective actions and their date(s) of implementation
	ARE ADDITIONAL/REVISED BMPs NECESSARY? <input type="checkbox"/> YES <input type="checkbox"/> NO			
POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP)	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? <input type="checkbox"/> YES <input type="checkbox"/> NO	If yes, to either question, complete the next two columns of this form	Describe deficiencies in BMPs or BMP implementation	Describe additional/revised BMPs or corrective actions and their date(s) of implementation
	ARE ADDITIONAL/REVISED BMPs NECESSARY? <input type="checkbox"/> YES <input type="checkbox"/> NO			
POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP)	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? <input type="checkbox"/> YES <input type="checkbox"/> NO	If yes, to either question, complete the next two columns of this form	Describe deficiencies in BMPs or BMP implementation	Describe additional/revised BMPs or corrective actions and their date(s) of implementation
	ARE ADDITIONAL/REVISED BMPs NECESSARY? <input type="checkbox"/> YES <input type="checkbox"/> NO			

FORM 5 (Continued)-ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION
POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY BMP STATUS

EVALUATION DATE: / / INSPECTOR NAME: TITLE: SIGNATURE: _____

POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP)	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? <input type="checkbox"/> YES <input type="checkbox"/> NO	If yes, to either question, complete the next two columns of this form	Describe deficiencies in BMPs or BMP implementation	Describe additional/revised BMPs or corrective actions and their date(s) of implementation
	ARE ADDITIONAL/REVISED BMPs NECESSARY? <input type="checkbox"/> YES <input type="checkbox"/> NO			
POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP)	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? <input type="checkbox"/> YES <input type="checkbox"/> NO	If yes, to either question, complete the next two columns of this form	Describe deficiencies in BMPs or BMP implementation	Describe additional/revised BMPs or corrective actions and their date(s) of implementation
	ARE ADDITIONAL/REVISED BMPs NECESSARY? <input type="checkbox"/> YES <input type="checkbox"/> NO			
POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP)	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? <input type="checkbox"/> YES <input type="checkbox"/> NO	If yes, to either question, complete the next two columns of this form	Describe deficiencies in BMPs or BMP implementation	Describe additional/revised BMPs or corrective actions and their date(s) of implementation
	ARE ADDITIONAL/REVISED BMPs NECESSARY? <input type="checkbox"/> YES <input type="checkbox"/> NO			
POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP)	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? <input type="checkbox"/> YES <input type="checkbox"/> NO	If yes, to either question, complete the next two columns of this form	Describe deficiencies in BMPs or BMP implementation	Describe additional/revised BMPs or corrective actions and their date(s) of implementation
	ARE ADDITIONAL/REVISED BMPs NECESSARY? <input type="checkbox"/> YES <input type="checkbox"/> NO			

San Diego Stormwater Copermittees

Dry Weather Monitoring Field Datasheet

☒ Routine Investigation

☐ IC/ID Follow-Up For _____

GENERAL SITE DESCRIPTION

(NAD 83 decimal degrees to 5th place)

Site ID		Latitude		Watershed	Hydrologic Unit	
Location		Longitude			Hydrologic Area	
Date		TB Page			Hydrologic Subarea (Optional)	
Time		Observer	RG, MG	Discharge Area (Optional)		

Land Use (Primary)
(Check one only)

☐ Residential

☐ Commercial

☐ Industrial

☐ Agricultural

☐ Parks

☐ Open

Land Use (Secondary)
(Optional, greater than 10%)

☐ Residential

☐ Commercial

☐ Industrial

☐ Agricultural

☐ Parks

☐ Open

Conveyance
(Check one only)

☐ Manhole

☒ Catch Basin

☐ Outlet

☐ Concrete Channel

☐ Natural Creek

☐ Earthen Channel

ATMOSPHERIC CONDITIONS

Weather

☐ Sunny

☐ Partly Cloudy

☐ Overcast

☐ Fog

Tide

☐ N/A

☐ Low

☐ Incoming

☐ High

☐ Outgoing

Tide Height: _____ ft.

Last Rain

☐ > 72 hours

☐ < 72 hours

Rainfall

☐ None

☐ < 0.1"

☐ > 0.1"

RUNOFF CHARACTERISTICS

Odor

☐ None

☐ Musty

☐ Rotten Eggs

☐ Chemical

☐ Sewage

☐ Other _____

Color

☐ None

☐ Yellow

☐ Brown

☐ White

☐ Gray

☐ Other _____

Clarity

☐ Clear

☐ Slightly Cloudy

☐ Opaque

☐ Other _____

Floatables

☐ None

☐ Trash

☐ Bubbles/Foam

☐ Sheen

☐ Fecal Matter

☐ Other _____

Deposits

☐ None

☐ Sediment/Gravel

☐ Fine Particulates

☐ Stains

☐ Oily Deposits

☐ Other _____

Vegetation

☐ None

☐ Limited

☐ Normal

☐ Excessive

☐ Other _____

Biology

☐ None

☐ Insects

☐ Algae

☐ Snails/Fish

☐ Mussels/Barnacles

☐ Other _____

Flow Observed

☐ Yes

☐ No

☐ Ponded

☐ Tidal

Does the storm drain flow reach the Receiving Water?

☐ Yes

☐ No

☐ N/A

Evidence of Overland Flow?

☐ Yes

☐ No

☐ Irrigation Runoff

☐ Other: _____

Photo Taken

☐ Yes

☐ No

Photo # _____

Field Screening Samples Collected?

☐ Yes

☐ No

Water Temp (°C)		NH3-N (mg/L)		NO3-N (mg/L)		React PO4 (mg/L)	
pH (pH units)		TURB (NTU)		COND (mS/cm)		MBAS (mg/L)	

FLOW ESTIMATION WORKSHEETS

Flowing Creek or Box Culvert			Filling a Bottle or Known Volume			Flowing Pipe		
Width		ft	Volume		mL	Diameter		ft
Depth		ft	Time to Fill		sec	Depth		ft
Velocity		ft/sec	Flow		gpm	Velocity		ft/sec
Flow		gpm				Flow		gpm

Analytical Laboratory Samples Collected?

☐ Yes

☐ No

O&G (mg/L)		Enter. (MPN/100mL)		Fecal Col. (MPN/mL)		Chlorpy. (ug/L)		Pb (ug/L)	
Hardness (mg/L)		Total Col. (MPN/100mL)		Diazanone (ug/L)		Cd (ug/L)		Zn (ug/L)	

COMMENTS: _____

San Diego Stormwater Copermittees
Land Use Types for Dry Weather Monitoring
(Adopted by the Dry Weather Monitoring Workgroup, April 20, 2004)

1. Residential

Residential (general)

Single- and multi-family homes, mobile home parks, etc.

Rural residential (For the County of San Diego and other appropriate Copermittees)

Single family homes located in rural areas with lot sizes of approximately 1 to 10 acres. Rural residential estates may have small orchards, fields or small storage buildings associated with the residential dwelling unit, etc.

2. Commercial

Offices, schools, shopping centers, auto dealerships, government/civic centers, cemeteries, churches, libraries, post offices, fire/police stations, military use, jails, prisons, border patrol holding stations, dormitories, hotels, motels, resorts, and casinos, etc.

3. Agricultural

Orchards, vineyards, nurseries, greenhouses, flower fields, dairies, livestock, poultry, equine ranches, row crops and grains, pasture, fallow, etc.

4. Industrial

Shipbuilding, airframe, aircraft manufacturing, industrial parks, manufacturing uses such as lumber, furniture, paper, rubber, stone, clay, and glass; auto repair services/recycling centers; warehousing, wholesale trade; mining, sand and gravel extraction, salt evaporation; junkyard, dumps/landfills; auto wrecking/dismantling and recycling centers, etc.

5. Parks

Recreation areas and centers, neighborhood parks, wildlife and nature preserves, golf courses, accessible sandy areas along the coast or major water bodies allowing swimming and picnicking, etc.

6. Open

Vacant and undeveloped lands, etc.

Storm Water Quality Inspection For Industrial/Commercial/Municipal Facilities

Inspector Name: _____

Date: _____

Time: _____

Type of Inspection

☐ Routine

☐ Complaint Investigation

☐ Other

☐ Follow-up

Contact Information

Business Name _____

Street Address _____ Business Type _____

Subtenants _____

On-Site Contact _____ Cell phone # _____ Title: _____ Email: _____

Environ Contact _____ Cell phone # _____ Title: _____ Email: _____

Business Telephone # (_____) _____ - _____

Business Fax # (_____) _____ - _____

Other Contact Info: _____

Facility/Operation/Site Information

Principal activity: _____

Category: ☐ High Commercial

☐ High Industrial

☐ High Municipal

☐ Med Commercial

☐ Med Industrial

☐ Med Municipal

☐ Low Commercial

☐ Low Industrial

☐ Low Municipal

Is the facility/operation subject to CA Statewide General Industrial Permit?

If yes, has facility/operation filed a Notice of Intent (NOI) to comply?

WDID # _____

Does the facility/operation qualify for a "No Exposure Certification"?

Does facility/operation have an Individual NPDES Permit? Permit # _____

Does facility/operation maintain SWPPP, BMP Plan or Hazmat Business Plan (or any others)?

Has facility/operation conducted previous storm water monitoring programs?

Property Owner / Management Group / Primary Tenant: _____

Initial Observations

Nearest MS4 conveyance inlet:

Approximate distance to MS4: ☐ < 200 ft. ☐ 200 – 1000 ft. ☐ > 1000 ft.

Discharge observed?

If yes, describe:

Additional comments:

Print Name of Facility/Operation Representative: _____

Inspector's Signature: _____ Date: _____

BMPs	N/A	Yes	Partial	No	Comments
Storm Water Discharges					
Does storm water from this facility/operation enter the MS4?					
Does the storm water run-off from this facility/operation discharge into a wastewater treatment process or sanitary sewer or dead-end sump area with pump?					
BMPs	N/A	Yes	Partial	No	Comments

SC01 - Non-Storm Water Management
☐ Not Applicable at this Facility/Operation

Identify significant materials which could have the potential to discharge to storm drains.	<input type="checkbox"/> Oil and Grease <input type="checkbox"/> Solvents <input type="checkbox"/> Paint <input type="checkbox"/> Deicing/Anti-Icing Fluids <input type="checkbox"/> Cleaning Solutions <input type="checkbox"/> Lubricants <input type="checkbox"/> Anti freeze <input type="checkbox"/> Battery Acid <input type="checkbox"/> Fuel <input type="checkbox"/> Pesticides/Herbicides/Fertilizers <input type="checkbox"/> Metals <input type="checkbox"/> Deicing/Anti-Icing Fluids <input type="checkbox"/> Sediment <input type="checkbox"/> Fire Fighting Foam <input type="checkbox"/> Dumpster Wastes <input type="checkbox"/> Landscape Wastes <input type="checkbox"/> Floatables <input type="checkbox"/> Lavatory Chemical Wastes <input type="checkbox"/> Potable Water System Chemicals <input type="checkbox"/> Rubber Particulates <input type="checkbox"/> Other:				
SC01-02. Is the site free of evidence of illicit connections and illegal discharges?					
SC01-03. Are observed non-storm water discharges routinely reported?					
SC01-04. Have employees, tenants and the public been educated about avoiding non-storm water discharges?					
SC01-05. Are outdoor water supplies (hose bibs) limited and posted with appropriate use signs to discourage uses that may pollute the storm drain system/receiving waters?					

Additional Comments:

BMPs	N/A	Yes	Partial	No	Comments
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SC02A - Outdoor Equipment Ops and Maintenance Areas
☐ Not Applicable at this Facility/Operation

Identify significant materials used at the facility/operation, associated with equipment operations and maintenance.	<input type="checkbox"/> Oil and Grease <input type="checkbox"/> Fuel <input type="checkbox"/> Solvents <input type="checkbox"/> Paint <input type="checkbox"/> Cleaning Solutions <input type="checkbox"/> Lubricants <input type="checkbox"/> Anti freeze <input type="checkbox"/> Battery Acid <input type="checkbox"/> Other:				
SC02A-02. Are storm drains located directly within equipment operations and maintenance areas?					
SC02A-03. Is there a designated equipment ops and maintenance area with overhead cover for pollutant sources and/or activity areas?					

Additional Comments:

BMPs	N/A	Yes	Partial	No	Comments
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SC02B - Aircraft, Grnd Vehicle & Eqpmnt Maintenance ☐ Not Applicable at this Facility/Operation

Identify significant materials used at the facility/operation, associated with maintenance/repair.	<input type="checkbox"/> Oil and Grease <input type="checkbox"/> Fuel <input type="checkbox"/> Solvents <input type="checkbox"/> Paint <input type="checkbox"/> Cleaning Solutions <input type="checkbox"/> Lubricants <input type="checkbox"/> Anti freeze <input type="checkbox"/> Battery Acid <input type="checkbox"/> Other:				
SC02B-02. Is there a designated vehicle and equipment maintenance area that is covered, bermed, enclosed, or sloped away from the MS4?					
SC02B-03. Are storm drains located directly within the vehicle and equipment maintenance area?					
SC02B-04. Is equipment regularly inspected and tested?					
SC02B-05. Are vehicles and equipment maintained in good condition to prevent or correct any leakage of oil or other fluids?					
SC02B-06. Are maintenance vehicles furnished with spill response materials?					
SC02B-07. Are employees trained in safe vehicle and equipment operations?					
SC02B-08. Are visual observations performed to detect leaking fluids from any vehicles or equipment?					
SC02B-09. Are drip pans used?					
SC02B-010. Are mechanical parts and equipment stored under cover and away from					
SC02B-11. Are obsolete or inoperable vehicles or equipment disposed of?					
SC02B-12. Are fluids and batteries removed from salvage vehicles and equipment and properly disposed of?					

Additional Comments:

BMPs	N/A	Yes	Partial	No	Comments
SC03 - Aircraft, Ground Vehicle and Equipment Fueling <input type="checkbox"/> Not Applicable at this Facility/Operation					
Identify significant materials used at the facility/operation, associated with vehicle and equipment fueling.	<input type="checkbox"/> Fuel <input type="checkbox"/> Other				
SC03-02. Is there a designated fueling area that is covered, bermed, enclosed or sloped away from the MS4?					
SC03-03. Are storm drains located directly within fueling areas?					
SC03-04. Are major fueling operations monitored?					
SC03-05. Are fueling areas regularly inspected?					
SC03-06. Is secondary containment or cover used when transferring fuel from a tank truck to a fuel tank?					
SC03-07. Are absorbent booms, spill kits or vacuum equipment present in fueling areas or on fueling vehicles?					
SC03-08. Are leak, overfill protection and spill prevention devices used for tanks and piping?					
SC03-09. Are automatic shut-off mechanisms used for fuel tankers and hose connections?					
SC03-10. Are fuel tanks topped off?					
SC03-11. Is access to tanks restricted?					
SC03-12. Are tanks, piping and valves labeled, regularly inspected and kept in good condition?					

Additional Comments:

BMPs	N/A	Yes	Partial	No	Comments
SC04 - Aircraft, Grnd Vehicle and Equipment Cleaning <input type="checkbox"/> Not Applicable at this Facility/Operation					
Identify significant materials at the facility/operation associated with vehicle and equipment cleaning.	<input type="checkbox"/> Oil and Grease <input type="checkbox"/> Solvents <input type="checkbox"/> Cleaning Solutions <input type="checkbox"/> Lubricants <input type="checkbox"/> Anti freeze <input type="checkbox"/> Other:				
SC04-02. Are vehicles, equipment and washing areas kept clean?					
SC04-03. Is there a designated wash area that captures or diverts all wash water to treatment plant or sanitary sewer or dead end sump with pump?					

SC04-04. Is wash water filtered and recycled where practical?					
SC04-05. Are dry washing and surface preparation techniques used where feasible?					
SC04-06. Are drippings, residue etc removed using vacuum methods?					
SC04-07. Are visual observations performed to detect discharges from cleaning activities?					
SC04-08. Are storm drains located within the wash area?					

Additional Comments:

BMPs	N/A	Yes	Parital	No	Comments
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SC05 - Aircraft Deicing/Anti-Icing

☐ Not Applicable at this Facility/Operation

Identify significant materials used at the facility/operation, associated with aircraft deicing/anti-icing.	<input type="checkbox"/> Ethylene Glycol <input type="checkbox"/> Propylene glycol <input type="checkbox"/> Other:				
SC05-02. Is there a designated deicing/anti-icing area that is covered, bermed, enclosed or sloped away from the MS4?					
SC05-03. Are all fluids captured or diverted to a treatment plant, recycling system, sanitary sewer or dead end sump with pump?					
SC05-04. Are deicing/anti-icing areas cleaned with wet-type sweepers and the fluids appropriately recycled or disposed of?					

Additional Comments:

SC07-03. Does the facility/operation have a County hazardous materials permit for hazardous materials storage, and is it on display?					
SC07-04. Are storm drains located directly within outdoor material storage areas?					
SC07-05. Do outdoor material storage areas have areas with overhead cover and secondary containment?					
SC07-06. Are outdoor material storage areas prevented from contacting stormwater run-on and run-off (e.g. by the use of berms)?					
SC07-07. Are regular inspections performed on tanks or containers to check for corrosion, structural failure, loose fittings, poor welds, leaks etc?					

Additional Comments:

BMPs	N/A	Yes	Partial	No	Comments
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SC08 - Waste Handling and Disposal

☐ Not Applicable at this Facility/Operation

Identify wastes stored, handled, disposed of or recycled at the facility/operation.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Oil and Grease <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Lubricants <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Anti freeze <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Solvents <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Cleaning Solutions <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Trash <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Other: (I=indoors; O=outdoors)				
SC08-02. Is there a designated waste/recycling area with restricted access?					
SC08-03. Are storm drains located directly in waste/recycling areas?					
SC08-04. Does the facility/operation recycle?					
SC08-05. Is timely service and removal provided to prevent waste containers and sanitary facilities from overflowing?					
SC08-06. Are wastes and recycling materials appropriately stored in containers, segregated and labeled?					
SC08-07. If wastes are not contained, are they covered and prevented from contacting stormwater run-on and run-off (e.g. by the use of berms)?					
SC08-08. Are waste containers inspected frequently for leaks, structural integrity and proper closure seal?					
SC08-09. Is secondary containment provided?					

SC08-10. Are wastes characterized, where appropriate, and properly disposed of?					
SC08-11. Are employees trained to properly handle and dispose of wastes?					
SC08-12. Does facility/operation make efforts to reduce waste (use only amount needed, use solvents more than once, practice good inventory control, do not overbuy, purchase long-lasting products etc)?					

Additional Comments:

BMPs	N/A	Yes	Partial	No	Comments
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SC09 - Building and Grounds Maintenance

☐ Not Applicable at this Facility/Operation

Identify significant materials used in/produced by building and grounds maintenance.	<input type="checkbox"/> Oil and Grease <input type="checkbox"/> Pesticides/Herbicides/Fertilizers <input type="checkbox"/> Sediment <input type="checkbox"/> Landscape Wastes <input type="checkbox"/> Other:				
--	---	--	--	--	--

SC09-02. Have all areas of exposed soil been revegetated, landscaped or otherwise contain erosion or sediment controls?					
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SC09-03. Are landscaped areas irrigated?					
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SC09-04. Are integrated pest management methods used?					
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Additional Comments:					
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BMPs	N/A	Yes	Partial	No	Comments
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SC10 - Employee Training

☐ Not Applicable at this Facility/Operation

SC10-01. Is facility/operation SWPPP up to date, including completion of amendments					
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SC10-02. Have employees been trained on storm water issues, spill cleanup, hazardous materials management, right to know awareness and SWPPP implementation?					
--	--	--	--	--	--

SC10-03. Are any other training programs in place?					
--	--	--	--	--	--

SC10-04. Does facility/operation have current employee training records?					
--	--	--	--	--	--

Additional Comments:

BMPs	N/A	Yes	Partial	No	Comments
SC11 - Lavatory Service Operation <input type="checkbox"/> Not Applicable at this Facility/Operation					
Identify significant materials at the facility/operation associated with lavatory service operations.	<input type="checkbox"/> Lavatory Chemicals <input type="checkbox"/> Lavatory Waste <input type="checkbox"/> Lavatory Truck Wash Water <input type="checkbox"/> Other:				
SC11-02. Are triturator facilities covered, and have low roll-over type berming?					
SC11-03. Are storm drains located near the triturator facility/operation?					
SC11-04. Are lavatory truck cleanouts/backflushing, and lavatory waste discharging to sanitary sewer connections performed ONLY at triturator facilities?					
SC11-05. Are drip pans used when draining the aircraft and drippage dumped into the bulk storage tank of the lavatory service equipment?					
SC11-06. Are hoses completely drained?					
SC11-07. Are all hoses, valves and equipment properly secured when transporting lavatory waste?					
SC11-08. Are hoses and fittings used for transferring lavatory waste regularly inspected and kept in good condition?					
SC11-09. Are absorbent booms, spill kits or other containment equipment present on lavatory service equipment and in the triturator facility/operation?					
SC11-10. Are surfactant/disinfectant mixing and transfers performed in the triturator area or under cover?					

Additional Comments:

BMPs	N/A	Yes	Partial	No	Comments
SC12 - Outdoor Washdown/Sweeping, <input type="checkbox"/> Not Applicable at this Facility/Operation					
SC12-01. Is wash water collected and discharged to the sanitary sewer system through a permitted connection?					
SC12-04. Are designated and approved discharge facilities used to dispose of apron/ramp cleaning waste?					
SC12-05. Are outdoor washdown areas bermed to minimize run-on to other areas?					
SC12-06. Are "dry" sweeping techniques used where feasible?					
SC12-07. Are sweepings disposed of in an appropriate manner?					
SC12-08. Are the roads swept on a regular basis?					

Additional Comments:

BMPs	N/A	Yes	Partial	No	Comments
SC13 - Fire Fighting Foam Discharge <input type="checkbox"/> Not Applicable at this Facility/Operation					
Identify significant materials at the facility/operation associated with testing fire fighting equipment.	<input type="checkbox"/> Aircraft Fire Fighting Foam <input type="checkbox"/> Other:				
SC13-02. Are storm drains located near the fire fighting foam discharge/testing area?					
SC13-03 Is fire fighting equipment regularly tested?					

SC13-04. Is there a designated fire fighting foam testing area that captures or diverts all foam waste to treatment/recycling plant or sanitary sewer or dead end sump with pump or oil water seperator?

SC13-05 If sump or oil water seperator is present, is it serviced regularly?

SC13-06. Are fire fighting foam testing areas prevented from contacting stormwater run-on and run-off (e.g. by the use of berms)?

Additional Comments:

BMPs

N/A

Yes

Parial

No

Comments

SC14 - Potable Water System Flushing

☐ Not Applicable at this Facility/Operation

Identify significant materials used at the facility/operation, associated with aircraft potable water system flushing and water truck cleaning/flushing.

☐ Purine

☐ Chlorine Bleach

☐ Other:

SC14-02. Are storm drains located near the aircraft potable water system or water truck cleaning/flushing areas?

SC14-03. Is there a designated cleaning/flushing area that captures or diverts all wastewater to treatment/recycling plant or sanitary sewer or dead end sump with pump?

SC14-05. Are cleaning/flushing areas prevented from contacting stormwater run-on and run-off (e.g. by the use of berms)?

Additional Comments:

BMPs	N/A	Yes	Partial	No	Comments
SC15 - Runway Rubber Removal <input type="checkbox"/> Not Applicable at this Facility/Operation					
Identify significant materials generated by runway rubber removal activities.	<input type="checkbox"/> Rubber Particles <input type="checkbox"/> Dirt Particles <input type="checkbox"/> Other:				
SC15-02. Is the waste water produced from runway rubber removal activities prevented from entering the storm drainage system by immediately collecting and properly disposing of it?					
SC15-03. Are runways and adjacent paved areas swept, either manually or using mechanical sweepers, following runway rubber removal activities?					
SC15-04. Are storm drain culverts or runway drainage areas inspected following runway rubber removal activities?					
Additional Comments: 					
BMPs	N/A	Yes	Partial	No	Comments
SC16 - Parking Lots <input type="checkbox"/> Not Applicable at this Facility/Operation					
SC16-01A. Are parking lots regularly swept using "dry" sweeping methods?					
SC16-01B. Are parking lots posted with "No Littering" signs and have regularly emptied trash receptacles??					
SC16-02. Are oily spots cleaned with absorbent materials?					
SC16-04. Are repairs performed during dry weather?					
SC16-05. Are hot bituminous materials preheated, transferred or loaded away from storm drain inlets?					
SC16-07. Are drip pans used under paving equipment?					
SC16-08. Are absorbent materials, debris, and drips properly disposed of?					

SC16-09. Do rooftops drain onto paved surfaces?					
Additional Comments:					
BMPs	N/A	Yes	Partial	No	Comments
SC17 - Drainage System Maintenance <input type="checkbox"/> Not Applicable at this Facility/Operation					
SC17-01 Are storm drains stenciled with "No Dumping" messages?					
SC17-02. Does facility/operation conduct routine self-inspection of the storm water conveyance system?					
SC17-03. Are storm drains, inlets and catch basins routinely inspected, cleaned and maintained?					
SC17-04. Is debris from cleaning activities disposed of properly?					
SC17-05. Are records kept for all inspections, cleaning and maintenance?					
BMPs	N/A	Yes	Partial	No	Comments
SC18 - Housekeeping <input type="checkbox"/> Not Applicable at this Facility/Operation					
SC18-01. Does facility/operation conduct routine self-inspection of BMPs?					
SC18-04. Is facility/operation clean and orderly?					
SC18-05. Are trash receptacles placed in appropriate locations?					
SC18-06. Is facility/operation swept at least once per week?					
SC18-07. Are sweepings and sediment disposed of properly?					
SC18-09. Are potentially significant materials stored in appropriate containers, properly sealed and labeled?					
SC18-10. Is secondary containment provided for significant materials?					
SC18-12. Are significant materials stored in a restricted access area?					

SC18-14. Are Material Safety Data Sheets (MSDSs) readily available for all significant materials?

Additional Comments:

BMPs	N/A	Yes	Partial	No	Comments
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SC19 - Safer/Alternative Products

☐ Not Applicable at this Facility/Operation

SC19-01. Does this facility/operation use "Regionally Accepted" products identified as non-toxic, less toxic or biodegradable?

BMPs	N/A	Yes	Partial	No	Comments
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SR01 - Spill Prevention, Control and Clean up

☐ Not Applicable at this Facility/Operation

SR01-01. Does facility/operation have current Spill Prevention, Control, and Countermeasure (SPCC) Plan?

SR01-02. Does facility/operation have adequate spill kits in appropriate locations?

SR01-03. What types of materials are used for spill control/clean up?

SR01-04. Are these used materials properly disposed of?

SR01-05. Are leak and spill prevention devices used?

SR01-06. Does facility/operation use only dry cleaning methods?

SR01-07. If wet-washing techniques are used, is wash water captured by vacuum, and properly disposed of, or diverted to treatment plant or sewer system or dead end sump with pump?

Additional Comments:

BMPs	N/A	Yes	Partial	No	Comments
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TC 01 - Structural Treatment Control BMPs

☐ Not Applicable at this Facility/Operation

Identify each structural treatment control BMP currently implemented at this facility/operation.

Detention Basin TC-22		Vegetated Buffer Strip TC-31		Infiltration Trench TC-10	
Wet Pond TC-20		Retention / Irrigation TC-12		Infiltration Basin TC-11	
Constructed Wetland TC-21		Bioretention TC-32		Water Quality Inlet TC-50	
Vegetated Swale TC-30		Media Filter TC-40		Multiple Systems TC-60	

Other

TC01-01. If used, are structural / treatment control BMPs regularly inspected, cleaned and maintained?					
TC01-02. Are records kept for all inspections and maintenance of structural / treatment control BMPs?					
TC01-03. Is an annual inventory of all treatment control BMPs conducted?					

Additional Comments:

APPENDIX G
MISCELANEOUS SUPPORT MATERIALS

Appendix G – Miscellaneous Support Materials



State of California
STATE WATER RESOURCES CONTROL BOARD

2006-2007
ANNUAL REPORT
FOR
STORM WATER DISCHARGES ASSOCIATED
WITH INDUSTRIAL ACTIVITIES

Reporting Period July 1, 2006 through June 30, 2007

An annual report is required to be submitted to your local Regional Water Quality Control Board (Regional Board) by July 1 of each year. This document must be certified and signed, under penalty of perjury, by the appropriate official of your company. Many of the Annual Report questions require an explanation. Please provide explanations on a separate sheet as an attachment. **Retain a copy of the completed Annual Report for your records.**

Please circle or highlight any information contained in Items A, B, and C below that is new or revised so we can update our records. Please remember that a Notice of Termination and new Notice of Intent are required whenever a facility operation is relocated or changes ownership.

If you have any questions, please contact your Regional Board Industrial Storm Water Permit Contact. The names, telephone numbers and e-mail addresses of the Regional Board contacts, as well as the Regional Board office addresses can be found at <http://www.waterboards.ca.gov/stormwtr/contact.html>. To find your Regional Board information, match the first digit of your WDID number with the corresponding number that appears in parenthesis on the first line of each Regional Board office.

GENERAL INFORMATION:

A. Facility Information:

Facility Business Name: _____
Physical Address: _____
City: _____
Standard Industrial Classification (SIC) Code(s): _____

Facility WDID No: _____

Contact Person: _____
e-mail: _____
CA Zip: _____ Phone: _____

B. Facility Operator Information:

Operator Name: _____
Mailing Address: _____
City: _____

Contact Person: _____
e-mail: _____
State: ____ Zip: _____ Phone: _____

C. Facility Billing Information:

Operator Name: _____
Mailing Address: _____
City: _____

Contact Person: _____
e-mail: _____
State: ____ Zip: _____ Phone: _____

2006-2007
ANNUAL REPORT

SPECIFIC INFORMATION

MONITORING AND REPORTING PROGRAM

D. SAMPLING AND ANALYSIS EXEMPTIONS AND REDUCTIONS

1. For the reporting period, was your facility exempt from collecting and analyzing samples from **two** storm events in accordance with sections B.12 or 15 of the General Permit?

☐ **YES** Go to Item D.2

☐ **NO** Go to Section E

2. Indicate the reason your facility is exempt from collecting and analyzing samples from **two** storm events. Attach a copy of the first page of the appropriate certification if you check boxes ii, iii, iv, or v.

- i. ☐ Participating in an Approved Group Monitoring Plan

Group Name: _____

- ii. ☐ Submitted **No Exposure Certification (NEC)**

Date Submitted: ____ / ____ / ____

Re-evaluation Date: ____ / ____ / ____

Does facility continue to satisfy NEC conditions?

☐

YES

☐

NO

- iii. ☐ Submitted **Sampling Reduction Certification (SRC)**

Date Submitted: ____ / ____ / ____

Re-evaluation Date: ____ / ____ / ____

Does facility continue to satisfy SRC conditions?

☐

YES

☐

NO

- iv. ☐ Received Regional Board Certification

Certification Date: ____ / ____ / ____

- v. ☐ Received Local Agency Certification

Certification Date: ____ / ____ / ____

3. If you checked boxes i or iii above, were you scheduled to sample **one** storm event during the reporting year?

☐ **YES** Go to Section E

☐ **NO** Go to Section F

4. If you checked boxes ii, iv, or v, go to Section F.

E. SAMPLING AND ANALYSIS RESULTS

1. How many storm events did you sample? _____

If less than 2, **attach explanation** (if you checked item D.2.i or iii. above, only attach explanation if you answer "0").

2. Did you collect storm water samples from the first storm of the wet season that produced a discharge during scheduled facility operating hours? (Section B.5 of the General Permit)

☐ **YES**

☐

NO **attach explanation** (Please note that if you do not sample the first storm event, you are still required to sample 2 storm events)

3. How many storm water discharge locations are at your facility? _____

2006-2007
ANNUAL REPORT

4. For each storm event sampled, did you collect and analyze a sample from each of the facility's' storm water discharge locations? ☐ YES, go to Item E.6 ☐ NO
5. Was sample collection or analysis reduced in accordance with Section B.7.d of the General Permit? ☐ YES ☐ NO, **attach explanation**

If "YES", **attach documentation** supporting your determination that two or more drainage areas are substantially identical.

Date facility's drainage areas were last evaluated ____ / ____ / ____

6. Were all samples collected during the first hour of discharge? ☐ YES ☐ NO, **attach explanation**
7. Was all storm water sampling preceded by three (3) working days without a storm water discharge? ☐ YES ☐ NO, **attach explanation**
8. Were there any discharges of storm water that had been temporarily stored or contained? (such as from a pond) ☐ YES ☐ NO, go to Item E.10
9. Did you collect and analyze samples of temporarily stored or contained storm water discharges from two storm events? (or one storm event if you checked item D.2.i or iii. above) ☐ YES ☐ NO, **attach explanation**

10. Section B.5. of the General Permit requires you to analyze storm water samples for pH, Total Suspended Solids (TSS), Specific Conductance (SC), Total Organic Carbon (TOC) or Oil and Grease (O&G), other pollutants likely to be present in storm water discharges in significant quantities, and analytical parameters listed in Table D of the General Permit.

- a. Does Table D contain any additional parameters related to your facility's SIC code(s)? ☐ YES ☐ NO, Go to Item E.11
- b. Did you analyze all storm water samples for the applicable parameters listed in Table D? ☐ YES ☐ NO
- c. If you did not analyze all storm water samples for the applicable Table D parameters, check one of the following reasons:

_____ In prior sampling years, the parameter(s) have not been detected in significant quantities from two consecutive sampling events. **Attach explanation**

_____ The parameter(s) is not likely to be present in storm water discharges and authorized non-storm water discharges in significant quantities based upon the facility operator's evaluation. **Attach explanation**

_____ Other. **Attach explanation**

11. For each storm event sampled, attach a copy of the laboratory analytical reports and report the sampling and analysis results using **Form 1** or its equivalent. The following must be provided for each sample collected:

- | | |
|---|---|
| • Date and time of sample collection | • Testing results |
| • Name and title of sampler | • Test methods used |
| • Parameters tested | • Test detection limits |
| • Name of analytical testing laboratory | • Date of testing |
| • Discharge location identification | • Copies of the laboratory analytical results |

2006-2007
ANNUAL REPORT

F. QUARTERLY VISUAL OBSERVATIONS

1. Authorized Non-Storm Water Discharges

Section B.3.b of the General Permit requires quarterly visual observations of all authorized non-storm water discharges and their sources.

- a. Do authorized non-storm water discharges occur at your facility?

☐ **YES** ☐ **NO** Go to Item F.2

- b. Indicate whether you visually observed all authorized non-storm water discharges and their sources during the quarters when they were discharged. **Attach an explanation for any "NO" answers.** Indicate "N/A" for quarters without any authorized non-storm water discharges.

July-September ☐ **YES** ☐ **NO** ☐ **N/A** October-December ☐ **YES** ☐ **NO** ☐ **N/A**

January-March ☐ **YES** ☐ **NO** ☐ **N/A** April-June ☐ **YES** ☐ **NO** ☐ **N/A**

- c. Use **Form 2** to report quarterly visual observations of authorized non-storm water discharges or provide the following information:

- i. name of each authorized non-storm water discharge
- ii. date and time of observation
- iii. source and location of each authorized non-storm water discharge
- iv. characteristics of the discharge at its source and impacted drainage area/discharge location
- v. name, title, and signature of observer
- vi. **any** new or revised BMPs necessary to reduce or prevent pollutants in authorized non-storm water discharges. Provide new or revised BMP implementation date.

2. Unauthorized Non-Storm Water Discharges

Section B.3.a of the General Permit requires quarterly visual observations of all drainage areas to detect the presence of unauthorized non-storm water discharges and their sources.

- a. Indicate whether you visually observed all drainage areas to detect the presence of unauthorized non-storm water discharges and their sources. **Attach an explanation for any "NO" answers.**

July-September ☐ **YES** ☐ **NO** October-December ☐ **YES** ☐ **NO**

January-March ☐ **YES** ☐ **NO** April-June ☐ **YES** ☐ **NO**

- b. Based upon the quarterly visual observations, were any unauthorized non-storm water discharges detected?

☐ **YES** ☐ **NO** Go to Item F.2.d

- c. Have each of the unauthorized non-storm water discharges been eliminated or permitted?

☐ **YES** ☐ **NO** **Attach explanation**

- d. Use **Form 3** to report quarterly unauthorized non-storm water discharge visual observations or provide the following information:

- i. name of each unauthorized non-storm water discharge
- ii. date and time of observation
- iii. source and location of each unauthorized non-storm water discharge
- iv. characteristics of the discharge at its source and impacted drainage area/discharge location
- v. name, title, and signature of observer
- vi. **any** corrective actions necessary to eliminate the source of each unauthorized non-storm water discharge and to clean impacted drainage areas. Provide date unauthorized non-storm water discharge(s) was eliminated or scheduled to be eliminated.

2006-2007 ANNUAL REPORT

G. MONTHLY WET SEASON VISUAL OBSERVATIONS

Section B.4.a of the General Permit requires you to conduct monthly visual observations of storm water discharges at all storm water discharge locations during the wet season. These observations shall occur during the first hour of discharge or, in the case of temporarily stored or contained storm water, at the time of discharge.

1. Indicate below whether monthly visual observations of storm water discharges occurred at all discharge locations. **Attach an explanation for any "NO" answers.** Include in this explanation whether any eligible storm events occurred during scheduled facility operating hours that did not result in a storm water discharge, and provide the date, time, name and title of the person who observed that there was no storm water discharge.

	YES	NO		YES	NO
October	<input type="checkbox"/>	<input type="checkbox"/>	February	<input type="checkbox"/>	<input type="checkbox"/>
November	<input type="checkbox"/>	<input type="checkbox"/>	March	<input type="checkbox"/>	<input type="checkbox"/>
December	<input type="checkbox"/>	<input type="checkbox"/>	April	<input type="checkbox"/>	<input type="checkbox"/>
January	<input type="checkbox"/>	<input type="checkbox"/>	May	<input type="checkbox"/>	<input type="checkbox"/>

2. Report monthly wet season visual observations using **Form 4** or provide the following information:

- a. date, time, and location of observation
- b. name and title of observer
- c. characteristics of the discharge (i.e., odor, color, etc.) and source of any pollutants observed
- d. **any** new or revised BMPs necessary to reduce or prevent pollutants in storm water discharges. Provide new or revised BMP implementation date.

ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION (ACSCE)

H. ACSCE CHECKLIST

Section A.9 of the General Permit requires the facility operator to conduct one ACSCE in each reporting period (July 1- June 30). Evaluations must be conducted within 8-16 months of each other. The SWPPP and monitoring program shall be revised and implemented, as necessary, within 90 days of the evaluation. The checklist below includes the minimum steps necessary to complete a ACSCE. Indicate whether you have performed each step below. **Attach an explanation for any "NO" answers.**

1. Have you inspected all potential pollutant sources and industrial activities areas? ☐ YES ☐ NO
The following areas should be inspected:

<ul style="list-style-type: none"> • areas where spills and leaks have occurred during the last year • outdoor wash and rinse areas • process/manufacturing areas • loading, unloading, and transfer areas • waste storage/disposal areas • dust/particulate generating areas • erosion areas 	<ul style="list-style-type: none"> • building repair, remodeling, and construction • material storage areas • vehicle/equipment storage areas • truck parking and access areas • rooftop equipment areas • vehicle fueling/maintenance areas • non-storm water discharge generating areas
--	--
2. Have you reviewed your SWPPP to assure that its BMPs address existing potential pollutant sources and industrial activities areas? ☐ YES ☐ NO
3. Have you inspected the entire facility to verify that the SWPPP's site map is up-to-date? The following site map items should be verified: ☐ YES ☐ NO

<ul style="list-style-type: none"> • facility boundaries • outline of all storm water drainage areas • areas impacted by run-on • storm water discharges locations 	<ul style="list-style-type: none"> • storm water collection and conveyance system • structural control measures such as catch basins, berms, containment areas, oil/water separators, etc.
--	--

2006-2007
ANNUAL REPORT

4. Have you reviewed all General Permit compliance records generated since the last annual evaluation?

☐ YES

☐ NO

The following records should be reviewed:

- | | |
|---|--|
| • quarterly authorized non-storm water discharge visual observations | • quarterly unauthorized non-storm water discharge visual observations |
| • monthly storm water discharge visual observation | • Sampling and Analysis records |
| • records of spills/leaks and associated clean-up/response activities | • preventative maintenance inspection and maintenance records |

5. Have you reviewed the major elements of the SWPPP to assure compliance with the General Permit?

☐ YES

☐ NO

The following SWPPP items should be reviewed:

- | | |
|--|--|
| • pollution prevention team | • assessment of potential pollutant sources |
| • list of significant materials | • identification and description of the BMPs to be implemented for each potential pollutant source |
| • description of potential pollutant sources | |

6. Have you reviewed your SWPPP to assure that a) the BMPs are adequate in reducing or preventing pollutants in storm water discharges and authorized non-storm water discharges, and b) the BMPs are being implemented?

☐ YES

☐ NO

The following BMP categories should be reviewed:

- | | |
|-------------------------------|---|
| • good housekeeping practices | • preventative maintenance |
| • spill response | • material handling and storage practices |
| • employee training | • waste handling/storage |
| • erosion control | • structural BMPs |
| • quality assurance | |

7. Has all material handling equipment and equipment needed to implement the SWPPP been inspected?

☐ YES

☐ NO

I. ACSCE EVALUATION REPORT

The facility operator is required to provide an evaluation report that includes:

- | | |
|---|--|
| • identification of personnel performing the evaluation | • schedule for implementing SWPPP revisions |
| • the date(s) of the evaluation | • any incidents of non-compliance and the corrective actions taken |
| • necessary SWPPP revisions | |

Use **Form 5** to report the results of your evaluation or develop an equivalent form.

J. ACSCE CERTIFICATION

The facility operator is required to certify compliance with the Industrial Activities Storm Water General Permit. To certify compliance, both the SWPPP and Monitoring Program must be up to date and be fully implemented.

Based upon your ACSCE, do you certify compliance with the Industrial Activities Storm Water General Permit?

☐ YES

☐ NO

If you answered "NO" **attach an explanation** to the ACSCE Evaluation Report why you are not in compliance with the Industrial Activities Storm Water General Permit.

2006-2007
ANNUAL REPORT

ATTACHMENT SUMMARY

Answer the questions below to help you determine what should be attached to this annual report. Answer NA (Not Applicable) to questions 2-4 if you are not required to provide those attachments.

- | | | | |
|--|--|-----------------------------|-----------------------------|
| 1. Have you attached Forms 1,2,3,4, and 5 or their equivalent? | <input type="checkbox"/> YES (Mandatory) | | |
| 2. If you conducted sampling and analysis, have you attached the laboratory analytical reports? | <input type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> NA |
| 3. If you checked box II, III, IV, or V in item D.2 of this Annual Report, have you attached the first page of the appropriate certifications? | <input type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> NA |
| 4. Have you attached an explanation for each "NO" answer in items E.1, E.2, E.5-E.7, E.9, E.10.c, F.1.b, F.2.a, F.2.c, G.1, H.1-H.7, or J? | <input type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> NA |

ANNUAL REPORT CERTIFICATION

I am duly authorized to sign reports required by the INDUSTRIAL ACTIVITIES STORM WATER GENERAL PERMIT (see Standard Provision C.9) and I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those person directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Printed Name: _____

Signature: _____ Date: _____

Title: _____

2006-2007
ANNUAL REPORT

DESCRIPTION OF BASIC ANALYTICAL PARAMETERS

The Industrial Activities Storm Water General Permit (General Permit) requires you to analyze storm water samples for at least four parameters. These are pH, Total Suspended Solids (TSS), Specific Conductance (SC), and Total Organic Carbon (TOC). Oil and Grease (O&G) may be substituted for TOC. In addition, you must monitor for any other pollutants which you believe to be present in your storm water discharge as a result of industrial activity and analytical parameters listed in Table D of the General Permit. There are no numeric limitations for the parameters you test for.

The four parameters which the General Permit requires to be tested are considered *indicator* parameters. In other words, regardless of what type of facility you operate, these parameters are nonspecific and general enough to usually provide some indication whether pollutants are present in your storm water discharge. The following briefly explains what each of these parameters mean:

pH is a numeric measure of the hydrogen-ion concentration. The neutral, or acceptable, range is within 6.5 to 8.5. At values less than 6.5, the water is considered acidic; above 8.5 it is considered alkaline or basic. An example of an acidic substance is vinegar, and a alkaline or basic substance is liquid antacid. Pure rainfall tends to have a pH of a little less than 7. There may be sources of materials or industrial activities which could increase or decrease the pH of your storm water discharge. If the pH levels of your storm water discharge are high or low, you should conduct a thorough evaluation of all potential pollutant sources at your site.

Total Suspended Solids (TSS) is a measure of the undissolved solids that are present in your storm water discharge. Sources of TSS include sediment from erosion of exposed land, and dirt from impervious (i.e. paved) areas. Sediment by itself can be very toxic to aquatic life because it covers feeding and breeding grounds, and can smother organisms living on the bottom of a water body. Toxic chemicals and other pollutants also adhere to sediment particles. This provides a medium by which toxic or other pollutants end up in our water ways and ultimately in human and aquatic life. TSS levels vary in runoff from undisturbed land. It has been shown that TSS levels increase significantly due to land development.

Specific Conductance (SC) is a numerical expression of the ability of the water to carry an electric current. SC can be used to assess the degree of mineralization, salinity, or estimate the total dissolved solids concentration of a water sample. Because of air pollution, most rain water has a SC a little above zero. A high SC could affect the usability of waters for drinking, irrigation, and other commercial or industrial use.

Total Organic Carbon (TOC) is a measure of the total organic matter present in water. (All organic matter contains carbon) This test is sensitive and able to detect small concentrations of organic matter. Organic matter is naturally occurring in animals, plants, and man. Organic matter may also be man made (so called synthetic organics). Synthetic organics include pesticides, fuels, solvents, and paints. Natural organic matter utilizes the oxygen in a receiving water to biodegrade. Too much organic matter could place a significant oxygen demand on the water, and possibly impact its quality. Synthetic organics either do not biodegrade or biodegrade very slowly. Synthetic organics are a source of toxic chemicals that can have adverse affects at very low concentrations. Some of these chemicals bioaccumulate in aquatic life. If your levels of TOC are high, you should evaluate all sources of natural or synthetic organics you may use at your site.

Oil and Grease (O&G) is a measure of the amount of oil and grease present in your storm water discharge. At very low concentrations, O&G can cause a sheen (that floating "rainbow") on the surface of water (1 qt. of oil can pollute 250,000 gallons of water). O&G can adversely affect aquatic life and create unsightly floating material and film on water, thus making it undrinkable. Sources of O&G include maintenance shops, vehicles, machines and roadways.

If you have any questions regarding whether or not your constituent concentrations are too high, please contact your local Regional Board office. The United States Environmental Protection Agency (USEPA) has published stormwater discharge benchmarks for a number of parameters. These benchmarks may be helpful when evaluating whether additional BMPs are appropriate. These benchmarks can be accessed at our website at <http://www.waterboards.ca.gov>. It is contained in the Sampling and Analysis Reduction Certification.

See Storm Water Contacts at

<http://www.waterboards.ca.gov/stormwtr/contact.html>

2006 - 2007
ANNUAL REPORT

SIDE A

FORM 1-SAMPLING & ANALYSIS RESULTS

FIRST STORM EVENT

- If analytical results are less than the detection limit (or non detectable), show the value as less than the numerical value of the detection limit (example: <.05)
- If you did not analyze for a required parameter, do not report "0". Instead, leave the appropriate box blank
- When analysis is done using portable analysis (such as portable pH meters, SC meters, etc.), indicate "PA" in the appropriate test method used box.
- Make additional copies of this form as necessary.

NAME OF PERSON COLLECTING SAMPLE(S): _____ TITLE: _____ SIGNATURE: _____

DESCRIBE DISCHARGE LOCATION Example: NW Out Fall	DATE/TIME OF SAMPLE COLLECTION	TIME DISCHARGE STARTED	ANALYTICAL RESULTS For First Storm Event										
			BASIC PARAMETERS					OTHER PARAMETERS					
			PH	TSS	SC	O&G	TOC						
	____/____/____ <input type="checkbox"/> AM <input type="checkbox"/> PM	____:____ <input type="checkbox"/> AM <input type="checkbox"/> PM											
	____/____/____ <input type="checkbox"/> AM <input type="checkbox"/> PM	____:____ <input type="checkbox"/> AM <input type="checkbox"/> PM											
	____/____/____ <input type="checkbox"/> AM <input type="checkbox"/> PM	____:____ <input type="checkbox"/> AM <input type="checkbox"/> PM											
	____/____/____ <input type="checkbox"/> AM <input type="checkbox"/> PM	____:____ <input type="checkbox"/> AM <input type="checkbox"/> PM											
TEST REPORTING UNITS:			pH Units	mg/l	umho/cm	mg/l	mg/l						
TEST METHOD DETECTION LIMIT:													
TEST METHOD USED:													
ANALYZED BY (SELF/LAB):													

TSS - Total Suspended Solids

SC - Specific Conductance

O&G - Oil & Grease

TOC - Total Organic Carbon

2006 - 2007
ANNUAL REPORT

SIDE B

FORM 1-SAMPLING & ANALYSIS RESULTS

SECOND STORM EVENT

- If analytical results are less than the detection limit (or non detectable), show the value as less than the numerical value of the detection limit (example: <.05)
- If you did not analyze for a required parameter, do not report "0". Instead, leave the appropriate box blank
- When analysis is done using portable analysis (such as portable pH meters, SC meters, etc.), indicate "PA" in the appropriate test method used box.

NAME OF PERSON COLLECTING SAMPLE(S): _____ TITLE: _____ SIGNATURE: _____

DESCRIBE DISCHARGE LOCATION Example: NW Out Fall	DATE/TIME OF SAMPLE COLLECTION	TIME DISCHARGE STARTED	ANALYTICAL RESULTS For Second Storm Event										
			BASIC PARAMETERS					OTHER PARAMETERS					
			PH	TSS	SC	O&G	TOC						
	____/____/____ <input type="checkbox"/> AM <input type="checkbox"/> PM	____:____ <input type="checkbox"/> AM <input type="checkbox"/> PM											
	____/____/____ <input type="checkbox"/> AM <input type="checkbox"/> PM	____:____ <input type="checkbox"/> AM <input type="checkbox"/> PM											
	____/____/____ <input type="checkbox"/> AM <input type="checkbox"/> PM	____:____ <input type="checkbox"/> AM <input type="checkbox"/> PM											
	____/____/____ <input type="checkbox"/> AM <input type="checkbox"/> PM	____:____ <input type="checkbox"/> AM <input type="checkbox"/> PM											
TEST REPORTING UNITS:			pH Units	mg/l	umho/cm	mg/l	mg/l						
TEST METHOD DETECTION LIMIT:													
TEST METHOD USED:													
ANALYZED BY (SELF/LAB):													

TSS - Total Suspended Solids

SC - Specific Conductance

O&G - Oil & Grease

TOC - Total Organic Carbon

2006 - 2007
ANNUAL REPORT

SIDE A

FORM 2-QUARTERLY VISUAL OBSERVATIONS OF AUTHORIZED
NON-STORM WATER DISCHARGES (NSWDs)

- Quarterly dry weather visual observations are required of each authorized NSWD.
- Observe each authorized NSWD source, impacted drainage area, and discharge location.

- Authorized NSWDs must meet the conditions provided in Section D (pages 5-6), of the General Permit.
- Make additional copies of this form as necessary.

<p>QUARTER:</p> <p>JULY-SEPT.</p> <p>DATE:</p> <p>____ / ____ / ____</p>	<p>Observers Name: _____</p> <p>Title: _____</p> <p>Signature: _____</p>	<p>WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?</p> <p><input type="checkbox"/> YES If YES, complete reverse side of this form.</p> <p><input type="checkbox"/> NO</p>
<p>QUARTER:</p> <p>OCT.-DEC.</p> <p>DATE:</p> <p>____ / ____ / ____</p>	<p>Observers Name: _____</p> <p>Title: _____</p> <p>Signature: _____</p>	<p>WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?</p> <p><input type="checkbox"/> YES If YES, complete reverse side of this form.</p> <p><input type="checkbox"/> NO</p>
<p>QUARTER:</p> <p>JAN.-MARCH</p> <p>DATE:</p> <p>____ / ____ / ____</p>	<p>Observers Name: _____</p> <p>Title: _____</p> <p>Signature: _____</p>	<p>WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?</p> <p><input type="checkbox"/> YES If YES, complete reverse side of this form.</p> <p><input type="checkbox"/> NO</p>
<p>QUARTER:</p> <p>APRIL-JUNE</p> <p>DATE:</p> <p>____ / ____ / ____</p>	<p>Observers Name: _____</p> <p>Title: _____</p> <p>Signature: _____</p>	<p>WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?</p> <p><input type="checkbox"/> YES If YES, complete reverse side of this form.</p> <p><input type="checkbox"/> NO</p>

2006 - 2007
ANNUAL REPORT

SIDE B

FORM 2-QUARTERLY VISUAL OBSERVATIONS OF AUTHORIZED
NON-STORM WATER DISCHARGES (NSWDs)

DATE /TIME OF OBSERVATION	SOURCE AND LOCATION OF AUTHORIZED NSWD <u>EXAMPLE:</u> Air conditioner Units on Building C	NAME OF AUTHORIZED NSWD <u>EXAMPLE:</u> Air conditioner condensate	DESCRIBE AUTHORIZED NSWD CHARACTERISTICS Indicate whether authorized NSWD is clear, cloudy, or discolored, causing staining, contains floating objects or an oil sheen, has odors, etc.		DESCRIBE ANY REVISED OR NEW BMPs AND PROVIDE THEIR IMPLEMENTATION DATE
			At the NSWD Source	At the NSWD Drainage Area and Discharge Location	
____ / ____ / ____ ____ : ____ <input type="checkbox"/> AM <input type="checkbox"/> PM					
____ / ____ / ____ ____ : ____ <input type="checkbox"/> AM <input type="checkbox"/> PM					
____ / ____ / ____ ____ : ____ <input type="checkbox"/> AM <input type="checkbox"/> PM					
____ / ____ / ____ ____ : ____ <input type="checkbox"/> AM <input type="checkbox"/> PM					
____ / ____ / ____ ____ : ____ <input type="checkbox"/> AM <input type="checkbox"/> PM					

ANNUAL REPORT
FORM 3-QUARTERLY VISUAL OBSERVATIONS OF UNAUTHORIZED
NON-STORM WATER DISCHARGES (NSWDs)

- Unauthorized NSWDS are discharges (such as wash or rinse waters) that do not meet the conditions provided in Section D (pages 5-6) of the General Permit.
- Quarterly visual observations are required to observe current and detect prior unauthorized NSWDS.
- Quarterly visual observations are required during dry weather and at all facility drainage areas.
- Each unauthorized NSWDS source, impacted drainage area, and discharge location must be identified and observed.
- Unauthorized NSWDS that can not be eliminated within 90 days of observation must be reported to the Regional Board in accordance with Section A.10.e of the General Permit.
- Make additional copies of this form as necessary.

QUARTER: JULY-SEPT. DATE/TIME OF OBSERVATIONS ____/____/____ :____ <input type="checkbox"/> AM ____/____/____ :____ <input type="checkbox"/> PM	Observers Name: _____ Title: _____ Signature: _____	WERE UNAUTHORIZED NSWDS OBSERVED? <input type="checkbox"/> YES <input type="checkbox"/> NO WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDS? <input type="checkbox"/> YES <input type="checkbox"/> NO	If YES to either question, complete reverse side.
QUARTER: OCT.-DEC. DATE/TIME OF OBSERVATIONS ____/____/____ :____ <input type="checkbox"/> AM ____/____/____ :____ <input type="checkbox"/> PM	Observers Name: _____ Title: _____ Signature: _____	WERE UNAUTHORIZED NSWDS OBSERVED? <input type="checkbox"/> YES <input type="checkbox"/> NO WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDS? <input type="checkbox"/> YES <input type="checkbox"/> NO	If YES to either question, complete reverse side.
QUARTER: JAN.-MARCH DATE/TIME OF OBSERVATIONS ____/____/____ :____ <input type="checkbox"/> AM ____/____/____ :____ <input type="checkbox"/> PM	Observers Name: _____ Title: _____ Signature: _____	WERE UNAUTHORIZED NSWDS OBSERVED? <input type="checkbox"/> YES <input type="checkbox"/> NO WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDS? <input type="checkbox"/> YES <input type="checkbox"/> NO	If YES to either question, complete reverse side.
QUARTER: APRIL-JUNE DATE/TIME OF OBSERVATIONS ____/____/____ :____ <input type="checkbox"/> AM ____/____/____ :____ <input type="checkbox"/> PM	Observers Name: _____ Title: _____ Signature: _____	WERE UNAUTHORIZED NSWDS OBSERVED? <input type="checkbox"/> YES <input type="checkbox"/> NO WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDS? <input type="checkbox"/> YES <input type="checkbox"/> NO	If YES to either question, complete reverse side.

2006 - 2007
ANNUAL REPORT

SIDE B

**FORM 3 QUARTERLY VISUAL OBSERVATIONS OF UNAUTHORIZED
NON-STORM WATER DISCHARGES (NSWDs)**

OBSERVATION DATE (FROM REVERSE SIDE)	NAME OF UNAUTHORIZED NSWD EXAMPLE: Vehicle Wash Water	SOURCE AND LOCATION OF UNAUTHORIZED NSWD EXAMPLE: NW Corner of Parking Lot	DESCRIBE UNAUTHORIZED NSWD CHARACTERISTICS Indicate whether unauthorized NSWD is clear, cloudy, discolored, causing stains; contains floating objects or an oil sheen, has odors, etc.		DESCRIBE CORRECTIVE ACTIONS TO ELIMINATE UNAUTHORIZED NSWD AND TO CLEAN IMPACTED DRAINAGE AREAS. PROVIDE UNAUTHORIZED NSWD ELIMINATION DATE.
			AT THE UNAUTHORIZED NSWD SOURCE	AT THE UNAUTHORIZED NSWD AREA AND DISCHARGE LOCATION	
____ / ____ / ____ ____ : ____ <input type="checkbox"/> AM <input type="checkbox"/> PM					
____ / ____ / ____ ____ : ____ <input type="checkbox"/> AM <input type="checkbox"/> PM					
____ / ____ / ____ ____ : ____ <input type="checkbox"/> AM <input type="checkbox"/> PM					
____ / ____ / ____ ____ : ____ <input type="checkbox"/> AM <input type="checkbox"/> PM					

2006 - 2007
ANNUAL REPORT
FORM 4-MONTHLY VISUAL OBSERVATIONS OF

SIDE

A

STORM WATER DISCHARGES

- Storm water discharge visual observations are required for at least one storm event per month between October 1 and May 31.
- Visual observations must be conducted during the first hour of discharge at all discharge locations.
- Discharges of temporarily stored or contained storm water must be observed at the time of discharge.

- Indicate "None" in the first column of this form if you did not conduct a monthly visual observation.
- Make additional copies of this form as necessary.
- Until a monthly visual observation is made, record any eligible storm events that do not result in a storm water discharge and note the date, time, name, and title of who observed there was no storm water discharge.

Observation Date: October ____ 2006 Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	#1	#2	#3	#4		
	Observation Time	:	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	:	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	:	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.
	Time Discharge Began	:	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	:	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	:	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>		
	Observation Date: November ____ 2006 Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	#1	#2	#3	#4	
Observation Time		:	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	:	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	:	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.
Time Discharge Began		:	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	:	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	:	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.
Were Pollutants Observed (If yes, complete reverse side)		YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>		
Observation Date: December ____ 2006 Observers Name: _____ Title: _____ Signature: _____		Drainage Location Description	#1	#2	#3	#4	
	Observation Time	:	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	:	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	:	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.
	Time Discharge Began	:	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	:	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	:	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>		
	Observation Date: January ____ 2007 Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	#1	#2	#3	#4	
Observation Time		:	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	:	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	:	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.
Time Discharge Began		:	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	:	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	:	<input type="checkbox"/> P.M. <input type="checkbox"/> A.M.
Were Pollutants Observed (If yes, complete reverse side)		YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>		

2006 - 2007
ANNUAL REPORT

SIDE B

FORM 4-MONTHLY VISUAL OBSERVATIONS OF
STORM WATER DISCHARGES

DATE/TIME OF OBSERVATION (From Reverse Side)	DRAINAGE AREA DESCRIPTION <u>EXAMPLE:</u> Discharge from material storage Area #2	DESCRIBE STORM WATER DISCHARGE CHARACTERISTICS Indicate whether storm water discharge is clear, cloudy, or discolored; causing staining; containing floating objects or an oil sheen, has odors, etc.	IDENTIFY AND DESCRIBE SOURCE(S) OF POLLUTANTS <u>EXAMPLE:</u> Oil sheen caused by oil dripped by trucks in vehicle maintenance area.	DESCRIBE ANY REVISED OR NEW BMPs AND THEIR DATE OF IMPLEMENTATION
/ / : <input type="checkbox"/> AM <input type="checkbox"/> PM				
/ / : <input type="checkbox"/> AM <input type="checkbox"/> PM				
/ / : <input type="checkbox"/> AM <input type="checkbox"/> PM				
/ / : <input type="checkbox"/> AM <input type="checkbox"/> PM				
/ / : <input type="checkbox"/> AM <input type="checkbox"/> PM				

2006 - 2007
ANNUAL REPORT
FORM 4 (Continued)-MONTHLY VISUAL OBSERVATIONS OF
STORM WATER DISCHARGES

SIDE A

- Storm water discharge visual observations are required for at least one storm event per month between October 1 and May 31.
- Visual observations must be conducted during the first hour of discharge at all discharge locations.
- Discharges of temporarily stored or contained storm water must be observed at the time of discharge.

- Indicate "None" in the first column of this form if you did not conduct a monthly visual observation.
- Make additional copies of this form as necessary.
- Until a monthly visual observation is made, record any eligible storm events that do not result in a storm water discharge and note the date, time, name, and title of who observed there was no storm water discharge.

Observation Date: February ____ 2007 Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	#1	#2	#3	#4
	Observation Time	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.
	Time Discharge Began	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>
	Drainage Location Description	#1	#2	#3	#4
Observation Date: March ____ 2007 Observers Name: _____ Title: _____ Signature: _____	Observation Time	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.
	Time Discharge Began	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>
	Drainage Location Description	#1	#2	#3	#4
	Observation Date: April ____ 2007 Observers Name: _____ Title: _____ Signature: _____	Observation Time	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.
Time Discharge Began		: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.
Were Pollutants Observed (If yes, complete reverse side)		YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>
Drainage Location Description		#1	#2	#3	#4
Observation Date: May ____ 2007 Observers Name: _____ Title: _____ Signature: _____		Observation Time	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.
	Time Discharge Began	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.	: <input type="checkbox"/> P.M. <input type="checkbox"/> A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>

2006 - 2007
ANNUAL REPORT

SIDE B

FORM 4 (Continued)-MONTHLY VISUAL OBSERVATIONS OF
STORM WATER DISCHARGES

DATE/TIME OF OBSERVATION (From Reverse Side)	DRAINAGE AREA DESCRIPTION <u>EXAMPLE:</u> Discharge from material storage Area #2	DESCRIBE STORM WATER DISCHARGE CHARACTERISTICS Indicate whether storm water discharge is clear, cloudy, or discolored; causing staining; containing floating objects or an oil sheen, has odors, etc.	IDENTIFY AND DESCRIBE SOURCE(S) OF POLLUTANTS <u>EXAMPLE:</u> Oil sheen caused by oil dripped by trucks in vehicle maintenance area.	DESCRIBE ANY REVISED OR NEW BMPs AND THEIR DATE OF IMPLEMENTATION
<div>_ / _ / _</div> <div> <div>_: _</div> <div><input type="checkbox"/></div> AM <div><input type="checkbox"/></div> PM </div>				
<div>_ / _ / _</div> <div> <div>_: _</div> <div><input type="checkbox"/></div> AM <div><input type="checkbox"/></div> PM </div>				
<div>_ / _ / _</div> <div> <div>_: _</div> <div><input type="checkbox"/></div> AM <div><input type="checkbox"/></div> PM </div>				
<div>_ / _ / _</div> <div> <div>_: _</div> <div><input type="checkbox"/></div> AM <div><input type="checkbox"/></div> PM </div>				
<div>_ / _ / _</div> <div> <div>_: _</div> <div><input type="checkbox"/></div> AM <div><input type="checkbox"/></div> PM </div>				

2006 - 2007
ANNUAL REPORT

SIDE A

FORM 5-ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION
POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY BMP STATUS

EVALUATION DATE: ____ / ____ / ____ INSPECTOR NAME: _____ TITLE: _____ SIGNATURE: _____

POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP)	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? <input type="checkbox"/> YES <input type="checkbox"/> NO	If yes, to either question, complete the next two columns of this form	Describe deficiencies in BMPs or BMP implementation	Describe additional/revised BMPs or corrective actions and their date(s) of implementation
	ARE ADDITIONAL/REVISED BMPs NECESSARY? <input type="checkbox"/> YES <input type="checkbox"/> NO			
POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP)	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? <input type="checkbox"/> YES <input type="checkbox"/> NO	If yes, to either question, complete the next two columns of this form	Describe deficiencies in BMPs or BMP implementation	Describe additional/revised BMPs or corrective actions and their date(s) of implementation
	ARE ADDITIONAL/REVISED BMPs NECESSARY? <input type="checkbox"/> YES <input type="checkbox"/> NO			
POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP)	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? <input type="checkbox"/> YES <input type="checkbox"/> NO	If yes, to either question, complete the next two columns of this form	Describe deficiencies in BMPs or BMP implementation	Describe additional/revised BMPs or corrective actions and their date(s) of implementation
	ARE ADDITIONAL/REVISED BMPs NECESSARY? <input type="checkbox"/> YES <input type="checkbox"/> NO			
POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP)	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? <input type="checkbox"/> YES <input type="checkbox"/> NO	If yes, to either question, complete the next two columns of this form	Describe deficiencies in BMPs or BMP implementation	Describe additional/revised BMPs or corrective actions and their date(s) of implementation
	ARE ADDITIONAL/REVISED BMPs NECESSARY? <input type="checkbox"/> YES <input type="checkbox"/> NO			

FORM 5 (Continued)-ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION
POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY BMP STATUS

EVALUATION DATE: / / INSPECTOR NAME: TITLE: SIGNATURE: _____

POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP)	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? <input type="checkbox"/> YES <input type="checkbox"/> NO	If yes, to either question, complete the next two columns of this form	Describe deficiencies in BMPs or BMP implementation	Describe additional/revised BMPs or corrective actions and their date(s) of implementation
	ARE ADDITIONAL/REVISED BMPs NECESSARY? <input type="checkbox"/> YES <input type="checkbox"/> NO			
POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP)	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? <input type="checkbox"/> YES <input type="checkbox"/> NO	If yes, to either question, complete the next two columns of this form	Describe deficiencies in BMPs or BMP implementation	Describe additional/revised BMPs or corrective actions and their date(s) of implementation
	ARE ADDITIONAL/REVISED BMPs NECESSARY? <input type="checkbox"/> YES <input type="checkbox"/> NO			
POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP)	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? <input type="checkbox"/> YES <input type="checkbox"/> NO	If yes, to either question, complete the next two columns of this form	Describe deficiencies in BMPs or BMP implementation	Describe additional/revised BMPs or corrective actions and their date(s) of implementation
	ARE ADDITIONAL/REVISED BMPs NECESSARY? <input type="checkbox"/> YES <input type="checkbox"/> NO			
POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP)	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? <input type="checkbox"/> YES <input type="checkbox"/> NO	If yes, to either question, complete the next two columns of this form	Describe deficiencies in BMPs or BMP implementation	Describe additional/revised BMPs or corrective actions and their date(s) of implementation
	ARE ADDITIONAL/REVISED BMPs NECESSARY? <input type="checkbox"/> YES <input type="checkbox"/> NO			

San Diego Stormwater Copermittees

Dry Weather Monitoring Field Datasheet

☒ Routine Investigation

☐ IC/ID Follow-Up For _____

GENERAL SITE DESCRIPTION

(NAD 83 decimal degrees to 5th place)

Site ID		Latitude		Watershed	Hydrologic Unit	
Location		Longitude			Hydrologic Area	
Date		TB Page			Hydrologic Subarea (Optional)	
Time		Observer	RG, MG	Discharge Area (Optional)		

Land Use (Primary)
(Check one only)

☐ Residential ☐ Commercial ☐ Industrial ☐ Agricultural ☐ Parks ☐ Open

Land Use (Secondary)
(Optional, greater than 10%)

☐ Residential ☐ Commercial ☐ Industrial ☐ Agricultural ☐ Parks ☐ Open

Conveyance
(Check one only)

☐ Manhole ☒ Catch Basin ☐ Outlet ☐ Concrete Channel ☐ Natural Creek ☐ Earthen Channel

ATMOSPHERIC CONDITIONS

Weather ☐ Sunny ☐ Partly Cloudy ☐ Overcast ☐ Fog
Tide ☐ N/A ☐ Low ☐ Incoming ☐ High ☐ Outgoing **Tide Height:** _____ ft.
Last Rain ☐ > 72 hours ☐ < 72 hours
Rainfall ☐ None ☐ < 0.1" ☐ > 0.1"

RUNOFF CHARACTERISTICS

Odor	<input type="checkbox"/> None	<input type="checkbox"/> Musty	<input type="checkbox"/> Rotten Eggs	<input type="checkbox"/> Chemical	<input type="checkbox"/> Sewage	<input type="checkbox"/> Other _____
Color	<input type="checkbox"/> None	<input type="checkbox"/> Yellow	<input type="checkbox"/> Brown	<input type="checkbox"/> White	<input type="checkbox"/> Gray	<input type="checkbox"/> Other _____
Clarity	<input type="checkbox"/> Clear		<input type="checkbox"/> Slightly Cloudy	<input type="checkbox"/> Opaque		<input type="checkbox"/> Other _____
Floatables	<input type="checkbox"/> None	<input type="checkbox"/> Trash	<input type="checkbox"/> Bubbles/Foam	<input type="checkbox"/> Sheen	<input type="checkbox"/> Fecal Matter	<input type="checkbox"/> Other _____
Deposits	<input type="checkbox"/> None	<input type="checkbox"/> Sediment/Gravel	<input type="checkbox"/> Fine Particulates	<input type="checkbox"/> Stains	<input type="checkbox"/> Oily Deposits	<input type="checkbox"/> Other _____
Vegetation	<input type="checkbox"/> None	<input type="checkbox"/> Limited	<input type="checkbox"/> Normal	<input type="checkbox"/> Excessive		<input type="checkbox"/> Other _____
Biology	<input type="checkbox"/> None	<input type="checkbox"/> Insects	<input type="checkbox"/> Algae	<input type="checkbox"/> Snails/Fish	<input type="checkbox"/> Mussels/Barnacles	<input type="checkbox"/> Other _____

Flow Observed ☐ Yes ☐ No ☐ Ponded ☐ Tidal

Does the storm drain flow reach the Receiving Water? ☐ Yes ☐ No ☐ N/A

Evidence of Overland Flow? ☐ Yes ☐ No ☐ Irrigation Runoff ☐ Other: _____

Photo Taken ☐ Yes ☐ No **Photo #** _____

Field Screening Samples Collected? ☐ Yes ☐ No

Water Temp (°C)		NH3-N (mg/L)		NO3-N (mg/L)		React PO4 (mg/L)	
pH (pH units)		TURB (NTU)		COND (mS/cm)		MBAS (mg/L)	

FLOW ESTIMATION WORKSHEETS

Flowing Creek or Box Culvert	Filling a Bottle or Known Volume	Flowing Pipe
Width	Volume	Diameter
Depth	Time to Fill	Depth
Velocity	Flow	Velocity
Flow		Flow

Analytical Laboratory Samples Collected? ☐ Yes ☐ No

O&G (mg/L)		Enter. (MPN/100mL)		Fecal Col. (MPN/mL)		Chlorpy. (ug/L)		Pb (ug/L)	
Hardness (mg/L)		Total Col. (MPN/100mL)		Diazanone (ug/L)		Cd (ug/L)		Zn (ug/L)	

COMMENTS: _____

San Diego Stormwater Copermittees
Land Use Types for Dry Weather Monitoring
(Adopted by the Dry Weather Monitoring Workgroup, April 20, 2004)

1. Residential

Residential (general)

Single- and multi-family homes, mobile home parks, etc.

Rural residential (For the County of San Diego and other appropriate Copermittees)

Single family homes located in rural areas with lot sizes of approximately 1 to 10 acres. Rural residential estates may have small orchards, fields or small storage buildings associated with the residential dwelling unit, etc.

2. Commercial

Offices, schools, shopping centers, auto dealerships, government/civic centers, cemeteries, churches, libraries, post offices, fire/police stations, military use, jails, prisons, border patrol holding stations, dormitories, hotels, motels, resorts, and casinos, etc.

3. Agricultural

Orchards, vineyards, nurseries, greenhouses, flower fields, dairies, livestock, poultry, equine ranches, row crops and grains, pasture, fallow, etc.

4. Industrial

Shipbuilding, airframe, aircraft manufacturing, industrial parks, manufacturing uses such as lumber, furniture, paper, rubber, stone, clay, and glass; auto repair services/recycling centers; warehousing, wholesale trade; mining, sand and gravel extraction, salt evaporation; junkyard, dumps/landfills; auto wrecking/dismantling and recycling centers, etc.

5. Parks

Recreation areas and centers, neighborhood parks, wildlife and nature preserves, golf courses, accessible sandy areas along the coast or major water bodies allowing swimming and picnicking, etc.

6. Open

Vacant and undeveloped lands, etc.

Storm Water Quality Inspection For Industrial/Commercial/Municipal Facilities

Inspector Name: _____

Date: _____

Time: _____

Type of Inspection

☐ Routine

☐ Complaint Investigation

☐ Other

☐ Follow-up

Contact Information

Business Name _____

Street Address _____

Business Type _____

Subtenants _____

On-Site Contact _____ Cell phone # _____ Title: _____ Email: _____

Environ Contact _____ Cell phone # _____ Title: _____ Email: _____

Business Telephone # (_____) _____ - _____

Business Fax # (_____) _____ - _____

Other Contact Info: _____

Facility/Operation/Site Information

Principal activity: _____

Category: ☐ High Commercial

☐ High Industrial

☐ High Municipal

☐ Med Commercial

☐ Med Industrial

☐ Med Municipal

☐ Low Commercial

☐ Low Industrial

☐ Low Municipal

Is the facility/operation subject to CA Statewide General Industrial Permit?

If yes, has facility/operation filed a Notice of Intent (NOI) to comply?

WDID # _____

Does the facility/operation qualify for a "No Exposure Certification"?

Does facility/operation have an Individual NPDES Permit?

Permit # _____

Does facility/operation maintain SWPPP, BMP Plan or Hazmat Business Plan (or any others)?

Has facility/operation conducted previous storm water monitoring programs?

Property Owner / Management Group / Primary Tenant: _____

Initial Observations

Nearest MS4 conveyance inlet:

Approximate distance to MS4:

☐ < 200 ft.

☐ 200 – 1000 ft.

☐ > 1000 ft.

Discharge observed?

If yes, describe:

Additional comments:

Print Name of Facility/Operation Representative: _____

Inspector's Signature: _____ Date: _____

BMPs	N/A	Yes	Partial	No	Comments
Storm Water Discharges					
Does storm water from this facility/operation enter the MS4?					
Does the storm water run-off from this facility/operation discharge into a wastewater treatment process or sanitary sewer or dead-end sump area with pump?					
BMPs	N/A	Yes	Partial	No	Comments

SC01 - Non-Storm Water Management

☐ Not Applicable at this Facility/Operation

Identify significant materials which could have the potential to discharge to storm drains.	<input type="checkbox"/> Oil and Grease <input type="checkbox"/> Solvents <input type="checkbox"/> Paint <input type="checkbox"/> Deicing/Anti-Icing Fluids <input type="checkbox"/> Cleaning Solutions <input type="checkbox"/> Lubricants <input type="checkbox"/> Anti freeze <input type="checkbox"/> Battery Acid <input type="checkbox"/> Fuel <input type="checkbox"/> Pesticides/Herbicides/Fertilizers <input type="checkbox"/> Metals <input type="checkbox"/> Deicing/Anti-Icing Fluids <input type="checkbox"/> Sediment <input type="checkbox"/> Fire Fighting Foam <input type="checkbox"/> Dumpster Wastes <input type="checkbox"/> Landscape Wastes <input type="checkbox"/> Floatables <input type="checkbox"/> Lavatory Chemical Wastes <input type="checkbox"/> Potable Water System Chemicals <input type="checkbox"/> Rubber Particulates <input type="checkbox"/> Other:				
SC01-02. Is the site free of evidence of illicit connections and illegal discharges?					
SC01-03. Are observed non-storm water discharges routinely reported?					
SC01-04. Have employees, tenants and the public been educated about avoiding non-storm water discharges?					
SC01-05. Are outdoor water supplies (hose bibs) limited and posted with appropriate use signs to discourage uses that may pollute the storm drain system/receiving waters?					

Additional Comments:

BMPs	N/A	Yes	Partial	No	Comments
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SC02A - Outdoor Equipment Ops and Maintenance Areas

☐ Not Applicable at this Facility/Operation

Identify significant materials used at the facility/operation, associated with equipment operations and maintenance.	<input type="checkbox"/> Oil and Grease <input type="checkbox"/> Fuel <input type="checkbox"/> Solvents <input type="checkbox"/> Paint <input type="checkbox"/> Cleaning Solutions <input type="checkbox"/> Lubricants <input type="checkbox"/> Anti freeze <input type="checkbox"/> Battery Acid <input type="checkbox"/> Other:				
SC02A-02. Are storm drains located directly within equipment operations and maintenance areas?					
SC02A-03. Is there a designated equipment ops and maintenance area with overhead cover for pollutant sources and/or activity areas?					

Additional Comments:

BMPs	N/A	Yes	Partial	No	Comments
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SC02B - Aircraft, Grnd Vehicle & Eqpmnt Maintenance ☐ Not Applicable at this Facility/Operation

Identify significant materials used at the facility/operation, associated with maintenance/repair.	<input type="checkbox"/> Oil and Grease <input type="checkbox"/> Fuel <input type="checkbox"/> Solvents <input type="checkbox"/> Paint <input type="checkbox"/> Cleaning Solutions <input type="checkbox"/> Lubricants <input type="checkbox"/> Anti freeze <input type="checkbox"/> Battery Acid <input type="checkbox"/> Other:				
SC02B-02. Is there a designated vehicle and equipment maintenance area that is covered, bermed, enclosed, or sloped away from the MS4?					
SC02B-03. Are storm drains located directly within the vehicle and equipment maintenance area?					
SC02B-04. Is equipment regularly inspected and tested?					
SC02B-05. Are vehicles and equipment maintained in good condition to prevent or correct any leakage of oil or other fluids?					
SC02B-06. Are maintenance vehicles furnished with spill response materials?					
SC02B-07. Are employees trained in safe vehicle and equipment operations?					
SC02B-08. Are visual observations performed to detect leaking fluids from any vehicles or equipment?					
SC02B-09. Are drip pans used?					
SC02B-10. Are mechanical parts and equipment stored under cover and away from					
SC02B-11. Are obsolete or inoperable vehicles or equipment disposed of?					
SC02B-12. Are fluids and batteries removed from salvage vehicles and equipment and properly disposed of?					

Additional Comments:

BMPs	N/A	Yes	Partial	No	Comments
SC03 - Aircraft, Ground Vehicle and Equipment Fueling <input type="checkbox"/> Not Applicable at this Facility/Operation					
Identify significant materials used at the facility/operation, associated with vehicle and equipment fueling.	<input type="checkbox"/> Fuel <input type="checkbox"/> Other				
SC03-02. Is there a designated fueling area that is covered, bermed, enclosed or sloped away from the MS4?					
SC03-03. Are storm drains located directly within fueling areas?					
SC03-04. Are major fueling operations monitored?					
SC03-05. Are fueling areas regularly inspected?					
SC03-06. Is secondary containment or cover used when transferring fuel from a tank truck to a fuel tank?					
SC03-07. Are absorbent booms, spill kits or vacuum equipment present in fueling areas or on fueling vehicles?					
SC03-08. Are leak, overfill protection and spill prevention devices used for tanks and piping?					
SC03-09. Are automatic shut-off mechanisms used for fuel tankers and hose connections?					
SC03-10. Are fuel tanks topped off?					
SC03-11. Is access to tanks restricted?					
SC03-12. Are tanks, piping and valves labeled, regularly inspected and kept in good condition?					

Additional Comments:

BMPs	N/A	Yes	Partial	No	Comments
SC04 - Aircraft, Grnd Vehicle and Equipment Cleaning <input type="checkbox"/> Not Applicable at this Facility/Operation					
Identify significant materials at the facility/operation associated with vehicle and equipment cleaning.	<input type="checkbox"/> Oil and Grease <input type="checkbox"/> Solvents <input type="checkbox"/> Cleaning Solutions <input type="checkbox"/> Lubricants <input type="checkbox"/> Anti freeze <input type="checkbox"/> Other:				
SC04-02. Are vehicles, equipment and washing areas kept clean?					
SC04-03. Is there a designated wash area that captures or diverts all wash water to treatment plant or sanitary sewer or dead end sump with pump?					

SC04-04. Is wash water filtered and recycled where practical?					
SC04-05. Are dry washing and surface preparation techniques used where feasible?					
SC04-06. Are drippings, residue etc removed using vacuum methods?					
SC04-07. Are visual observations performed to detect discharges from cleaning activities?					
SC04-08. Are storm drains located within the wash area?					

Additional Comments:

BMPs	N/A	Yes	Parital	No	Comments
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SC05 - Aircraft Deicing/Anti-Icing

☐ Not Applicable at this Facility/Operation

Identify significant materials used at the facility/operation, associated with aircraft deicing/anti-icing.	<input type="checkbox"/> Ethylene Glycol <input type="checkbox"/> Propylene glycol <input type="checkbox"/> Other:				
SC05-02. Is there a designated deicing/anti-icing area that is covered, bermed, enclosed or sloped away from the MS4?					
SC05-03. Are all fluids captured or diverted to a treatment plant, recycling system, sanitary sewer or dead end sump with pump?					
SC05-04. Are deicing/anti-icing areas cleaned with wet-type sweepers and the fluids appropriately recycled or disposed of?					

Additional Comments:

SC07-03. Does the facility/operation have a County hazardous materials permit for hazardous materials storage, and is it on display?					
SC07-04. Are storm drains located directly within outdoor material storage areas?					
SC07-05. Do outdoor material storage areas have areas with overhead cover and secondary containment?					
SC07-06. Are outdoor material storage areas prevented from contacting stormwater run-on and run-off (e.g. by the use of berms)?					
SC07-07. Are regular inspections performed on tanks or containers to check for corrosion, structural failure, loose fittings, poor welds, leaks etc?					

Additional Comments:

BMPs	N/A	Yes	Partial	No	Comments
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SC08 - Waste Handling and Disposal

☐ Not Applicable at this Facility/Operation

Identify wastes stored, handled, disposed of or recycled at the facility/operation.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Oil and Grease <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Lubricants <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Anti freeze <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Solvents <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Cleaning Solutions <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Trash <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Other: (I=indoors; O=outdoors)				
SC08-02. Is there a designated waste/recycling area with restricted access?					
SC08-03. Are storm drains located directly in waste/recycling areas?					
SC08-04. Does the facility/operation recycle?					
SC08-05. Is timely service and removal provided to prevent waste containers and sanitary facilities from overflowing?					
SC08-06. Are wastes and recycling materials appropriately stored in containers, segregated and labeled?					
SC08-07. If wastes are not contained, are they covered and prevented from contacting stormwater run-on and run-off (e.g. by the use of berms)?					
SC08-08. Are waste containers inspected frequently for leaks, structural integrity and proper closure seal?					
SC08-09. Is secondary containment provided?					

SC08-10. Are wastes characterized, where appropriate, and properly disposed of?					
SC08-11. Are employees trained to properly handle and dispose of wastes?					
SC08-12. Does facility/operation make efforts to reduce waste (use only amount needed, use solvents more than once, practice good inventory control, do not overbuy, purchase long-lasting products etc)?					

Additional Comments:

BMPs	N/A	Yes	Partial	No	Comments
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SC09 - Building and Grounds Maintenance

☐ Not Applicable at this Facility/Operation

Identify significant materials used in/produced by building and grounds maintenance.	<input type="checkbox"/> Oil and Grease <input type="checkbox"/> Pesticides/Herbicides/Fertilizers <input type="checkbox"/> Sediment <input type="checkbox"/> Landscape Wastes <input type="checkbox"/> Other:				
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SC09-02. Have all areas of exposed soil been revegetated, landscaped or otherwise contain erosion or sediment controls?					
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SC09-03. Are landscaped areas irrigated?					
--	--	--	--	--	--

SC09-04. Are integrated pest management methods used?					
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Additional Comments:					
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BMPs	N/A	Yes	Partial	No	Comments
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SC10 - Employee Training

☐ Not Applicable at this Facility/Operation

SC10-01. Is facility/operation SWPPP up to date, including completion of amendments					
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SC10-02. Have employees been trained on storm water issues, spill cleanup, hazardous materials management, right to know awareness and SWPPP implementation?					
--	--	--	--	--	--

SC10-03. Are any other training programs in place?					
--	--	--	--	--	--

SC10-04. Does facility/operation have current employee training records?					
--	--	--	--	--	--

Additional Comments:

BMPs	N/A	Yes	Partial	No	Comments
SC11 - Lavatory Service Operation <input type="checkbox"/> Not Applicable at this Facility/Operation					
Identify significant materials at the facility/operation associated with lavatory service operations.	<input type="checkbox"/> Lavatory Chemicals <input type="checkbox"/> Lavatory Waste <input type="checkbox"/> Lavatory Truck Wash Water <input type="checkbox"/> Other:				
SC11-02. Are triturator facilities covered, and have low roll-over type berming?					
SC11-03. Are storm drains located near the triturator facility/operation?					
SC11-04. Are lavatory truck cleanouts/backflushing, and lavatory waste discharging to sanitary sewer connections performed ONLY at triturator facilities?					
SC11-05. Are drip pans used when draining the aircraft and drippage dumped into the bulk storage tank of the lavatory service equipment?					
SC11-06. Are hoses completely drained?					
SC11-07. Are all hoses, valves and equipment properly secured when transporting lavatory waste?					
SC11-08. Are hoses and fittings used for transferring lavatory waste regularly inspected and kept in good condition?					
SC11-09. Are absorbent booms, spill kits or other containment equipment present on lavatory service equipment and in the triturator facility/operation?					
SC11-10. Are surfactant/disinfectant mixing and transfers performed in the triturator area or under cover?					

Additional Comments:

BMPs	N/A	Yes	Partial	No	Comments
SC12 - Outdoor Washdown/Sweeping, <input type="checkbox"/> Not Applicable at this Facility/Operation					
SC12-01. Is wash water collected and discharged to the sanitary sewer system through a permitted connection?					
SC12-04. Are designated and approved discharge facilities used to dispose of apron/ramp cleaning waste?					
SC12-05. Are outdoor washdown areas bermed to minimize run-on to other areas?					
SC12-06. Are "dry" sweeping techniques used where feasible?					
SC12-07. Are sweepings disposed of in an appropriate manner?					
SC12-08. Are the roads swept on a regular basis?					

Additional Comments:

BMPs	N/A	Yes	Partial	No	Comments
SC13 - Fire Fighting Foam Discharge <input type="checkbox"/> Not Applicable at this Facility/Operation					
Identify significant materials at the facility/operation associated with testing fire fighting equipment.	<input type="checkbox"/> Aircraft Fire Fighting Foam <input type="checkbox"/> Other:				
SC13-02. Are storm drains located near the fire fighting foam discharge/testing area?					
SC13-03 Is fire fighting equipment regularly tested?					

SC13-04. Is there a designated fire fighting foam testing area that captures or diverts all foam waste to treatment/recycling plant or sanitary sewer or dead end sump with pump or oil water seperator?

SC13-05 If sump or oil water seperator is present, is it serviced regularly?

SC13-06. Are fire fighting foam testing areas prevented from contacting stormwater run-on and run-off (e.g. by the use of berms)?

Additional Comments:

BMPs

N/A

Yes

Parial

No

Comments

SC14 - Potable Water System Flushing

☐ Not Applicable at this Facility/Operation

Identify significant materials used at the facility/operation, associated with aircraft potable water system flushing and water truck cleaning/flushing.

☐ Purine

☐ Chlorine Bleach

☐ Other:

SC14-02. Are storm drains located near the aircraft potable water system or water truck cleaning/flushing areas?

SC14-03. Is there a designated cleaning/flushing area that captures or diverts all wastewater to treatment/recycling plant or sanitary sewer or dead end sump with pump?

SC14-05. Are cleaning/flushing areas prevented from contacting stormwater run-on and run-off (e.g. by the use of berms)?

Additional Comments:

BMPs	N/A	Yes	Partial	No	Comments
SC15 - Runway Rubber Removal <input type="checkbox"/> Not Applicable at this Facility/Operation					
Identify significant materials generated by runway rubber removal activities.	<input type="checkbox"/> Rubber Particles <input type="checkbox"/> Dirt Particles <input type="checkbox"/> Other:				
SC15-02. Is the waste water produced from runway rubber removal activities prevented from entering the storm drainage system by immediately collecting and properly disposing of it?					
SC15-03. Are runways and adjacent paved areas swept, either manually or using mechanical sweepers, following runway rubber removal activities?					
SC15-04. Are storm drain culverts or runway drainage areas inspected following runway rubber removal activities?					
Additional Comments: 					
BMPs	N/A	Yes	Partial	No	Comments
SC16 - Parking Lots <input type="checkbox"/> Not Applicable at this Facility/Operation					
SC16-01A. Are parking lots regularly swept using "dry" sweeping methods?					
SC16-01B. Are parking lots posted with "No Littering" signs and have regularly emptied trash receptacles??					
SC16-02. Are oily spots cleaned with absorbent materials?					
SC16-04. Are repairs performed during dry weather?					
SC16-05. Are hot bituminous materials preheated, transferred or loaded away from storm drain inlets?					
SC16-07. Are drip pans used under paving equipment?					
SC16-08. Are absorbent materials, debris, and drips properly disposed of?					

SC16-09. Do rooftops drain onto paved surfaces?					
Additional Comments:					
BMPs	N/A	Yes	Partial	No	Comments
SC17 - Drainage System Maintenance <input type="checkbox"/> Not Applicable at this Facility/Operation					
SC17-01 Are storm drains stenciled with “No Dumping” messages?					
SC17-02. Does facility/operation conduct routine self-inspection of the storm water conveyance system?					
SC17-03. Are storm drains, inlets and catch basins routinely inspected, cleaned and maintained?					
SC17-04. Is debris from cleaning activities disposed of properly?					
SC17-05. Are records kept for all inspections, cleaning and maintenance?					
BMPs	N/A	Yes	Partial	No	Comments
SC18 - Housekeeping <input type="checkbox"/> Not Applicable at this Facility/Operation					
SC18-01. Does facility/operation conduct routine self-inspection of BMPs?					
SC18-04. Is facility/operation clean and orderly?					
SC18-05. Are trash receptacles placed in appropriate locations?					
SC18-06. Is facility/operation swept at least once per week?					
SC18-07. Are sweepings and sediment disposed of properly?					
SC18-09. Are potentially significant materials stored in appropriate containers, properly sealed and labeled?					
SC18-10. Is secondary containment provided for significant materials?					
SC18-12. Are significant materials stored in a restricted access area?					

SC18-14. Are Material Safety Data Sheets (MSDSs) readily available for all significant materials?

Additional Comments:

BMPs	N/A	Yes	Partial	No	Comments
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SC19 - Safer/Alternative Products

☐ Not Applicable at this Facility/Operation

SC19-01. Does this facility/operation use "Regionally Accepted" products identified as non-toxic, less toxic or biodegradable?

BMPs	N/A	Yes	Partial	No	Comments
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SR01 - Spill Prevention, Control and Clean up

☐ Not Applicable at this Facility/Operation

SR01-01. Does facility/operation have current Spill Prevention, Control, and Countermeasure (SPCC) Plan?

SR01-02. Does facility/operation have adequate spill kits in appropriate locations?

SR01-03. What types of materials are used for spill control/clean up?

SR01-04. Are these used materials properly disposed of?

SR01-05. Are leak and spill prevention devices used?

SR01-06. Does facility/operation use only dry cleaning methods?

SR01-07. If wet-washing techniques are used, is wash water captured by vacuum, and properly disposed of, or diverted to treatment plant or sewer system or dead end sump with pump?

Additional Comments:

BMPs	N/A	Yes	Partial	No	Comments
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TC 01 - Structural Treatment Control BMPs

☐ Not Applicable at this Facility/Operation

Identify each structural treatment control BMP currently implemented at this facility/operation.

Detention Basin TC-22		Vegetated Buffer Strip TC-31		Infiltration Trench TC-10	
Wet Pond TC-20		Retention / Irrigation TC-12		Infiltration Basin TC-11	
Constructed Wetland TC-21		Bioretention TC-32		Water Quality Inlet TC-50	
Vegetated Swale TC-30		Media Filter TC-40		Multiple Systems TC-60	

Other

TC01-01. If used, are structural / treatment control BMPs regularly inspected, cleaned and maintained?					
TC01-02. Are records kept for all inspections and maintenance of structural / treatment control BMPs?					
TC01-03. Is an annual inventory of all treatment control BMPs conducted?					

Additional Comments:

Appendix G – Miscellaneous Support Materials



APPENDIX H
MUNICIPAL PERMIT

Appendix H – Municipal Permit



**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION
ORDER NO. R9-2007-0001
NPDES NO. CAS0108758
WASTE DISCHARGE REQUIREMENTS
FOR DISCHARGES OF URBAN RUNOFF FROM
THE MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)
DRAINING THE WATERSHEDS OF THE COUNTY OF SAN DIEGO,
THE INCORPORATED CITIES OF SAN DIEGO COUNTY,
THE SAN DIEGO UNIFIED PORT DISTRICT,
AND THE SAN DIEGO COUNTY REGIONAL AIRPORT AUTHORITY**

FINDINGS	2
PERMIT PROVISIONS	11
A. Prohibitions and Receiving Water Limitations	11
B. Non-Storm Water Discharges	13
C. Legal Authority	14
D. Jurisdictional Urban Runoff Management Program	15
D.1 Development Planning	16
D.2 Construction	28
D.3 Existing Development	32
D.4 Illicit Discharge Detection and Elimination	42
D.5 Education	43
D.6 Public Participation	46
E. Watershed Urban Runoff Management Program	46
F. Regional Urban Runoff Management Program	50
G. Fiscal Analysis	51
H. Total Maximum Daily Loads	51
I. Program Effectiveness Assessment	52
J. Reporting	57
K. Modification of Programs	75
L. All Copermittee Collaboration	75
M. Principal Permittee Responsibilities	76
N. Receiving Water Monitoring and Reporting Program	76
O. Standard Provisions, Reporting Requirements, and Notifications	76

Attachment A – Basin Plan Prohibitions

Attachment B – Standard Provisions, Reporting Requirements, and Notifications

Attachment C – Definitions

Attachment D – Scheduled Submittal Summary

RECEIVING WATERS AND URBAN RUNOFF MONITORING AND REPORTING
PROGRAM NO. R9-2007-0001

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board), finds that:

A. BASIS FOR THE ORDER

1. This Order is based on the federal Clean Water Act (CWA), the Porter-Cologne Water Quality Control Act (Division 7 of the Water Code, commencing with Section 13000), applicable state and federal regulations, all applicable provisions of statewide Water Quality Control Plans and Policies adopted by the State Water Resources Control Board (SWRCB), the Water Quality Control Plan for the San Diego Basin adopted by the Regional Board, the California Toxics Rule, and the California Toxics Rule Implementation Plan.
2. This Order renews National Pollutant Discharge Elimination System (NPDES) Permit No. CAS0108758, which was first issued on July 16, 1990 (Order No. 90-42), and then renewed on February 21, 2001 (Order No. 2001-01). On August 25, 2005, in accordance with Order No. 2001-01, the County of San Diego, as the Principal Permittee, submitted a Report of Waste Discharge (ROWD) for renewal of their MS4 Permit.

B. REGULATED PARTIES

1. Each of the persons in Table 1 below, hereinafter called Copermittees or dischargers, owns or operates a municipal separate storm sewer system (MS4), through which it discharges urban runoff into waters of the United States within the San Diego Region. These MS4s fall into one or more of the following categories: (1) a medium or large MS4 that services a population of greater than 100,000 or 250,000 respectively; or (2) a small MS4 that is “interrelated” to a medium or large MS4; or (3) an MS4 which contributes to a violation of a water quality standard; or (4) an MS4 which is a significant contributor of pollutants to waters of the United States.

Table 1. Municipal Copermittees

1. City of Carlsbad	12. City of Oceanside
2. City of Chula Vista	13. City of Poway
3. City of Coronado	14. City of San Diego
4. City of Del Mar	15. City of San Marcos
5. City of El Cajon	16. City of Santee
6. City of Encinitas	17. City of Solana Beach
7. City of Escondido	18. City of Vista
8. City of Imperial Beach	19. County of San Diego
9. City of La Mesa	20. San Diego Unified Port District
10. City of Lemon Grove	21. San Diego County Regional
11. City of National City	Airport Authority

C. DISCHARGE CHARACTERISTICS

1. Urban runoff contains waste, as defined in the California Water Code (CWC), and pollutants that adversely affect the quality of the waters of the State. The discharge of urban runoff from an MS4 is a “discharge of pollutants from a point source” into waters of the U.S. as defined in the CWA.
2. The most common categories of pollutants in urban runoff include total suspended solids, sediment (due to anthropogenic activities); pathogens (e.g., bacteria, viruses, protozoa);

heavy metals (e.g., copper, lead, zinc and cadmium); petroleum products and polynuclear aromatic hydrocarbons; synthetic organics (e.g., pesticides, herbicides, and PCBs); nutrients (e.g., nitrogen and phosphorus fertilizers), oxygen-demanding substances (decaying vegetation, animal waste), and trash.

3. The discharge of pollutants and/or increased flows from MS4s may cause or threaten to cause the concentration of pollutants to exceed applicable receiving water quality objectives and impair or threaten to impair designated beneficial uses resulting in a condition of pollution (i.e., unreasonable impairment of water quality for designated beneficial uses), contamination, or nuisance.
4. Pollutants in urban runoff can threaten human health. Human illnesses have been clearly linked to recreating near storm drains flowing to coastal waters. Also, urban runoff pollutants in receiving waters can bioaccumulate in the tissues of invertebrates and fish, which may be eventually consumed by humans.
5. Urban runoff discharges from MS4s often contain pollutants that cause toxicity to aquatic organisms (i.e., adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies). Toxic pollutants impact the overall quality of aquatic systems and beneficial uses of receiving waters.
6. The Copermittees discharge urban runoff into lakes, drinking water reservoirs, rivers, streams, creeks, bays, estuaries, coastal lagoons, the Pacific Ocean, and tributaries thereto within ten of the eleven hydrologic units (watersheds) comprising the San Diego Region as shown in Table 2 below. Some of the receiving water bodies have been designated as impaired by the Regional Board and the United States Environmental Protection Agency (USEPA) in 2002 pursuant to CWA section 303(d). Also shown below are the watershed management areas (WMAs) as defined in the Regional Board report, Watershed Management Approach, January 2002.

Table 2. Common Watersheds and CWA Section 303(d) Impaired Waters

REGIONAL BOARD WATERSHED MANAGEMENT AREA (WMA)	HYDROLOGIC UNIT(S)	MAJOR SURFACE WATER BODIES	303(d) POLLUTANT(S) OF CONCERN OR WATER QUALITY EFFECT ¹	COPERMITTEES
Santa Margarita River	Santa Margarita (902.00)	Santa Margarita River and Estuary, Pacific Ocean	1. Eutrophic 2. Nitrogen 3. Phosphorus 4. Total Dissolved Solids	1. County of San Diego
San Luis Rey River	San Luis Rey (903.00)	San Luis Rey River and Estuary, Pacific Ocean	1. Bacterial Indicators 2. Eutrophic 3. Chloride 4. Total Dissolved Solids	1. City of Escondido 2. City of Oceanside 3. City of Vista 4. County of San Diego
Carlsbad	Carlsbad (904.00)	Batiquitos Lagoon San Elijo Lagoon Agua Hedionda Lagoon Buena Vista Lagoon And Tributary Streams Pacific Ocean	1. Bacterial Indicators 2. Eutrophic 3. Sedimentation/Siltation 4. Nutrients 5. Total Dissolved Solids	1. City of Carlsbad 2. City of Encinitas 3. City of Escondido 4. City of Oceanside 5. City of San Marcos 6. City of Solana Beach 7. City of Vista 8. County of San Diego

¹ The listed 303(d) pollutant(s) of concern do not necessarily reflect impairment of the entire corresponding WMA or all corresponding major surface water bodies. The specific impaired portions of each WMA are listed in the State Water Resources Control Board's 2002 Section 303(d) List of Water Quality Limited Segments.

REGIONAL BOARD WATERSHED MANAGEMENT AREA (WMA)	HYDROLOGIC UNIT(S)	MAJOR SURFACE WATER BODIES	303(d) POLLUTANT(S) OF CONCERN OR WATER QUALITY EFFECT ¹	COPERMITTEES
San Dieguito River	San Dieguito (905.00)	San Dieguito River and Estuary, Pacific Ocean	1. Bacterial Indicators 2. Sulfate 3. Color 4. Nitrogen 5. Phosphorus 6. Total Dissolved Solids	1. City of Del Mar 2. City of Escondido 3. City of Poway 4. City of San Diego 5. City of Solana Beach 6. County of San Diego
Mission Bay	Peñasquitos (906.00)	Los Peñasquitos Lagoon Mission Bay, Pacific Ocean	1. Bacterial Indicators 2. Metals 3. Eutrophic 4. Sedimentation/Siltation 5. Toxicity	1. City of Del Mar 2. City of Poway 3. City of San Diego 4. County of San Diego
San Diego River	San Diego (907.00)	San Diego River, Pacific Ocean	1. Bacterial Indicators 2. Eutrophic 3. pH 4. Total Dissolved Solids 5. Oxygen (Dissolved)	1. City of El Cajon 2. City of La Mesa 3. City of Poway 4. City of San Diego 5. City of Santee 6. County of San Diego
San Diego Bay	Pueblo San Diego (908.00) Sweetwater (909.00) Otay (910.00)	San Diego Bay Sweetwater River Otay River Pacific Ocean	1. Bacterial Indicators 2. Metals 3. Sediment Toxicity 4. Benthic Community Degradation 5. Diazinon 6. Chlordane 7. Lindane 8. PAHs 9. PCBs	1. City of Chula Vista 2. City of Coronado 3. City of Imperial Beach 4. City of La Mesa 5. City of Lemon Grove 6. City of National City 7. City of San Diego 8. County of San Diego 9. San Diego Unified Port District 10. San Diego County Regional Airport Authority
Tijuana River	Tijuana (911.00)	Tijuana River and Estuary Pacific Ocean	1. Bacterial Indicators 2. Low Dissolved Oxygen 3. Metals 4. Eutrophic 5. Pesticides 6. Synthetic Organics 7. Trace Elements 8. Trash 9. Solids	1. City of Imperial Beach 2. City of San Diego 3. County of San Diego

7. The Copermittees' water quality monitoring data submitted to date documents persistent exceedances of Basin Plan water quality objectives for various urban runoff-related pollutants (diazinon, fecal coliform bacteria, total suspended solids, turbidity, metals, etc.) at various watershed monitoring stations. At some monitoring stations, such as Agua Hedionda, statistically significant upward trends in pollutant concentrations have been observed. Persistent toxicity has also been observed at some watershed monitoring stations. In addition, bioassessment data indicates that the majority of watersheds have Poor to Very Poor Index of Biotic Integrity ratings. In sum, the above findings indicate that urban runoff discharges are causing or contributing to water quality impairments, and are a leading cause of such impairments in San Diego County.
8. When natural vegetated pervious ground cover is converted to impervious surfaces such as paved highways, streets, rooftops, and parking lots, the natural absorption and infiltration abilities of the land are lost. Therefore, runoff leaving a developed urban area is significantly greater in runoff volume, velocity, and peak flow rate than pre-development runoff from the same area. Runoff durations can also increase as a result of flood control and other efforts to control peak flow rates. Increased volume, velocity, rate, and duration of runoff greatly accelerate the erosion of downstream natural channels. Significant declines in the biological integrity and physical habitat of streams and other receiving waters have been found to occur

with as little as a 10% conversion from natural to impervious surfaces. The increased runoff characteristics from new development must be controlled to protect against increased erosion of channel beds and banks, sediment pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force.

9. Urban development creates new pollution sources as human population density increases and brings with it proportionately higher levels of car emissions, car maintenance wastes, municipal sewage, pesticides, household hazardous wastes, pet wastes, trash, etc. which can either be washed or directly dumped into the MS4. As a result, the runoff leaving the developed urban area is significantly greater in pollutant load than the pre-development runoff from the same area. These increased pollutant loads must be controlled to protect downstream receiving water quality.
10. Development and urbanization especially threaten environmentally sensitive areas (ESAs), such as water bodies designated as supporting a RARE beneficial use (supporting rare, threatened or endangered species) and CWA 303(d) impaired water bodies. Such areas have a much lower capacity to withstand pollutant shocks than might be acceptable in the general circumstance. In essence, development that is ordinarily insignificant in its impact on the environment may become significant in a particular sensitive environment. Therefore, additional control to reduce pollutants from new and existing development may be necessary for areas adjacent to or discharging directly to an ESA.
11. Although dependent on several factors, the risks typically associated with properly managed infiltration of runoff (especially from residential land use areas) are not significant. The risks associated with infiltration can be managed by many techniques, including (1) designing landscape drainage features that promote infiltration of runoff, but do not “inject” runoff (injection bypasses the natural processes of filtering and transformation that occur in the soil); (2) taking reasonable steps to prevent the illegal disposal of wastes; (3) protecting footings and foundations; and (4) ensuring that each drainage feature is adequately maintained in perpetuity.

D. URBAN RUNOFF MANAGEMENT PROGRAMS

1. General

- a. This Order specifies requirements necessary for the Copermittees to reduce the discharge of pollutants in urban runoff to the maximum extent practicable (MEP). However, since MEP is a dynamic performance standard which evolves over time as urban runoff management knowledge increases, the Copermittees’ urban runoff management programs must continually be assessed and modified to incorporate improved programs, control measures, best management practices (BMPs), etc. in order to achieve the evolving MEP standard. Absent evidence to the contrary, this continual assessment, revision, and improvement of urban runoff management program implementation is expected to ultimately achieve compliance with water quality standards.
- b. Although the Copermittees have generally been implementing the jurisdictional urban runoff management programs required pursuant to Order No. 2001-01 since February 21, 2002, urban runoff discharges continue to cause or contribute to violations of water quality standards. This Order contains new or modified requirements that are necessary to improve Copermittees’ efforts to reduce the discharge of pollutants in urban runoff to the MEP and achieve water quality

standards. Some of the new or modified requirements, such as the expanded Watershed Urban Runoff Management Program section, are designed to specifically address these high priority water quality problems. Other new or modified requirements address program deficiencies that have been noted during audits, report reviews, and other Regional Board compliance assessment activities.

- c. Updated Jurisdictional Urban Runoff Management Plans (JURMPs) and Watershed Urban Runoff Management Plans (WURMPs), and a new Regional Urban Runoff Management Plan (RURMP), which describe the Copermittees' urban runoff management programs in their entirety, are needed to guide the Copermittees' urban runoff management efforts and aid the Copermittees in tracking urban runoff management program implementation. It is practicable for the Copermittees to update the JURMPs and WURMPs, and create the RURMP, within one year, since significant efforts to develop these programs have already occurred.
- d. Pollutants can be effectively reduced in urban runoff by the application of a combination of pollution prevention, source control, and treatment control BMPs. Pollution prevention is the reduction or elimination of pollutant generation at its source and is the best "first line of defense". Source control BMPs (both structural and non-structural) minimize the contact between pollutants and flows (e.g., rerouting run-on around pollutant sources or keeping pollutants on-site and out of receiving waters). Treatment control BMPs remove pollutants from urban runoff.
- e. Urban runoff needs to be addressed during the three major phases of development (planning, construction, and use) in order to reduce the discharge of pollutants to the MEP and protect receiving waters. Development which is not guided by water quality planning policies and principles can unnecessarily result in increased pollutant load discharges, flow rates, and flow durations which can impact receiving water beneficial uses. Construction sites without adequate BMP implementation result in sediment runoff rates which greatly exceed natural erosion rates of undisturbed lands, causing siltation and impairment of receiving waters. Existing development generates substantial pollutant loads which are discharged in urban runoff to receiving waters.
- f. Annual reporting requirements included in this Order are necessary to meet federal requirements and to evaluate the effectiveness and compliance of the Copermittees' programs.

2. Development Planning

- a. The Standard Urban Storm Water Mitigation Plan (SUSMP) requirements contained in this Order are consistent with Order WQ-2000-11 adopted by the SWRCB on October 5, 2000. In the precedential order, the SWRCB found that the design standards, which essentially require that urban runoff generated by 85 percent of storm events from specific development categories be infiltrated or treated, reflect the MEP standard. The order also found that the SUSMP requirements are appropriately applied to the majority of the Priority Development Project categories contained in Section D.1 of this Order. The SWRCB also gave Regional Water Quality Control Boards the discretion to include additional categories and locations, such as retail gasoline outlets (RGOs), in future SUSMPs.

- b. Controlling urban runoff pollution by using a combination of onsite source control and Low Impact Development (LID) BMPs augmented with treatment control BMPs before the runoff enters the MS4 is important for the following reasons: (1) Many end-of-pipe BMPs (such as diversion to the sanitary sewer) are typically ineffective during significant storm events. Whereas, onsite source control BMPs can be applied during all runoff conditions; (2) End-of-pipe BMPs are often incapable of capturing and treating the wide range of pollutants which can be generated on a sub-watershed scale; (3) End-of-pipe BMPs are more effective when used as polishing BMPs, rather than the sole BMP to be implemented; (4) End-of-pipe BMPs do not protect the quality or beneficial uses of receiving waters between the source and the BMP; and (5) Offsite end-of-pipe BMPs do not aid in the effort to educate the public regarding sources of pollution and their prevention.
- c. Use of LID BMPs at new development projects can be an effective means for minimizing the impact of urban runoff discharges from the development projects on receiving waters. LID BMPs help preserve and restore the natural hydrologic cycle of the site, allowing for filtration and infiltration which can greatly reduce the volume, peak flow rate, velocity, and pollutant loads of urban runoff.
- d. Retail Gasoline Outlets (RGOs) are significant sources of pollutants in urban runoff. RGOs are points of convergence for motor vehicles for automotive related services such as repair, refueling, tire inflation, and radiator fill-up and consequently produce significantly higher loadings of hydrocarbons and trace metals (including copper and zinc) than other urban areas. To meet MEP, LID, source control, and treatment control BMPs are needed at RGOs that meet the following criteria: (a) 5,000 square feet or more, or (b) a projected Average Daily Traffic (ADT) of 100 or more vehicles per day. These are appropriate thresholds since vehicular development size and volume of traffic are good indicators of potential impacts of urban runoff from RGOs on receiving waters.
- e. Sites of heavy industry are significant sources of pollutants in urban runoff. Pollutant concentrations and loads in runoff from industrial sites are similar or exceed pollutant concentrations and loads in runoff from other land uses, such as commercial or residential land uses. As with other land uses, LID, source control, and treatment control BMPs are needed at sites of heavy industry in order to meet the MEP standard. These BMPs are necessary where the site of heavy industry is larger than one acre. The one acre threshold is appropriate, since it is consistent with requirements in the Phase II NPDES storm water regulations.
- f. If not properly designed or maintained, certain BMPs implemented or required by municipalities for urban runoff management may create a habitat for vectors (e.g. mosquitoes and rodents). However, proper BMP design and maintenance can prevent the creation of vector habitat. Nuisances and public health impacts resulting from vector breeding can be prevented with close collaboration and cooperative effort between municipalities and local vector control agencies and the State Department of Health Services during the development and implementation of urban runoff management programs.

3. Construction and Existing Development

- a. In accordance with federal NPDES regulations and to ensure the most effective oversight of industrial and construction site discharges, discharges of runoff from

industrial and construction sites are subject to dual (state and local) storm water regulation. Under this dual system, the Regional Board is responsible for enforcing the General Construction Activities Storm Water Permit, SWRCB Order 99-08 DWQ, NPDES No. CAS000002 (General Construction Permit) and the General Industrial Activities Storm Water Permit, SWRCB Order 97-03 DWQ, NPDES No. CAS000001 (General Industrial Permit), and each municipal Copermittee is responsible for enforcing its local permits, plans, and ordinances, which may require the implementation of additional BMPs than required under the statewide general permits.

- b. Identification of sources of pollutants in urban runoff (such as municipal areas and activities, industrial and commercial sites/sources, construction sites, and residential areas), development and implementation of BMPs to address those sources, and updating ordinances and approval processes are necessary for the Copermittees to ensure that discharges of pollutants into and from its MS4 are reduced to the MEP. Inspections and other compliance verification methods are needed to ensure minimum BMPs are implemented. Inspections are especially important at high risk areas for pollutant discharges.
- c. Historic and current development makes use of natural drainage patterns and features as conveyances for urban runoff. Urban streams used in this manner are part of the municipalities MS4 regardless of whether they are natural, man-made, or partially modified features. In these cases, the urban stream is both an MS4 and a receiving water.
- d. As operators of the MS4s, the Copermittees cannot passively receive and discharge pollutants from third parties. By providing free and open access to an MS4 that conveys discharges to waters of the U.S., the operator essentially accepts responsibility for discharges into the MS4 that it does not prohibit or control. These discharges may cause or contribute to a condition of contamination or a violation of water quality standards.
- e. Waste and pollutants which are deposited and accumulate in MS4 drainage structures will be discharged from these structures to waters of the U.S. unless they are removed or treated. These discharges may cause or contribute to, or threaten to cause or contribute to, a condition of pollution in receiving waters. For this reason, pollutant discharges into MS4s must be reduced to the MEP unless treatment within the MS4 occurs.
- f. Enforcement of local urban runoff related ordinances, permits, and plans is an essential component of every urban runoff management program and is specifically required in the federal storm water regulations and this Order. Each Copermittee is individually responsible for adoption and enforcement of ordinances and/or policies, implementation of identified control measures/BMPs needed to prevent or reduce pollutants in storm water runoff, and for the allocation of funds for the capital, operation and maintenance, administrative, and enforcement expenditures necessary to implement and enforce such control measures/BMPs under its jurisdiction.
- g. Education is an important aspect of every effective urban runoff management program and the basis for changes in behavior at a societal level. Education of municipal planning, inspection, and maintenance department staffs is especially critical to ensure that in-house staffs understand how their activities impact water

quality, how to accomplish their jobs while protecting water quality, and their specific roles and responsibilities for compliance with this Order. Public education, designed to target various urban land users and other audiences, is also essential to inform the public of how individual actions impact receiving water quality and how these impacts can be minimized.

- h. Public participation during the development of urban runoff management programs is necessary to ensure that all stakeholder interests and a variety of creative solutions are considered.

4. Watershed and Regional Urban Runoff Management

- a. Since urban runoff does not recognize political boundaries, watershed-based urban runoff management can greatly enhance the protection of receiving waters within a watershed. Such management provides a means to focus on the most important water quality problems in each watershed. By focusing on the most important water quality problems, watershed efforts can maximize protection of beneficial use in an efficient manner. Effective watershed-based urban runoff management actively reduces pollutant discharges and abates pollutant sources causing or contributing to watershed water quality problems; watershed-based urban runoff management that does not actively reduce pollutant discharges and abate pollutant sources causing or contributing to watershed water quality problems can necessitate implementation of the iterative process outlined in section A.3 of the Order. Watershed management of urban runoff does not require Copermittees to expend resources outside of their jurisdictions. Watershed management requires the Copermittees within a watershed to develop a watershed-based management strategy, which can then be implemented on a jurisdictional basis.
- b. Some urban runoff issues, such as residential education, can be effectively addressed on a regional basis. Regional approaches to urban runoff management can improve program consistency and promote sharing of resources, which can result in implementation of more efficient programs.
- c. Both regionally and on a watershed basis, it is important for the Copermittees to coordinate their water quality protection and land use planning activities to achieve the greatest protection of receiving water bodies. Copermittee coordination with other watershed stakeholders, especially Caltrans, the Department of Defense, and Native American Tribes, is also important. Establishment of a management structure, within which the Copermittees subject to this Order will fund and coordinate those aspects of their joint obligations, will help promote implementation of urban runoff management programs on a watershed and regional basis in a most cost effective manner.

E. STATUTE AND REGULATORY CONSIDERATIONS

- 1. The Receiving Water Limitations (RWL) language specified in this Order is consistent with language recommended by the USEPA and established in SWRCB Water Quality Order 99-05, adopted by the SWRCB on June 17, 1999. The RWL in this Order require compliance with water quality standards, which is to be achieved through an iterative approach requiring the implementation of improved and better-tailored BMPs over time. Compliance with receiving water limits based on applicable water quality standards is necessary to ensure that MS4 discharges will not cause or contribute to violations of water quality standards and the

creation of conditions of pollution.

2. The Water Quality Control Plan for the San Diego Basin (Basin Plan), identifies the following beneficial uses for surface waters in San Diego County: Municipal and Domestic Supply (MUN), Agricultural Supply (AGR), Industrial Process Supply (PROC), Industrial Service Supply (IND), Ground Water Recharge (GWR), Contact Water Recreation (REC1) Non-contact Water Recreation (REC2), Warm Freshwater Habitat (WARM), Cold Freshwater Habitat (COLD), Wildlife Habitat (WILD), Rare, Threatened, or Endangered Species (RARE), Freshwater Replenishment (FRSH), Hydropower Generation (POW), and Preservation of Biological Habitats of Special Significance (BIOL). The following additional beneficial uses are identified for coastal waters of San Diego County: Navigation (NAV), Commercial and Sport Fishing (COMM), Estuarine Habitat (EST), Marine Habitat (MAR), Aquaculture (AQUA), Migration of Aquatic Organisms (MIGR), Spawning, Reproduction, and/or Early Development (SPWN), and Shellfish Harvesting (SHELL).
3. This Order is in conformance with SWRCB Resolution No. 68-16 and the federal Antidegradation Policy described in 40 CFR 131.12.
4. Section 6217(g) of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA) requires coastal states with approved coastal zone management programs to address non-point pollution impacting or threatening coastal water quality. CZARA addresses five sources of non-point pollution: agriculture, silviculture, urban, marinas, and hydromodification. This NPDES permit addresses the management measures required for the urban category, with the exception of septic systems. The adoption and implementation of this NPDES permit relieves the Permittee from developing a non-point source plan, for the urban category, under CZARA. The Regional Board addresses septic systems through the administration of other programs.
5. Section 303(d)(1)(A) of the CWA requires that "Each state shall identify those waters within its boundaries for which the effluent limitations...are not stringent enough to implement any water quality standard (WQS) applicable to such waters." The CWA also requires states to establish a priority ranking of impaired waterbodies known as Water Quality Limited Segments and to establish Total Maximum Daily Loads (TMDLs) for such waters. This priority list of impaired waterbodies is called the Section 303(d) List. The current Section 303(d) List was approved by the SWRCB on February 4, 2003 and on July 25, 2003 by USEPA.
6. This Order fulfills a component of the TMDL Implementation Plan adopted by this Regional Board on August 14, 2002 for diazinon in Chollas Creek by establishing Water Quality Based Effluent Limits (WQBELs) for the Cities of San Diego, Lemon Grove, and La Mesa, the County of San Diego, and the San Diego Unified Port District; and by requiring: 1) legal authority, 2) implementation of a diazinon toxicity control plan and a diazinon public outreach/ education program, 3) achievement of the Compliance Schedule, and 4) a monitoring program. The establishment of WQBELs expressed as iterative BMPs to achieve the Waste Load Allocation (WLA) compliance schedule is appropriate and is expected to be sufficient to achieve the WLAs specified in the TMDL.
7. This Order fulfills a component of the TMDL Implementation Plan adopted by this Regional Board on February 9, 2005 for dissolved copper in Shelter Island Yacht Basin (SIYB) by establishing WQBELs expressed as BMPs to achieve the WLA of 30 kg copper / year for the City of San Diego and the San Diego Unified Port District. The establishment of WQBELs expressed as BMPs is appropriate and is expected to be sufficient to achieve the WLA

specified in the TMDL.

8. This Order establishes WQBELs and conditions consistent with the requirements and assumptions of the WLAs in the TMDLs as required by 40 CFR 122.44(d)(1)(vii)(B).
9. Requirements in this Order that are more explicit than the federal storm water regulations in 40 CFR 122.26 are prescribed in accordance with the CWA section 402(p)(3)(B)(iii) and are necessary to meet the MEP standard.
10. Urban runoff treatment and/or mitigation must occur prior to the discharge of urban runoff into a receiving water. Federal regulations at 40 CFR 131.10(a) state that in no case shall a state adopt waste transport or waste assimilation as a designated use for any waters of the U.S. Authorizing the construction of an urban runoff treatment facility within a water of the U.S., or using the water body itself as a treatment system or for conveyance to a treatment system, would be tantamount to accepting waste assimilation as an appropriate use for that water body. Furthermore, the construction, operation, and maintenance of a pollution control facility in a water body can negatively impact the physical, chemical, and biological integrity, as well as the beneficial uses, of the water body. This is consistent with USEPA guidance to avoid locating structural controls in natural wetlands.
11. The issuance of waste discharge requirements and an NPDES permit for the discharge of urban runoff from MS4s to waters of the U.S. is exempt from the requirement for preparation of environmental documents under the California Environmental Quality Act (CEQA) (Public Resources Code, Division 13, Chapter 3, section 21000 et seq.) in accordance with the CWC section 13389.

F. PUBLIC PROCESS

1. The Regional Board has notified the Copermittees, all known interested parties, and the public of its intent to consider adoption of an Order prescribing waste discharge requirements that would serve to renew an NPDES permit for the existing discharge of urban runoff.
2. The Regional Board has, at public meetings on (date), held public hearings and heard and considered all comments pertaining to the terms and conditions of this Order.

IT IS HEREBY ORDERED that the Copermittees, in order to meet the provisions contained in Division 7 of the California Water Code (CWC) and regulations adopted thereunder, and the provisions of the Clean Water Act (CWA) and regulations adopted thereunder, shall each comply with the following:

A. PROHIBITIONS AND RECEIVING WATER LIMITATIONS

1. Discharges into and from municipal separate storm sewer systems (MS4s) in a manner causing, or threatening to cause, a condition of pollution, contamination, or nuisance (as defined in CWC section 13050), in waters of the state are prohibited.
2. Discharges from MS4s containing pollutants which have not been reduced to the maximum extent practicable (MEP) are prohibited.²

² This prohibition does not apply to MS4 discharges which receive subsequent treatment to reduce pollutants to the MEP prior to entering receiving waters (e.g., low flow diversions to the sanitary sewer).

3. Discharges from MS4s that cause or contribute to the violation of water quality standards (designated beneficial uses and water quality objectives developed to protect beneficial uses) are prohibited.
 - a. Each Copermittee shall comply with section A.3 and section A.4 as it applies to Prohibition 5 in Attachment A of this Order through timely implementation of control measures and other actions to reduce pollutants in urban runoff discharges in accordance with the Jurisdictional Urban Runoff Management Program and other requirements of this Order including any modifications. The Jurisdictional Urban Runoff Management Program shall be designed to achieve compliance with section A.3 and section A.4 as it applies to Prohibition 5 in Attachment A of this Order. If exceedance(s) of water quality standards persist notwithstanding implementation of the Jurisdictional Urban Runoff Management Program and other requirements of this Order, the Copermittee shall assure compliance with section A.3 and section A.4 as it applies to Prohibition 5 in Attachment A of this Order by complying with the following procedure:
 - (1) Upon a determination by either the Copermittee or the Regional Board that MS4 discharges are causing or contributing to an exceedance of an applicable water quality standard, the Copermittee shall promptly notify and thereafter submit a report to the Regional Board that describes best management practices (BMPs) that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of water quality standards. The report may be incorporated in the annual update to the Jurisdictional Urban Runoff Management Program unless the Regional Board directs an earlier submittal. The report shall include an implementation schedule. The Regional Board may require modifications to the report;
 - (2) Submit any modifications to the report required by the Regional Board within 30 days of notification;
 - (3) Within 30 days following approval of the report described above by the Regional Board, the Copermittee shall revise its Jurisdictional Urban Runoff Management Program and monitoring program to incorporate the approved modified BMPs that have been and will be implemented, the implementation schedule, and any additional monitoring required;
 - (4) Implement the revised Jurisdictional Urban Runoff Management Program and monitoring program in accordance with the approved schedule.
 - b. So long as the Copermittee has complied with the procedures set forth above and is implementing the revised Jurisdictional Urban Runoff Management Program, the Copermittee does not have to repeat the same procedure for continuing or recurring exceedances of the same receiving water limitations unless directed by the Regional Board to do so.
 - c. Nothing in section A.3 shall prevent the Regional Board from enforcing any provision of this Order while the Copermittee prepares and implements the above report.

4. In addition to the above prohibitions, discharges from MS4s are subject to all Basin Plan prohibitions cited in Attachment A to this Order.

B. NON-STORM WATER DISCHARGES

1. Each Copermittee shall effectively prohibit all types of non-storm water discharges into its MS4 unless such discharges are either authorized by a separate National Pollutant Discharge Elimination System (NPDES) permit; or not prohibited in accordance with sections B.2 and B.3 below.
2. The following categories of non-storm water discharges are not prohibited unless a Copermittee or the Regional Board identifies the discharge category as a significant source of pollutants to waters of the U.S. For such a discharge category, the Copermittee shall either prohibit the discharge category or develop and implement appropriate control measures to reduce the discharge of pollutants to the MEP and report to the Regional Board pursuant to section J.
 - a. Diverted stream flows;
 - b. Rising ground waters;
 - c. Uncontaminated ground water infiltration [as defined at 40 CFR 35.2005(20)] to MS4s;
 - d. Uncontaminated pumped ground water;
 - e. Foundation drains;
 - f. Springs;
 - g. Water from crawl space pumps;
 - h. Footing drains;
 - i. Air conditioning condensation;
 - j. Flows from riparian habitats and wetlands;
 - k. Water line flushing;
 - l. Landscape irrigation;
 - m. Discharges from potable water sources not subject to NPDES Permit No. CAG679001, other than water main breaks;
 - n. Irrigation water;
 - o. Lawn watering;
 - p. Individual residential car washing; and
 - q. Dechlorinated swimming pool discharges.
3. Emergency fire fighting flows (i.e., flows necessary for the protection of life or property) do not require BMPs and need not be prohibited. As part of the Jurisdictional Urban Runoff Management Plan (JURMP), each Copermittee shall develop and implement a program to reduce pollutants from non-emergency fire fighting flows (i.e., flows from controlled or practice blazes and maintenance activities) identified by the Copermittee to be significant sources of pollutants to waters of the United States.
4. Each Copermittee shall examine all dry weather field screening and analytical monitoring results collected in accordance with section D.4 of this Order and Receiving Waters Monitoring and Reporting Program No. R9-2007-0001 to identify water quality problems which may be the result of any non-prohibited discharge category(ies) identified above in section B.2. Follow-up investigations shall be conducted as necessary to identify and control any non-prohibited discharge category(ies) listed above.

C. LEGAL AUTHORITY

1. Each Copermittee shall establish, maintain, and enforce adequate legal authority to control pollutant discharges into and from its MS4 through ordinance, statute, permit, contract or similar means. This legal authority must, at a minimum, authorize the Copermittee to:
 - a. Control the contribution of pollutants in discharges of runoff associated with industrial and construction activity to its MS4 and control the quality of runoff from industrial and construction sites. This requirement applies both to industrial and construction sites which have coverage under the statewide general industrial or construction storm water permits, as well as to those sites which do not. Grading ordinances shall be upgraded and enforced as necessary to comply with this Order.
 - b. Prohibit all identified illicit discharges not otherwise allowed pursuant to section B.2 including but not limited to:
 - (1) Sewage;
 - (2) Discharges of wash water resulting from the hosing or cleaning of gas stations, auto repair garages, or other types of automotive services facilities;
 - (3) Discharges resulting from the cleaning, repair, or maintenance of any type of equipment, machinery, or facility including motor vehicles, cement-related equipment, and port-a-potty servicing, etc.;
 - (4) Discharges of wash water from mobile operations such as mobile automobile washing, steam cleaning, power washing, and carpet cleaning, etc.;
 - (5) Discharges of wash water from the cleaning or hosing of impervious surfaces in municipal, industrial, commercial, and residential areas including parking lots, streets, sidewalks, driveways, patios, plazas, work yards and outdoor eating or drinking areas, etc.;
 - (6) Discharges of runoff from material storage areas containing chemicals, fuels, grease, oil, or other hazardous materials;
 - (7) Discharges of pool or fountain water containing chlorine, biocides, or other chemicals; discharges of pool or fountain filter backwash water;
 - (8) Discharges of sediment, pet waste, vegetation clippings, or other landscape or construction-related wastes; and
 - (9) Discharges of food-related wastes (e.g., grease, fish processing, and restaurant kitchen mat and trash bin wash water, etc.).
 - c. Prohibit and eliminate illicit connections to the MS4;
 - d. Control the discharge of spills, dumping, or disposal of materials other than storm water to its MS4;
 - e. Require compliance with conditions in Copermittee ordinances, permits, contracts or orders (i.e., hold dischargers to its MS4 accountable for their contributions of pollutants and flows);
 - f. Utilize enforcement mechanisms to require compliance with Copermittee storm water ordinances, permits, contracts, or orders;
 - g. Control the contribution of pollutants from one portion of the shared MS4 to another portion of the MS4 through interagency agreements among Copermittees. Control of

the contribution of pollutants from one portion of the shared MS4 to another portion of the MS4 through interagency agreements with other owners of the MS4 such as Caltrans, the Department of Defense, or Native American Tribes is encouraged;

- h. Carry out all inspections, surveillance, and monitoring necessary to determine compliance and noncompliance with local ordinances and permits and with this Order, including the prohibition on illicit discharges to the MS4. This means the Copermittee must have authority to enter, monitor, inspect, take measurements, review and copy records, and require regular reports from industrial facilities discharging into its MS4, including construction sites;
 - i. Require the use of BMPs to prevent or reduce the discharge of pollutants into MS4s to the MEP; and
 - j. Require documentation on the effectiveness of BMPs implemented to reduce the discharge of pollutants to the MS4 to the MEP.
- 2. Each Permittee shall include as part of its JURMP a statement certified by its chief legal counsel that the Copermittee has taken the necessary steps to obtain and maintain full legal authority to implement and enforce each of the requirements contained in 40 CFR 122.26(d)(2)(i)(A-F) and this Order. This statement shall include:
 - a. Identification of all departments within the jurisdiction that conduct urban runoff related activities, and their roles and responsibilities under this Order. Include an up to date organizational chart specifying these departments and key personnel.
 - b. Citation of urban runoff related ordinances and the reasons they are enforceable;
 - c. Identification of the local administrative and legal procedures available to mandate compliance with urban runoff related ordinances and therefore with the conditions of this Order;
 - d. A description of how urban runoff related ordinances are implemented and appealed; and
 - e. Description of whether the municipality can issue administrative orders and injunctions or if it must go through the court system for enforcement actions.

D. JURISDICTIONAL URBAN RUNOFF MANAGEMENT PROGRAM

Each Copermittee shall implement all requirements of section D of this Order no later than 365 days after adoption of the Order, unless otherwise specified in this Order. Prior to 365 days after adoption of the Order, each Copermittee shall at a minimum implement its Jurisdictional URMP document, as the document was developed and amended to comply with the requirements of Order No. 2001-01.

Each Copermittee shall develop and implement an updated Jurisdictional Urban Runoff Management Program for its jurisdiction. Each updated Jurisdictional Urban Runoff Management Program shall meet the requirements of section D of this Order, reduce the discharge of pollutants from the MS4 to the MEP, and prevent urban runoff discharges from the MS4 from causing or contributing to a violation of water quality standards.

1. Development Planning Component

Each Copermittee shall implement a program which meets the requirements of this section and (1) reduces Development Project discharges of pollutants from the MS4 to the MEP, (2) prevents Development Project discharges from the MS4 from causing or contributing to a violation of water quality standards, and (3) manages increases in runoff discharge rates and durations from Development Projects that are likely to cause increased erosion of stream beds and banks, silt pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force.

a. GENERAL PLAN

Each Copermittee shall revise as needed its General Plan or equivalent plan (e.g., Comprehensive, Master, or Community Plan) for the purpose of providing effective water quality and watershed protection principles and policies that direct land-use decisions and require implementation of consistent water quality protection measures for Development Projects.

b. ENVIRONMENTAL REVIEW PROCESS

Each Copermittee shall revise as needed their current environmental review processes to accurately evaluate water quality impacts and cumulative impacts and identify appropriate measures to avoid, minimize and mitigate those impacts for all Development Projects.

c. APPROVAL PROCESS CRITERIA AND REQUIREMENTS FOR ALL DEVELOPMENT PROJECTS

For all proposed Development Projects, each Copermittee during the planning process and prior to project approval and issuance of local permits shall prescribe the necessary requirements so that Development Project discharges of pollutants from the MS4 will be reduced to the MEP, will not cause or contribute to a violation of water quality standards, and will comply with Copermittee's ordinances, permits, plans, and requirements, and with this Order. The requirements shall include, but not be limited to, implementation by the project proponent of the following:

- (1) Source control BMPs that reduce storm water pollutants of concern in urban runoff, including storm drain system stenciling and signage, properly designed outdoor material storage areas, properly designed trash storage areas, and implementation of efficient irrigation systems;
- (2) LID BMPs where feasible which maximize infiltration, provide retention, slow runoff, minimize impervious footprint, direct runoff from impervious areas into landscaping, and construct impervious surfaces to minimum widths necessary;
- (3) Buffer zones for natural water bodies, where feasible. Where buffer zones are infeasible, require project proponent to implement other buffers such as trees, access restrictions, etc., where feasible;
- (4) Measures necessary so that grading or other construction activities meet the provisions specified in section D.2 of this Order; and
- (5) Submittal of proof of a mechanism under which ongoing long-term maintenance of all structural post-construction BMPs will be conducted.

d. STANDARD URBAN STORM WATER MITIGATION PLANS (SUSMPs) – APPROVAL PROCESS CRITERIA AND REQUIREMENTS FOR PRIORITY DEVELOPMENT PROJECTS

Each Copermittee shall implement an updated local SUSMP which meets the requirements of section D.1.d of this Order and (1) reduces Priority Development Project discharges of pollutants from the MS4 to the MEP, (2) prevents Priority Development Project runoff discharges from the MS4 from causing or contributing to a violation of water quality standards, and (3) manages increases in runoff discharge rates and durations from Priority Development Projects that are likely to cause increased erosion of stream beds and banks, silt pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force.³

(1) Definition of Priority Development Project

- (a) Priority Development Projects are: a) all new Development Projects that fall under the project categories or locations listed in section D.1.d.(2), and b) those redevelopment projects that create, add or replace at least 5,000 square feet of impervious surfaces on an already developed site that falls under the project categories or locations listed in section D.1.d.(2). Where redevelopment results in an increase of less than fifty percent of the impervious surfaces of a previously existing development, and the existing development was not subject to SUSMP requirements, the numeric sizing criteria discussed in section D.1.d.(6)(c) applies only to the addition, and not to the entire development. Where redevelopment results in an increase of more than fifty percent of the impervious surfaces of a previously existing development, the numeric sizing criteria applies to the entire development. Where a new Development Project feature, such as a parking lot, falls into a Priority Development Project Category, the entire project footprint is subject to SUSMP requirements.
- (b) In addition to the Priority Development Project Categories identified in section D.1.d.(2), within three years of adoption of this Order Priority Development Projects shall also include all other pollutant generating Development Projects that result in the disturbance of one acre or more of land.⁴ As an alternative to this one acre threshold, the Copermittees may collectively identify a different threshold, provided the Copermittees' threshold is at least as inclusive of Development Projects as the one acre threshold.

³ Updated SUSMP and hydromodification requirements shall apply to all priority projects or phases of priority projects which have not yet begun grading or construction activities at the time any updated SUSMP or hydromodification requirement commences. If a Copermittee determines that lawful prior approval of a project exists, whereby application of an updated SUSMP or hydromodification requirement to the project is infeasible, the updated SUSMP or hydromodification requirement need not apply to the project. Where feasible, the Copermittees shall utilize the SUSMP and hydromodification update periods to ensure that projects undergoing approval processes include application of the updated SUSMP and hydromodification requirements in their plans.

⁴ Pollutant generating Development Projects are those projects that generate pollutants at levels greater than background levels.

(2) Priority Development Project Categories

- (a) Housing subdivisions of 10 or more dwelling units. This category includes single-family homes, multi-family homes, condominiums, and apartments.
- (b) Commercial developments greater than one acre. This category is defined as any development on private land that is not for heavy industrial or residential uses where the land area for development is greater than one acre. The category includes, but is not limited to: hospitals; laboratories and other medical facilities; educational institutions; recreational facilities; municipal facilities; commercial nurseries; multi-apartment buildings; car wash facilities; mini-malls and other business complexes; shopping malls; hotels; office buildings; public warehouses; automotive dealerships; airfields; and other light industrial facilities.
- (c) Developments of heavy industry greater than one acre. This category includes, but is not limited to, manufacturing plants, food processing plants, metal working facilities, printing plants, and fleet storage areas (bus, truck, etc.).
- (d) Automotive repair shops. This category is defined as a facility that is categorized in any one of the following Standard Industrial Classification (SIC) codes: 5013, 5014, 5541, 7532-7534, or 7536-7539.
- (e) Restaurants. This category is defined as a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812), where the land area for development is greater than 5,000 square feet. Restaurants where land development is less than 5,000 square feet shall meet all SUSMP requirements except for structural treatment BMP and numeric sizing criteria requirement D.1.d.(6)(c) and hydromodification requirement D.1.g.
- (f) All hillside development greater than 5,000 square feet. This category is defined as any development which creates 5,000 square feet of impervious surface which is located in an area with known erosive soil conditions, where the development will grade on any natural slope that is twenty-five percent or greater.
- (g) Environmentally Sensitive Areas (ESAs). All development located within or directly adjacent to or discharging directly to an ESA (where discharges from the development or redevelopment will enter receiving waters within the ESA), which either creates 2,500 square feet of impervious surface on a proposed project site or increases the area of imperviousness of a proposed project site to 10% or more of its naturally occurring condition. "Directly adjacent" means situated within 200 feet of the ESA. "Discharging directly to" means outflow from a drainage conveyance system that is composed entirely of flows from the subject development or redevelopment site, and not commingled with flows from adjacent lands.
- (h) Parking lots 5,000 square feet or more or with 15 or more parking spaces and potentially exposed to urban runoff. Parking lot is defined as a land area or facility for the temporary parking or storage of motor vehicles used personally, for business, or for commerce.
- (i) Street, roads, highways, and freeways. This category includes any paved surface that is 5,000 square feet or greater used for the transportation of automobiles, trucks, motorcycles, and other vehicles.
- (j) Retail Gasoline Outlets (RGOs). This category includes RGOs that meet the following criteria: (a) 5,000 square feet or more or (b) a projected Average

Daily Traffic (ADT) of 100 or more vehicles per day.

(3) Pollutants of Concern

As part of its local SUSMP, each Copermittee shall develop and implement a procedure for pollutants of concern to be identified for each Priority Development Project. The procedure shall address, at a minimum: (1) Receiving water quality (including pollutants for which receiving waters are listed as impaired under CWA section 303(d)); (2) Land use type of the Development Project and pollutants associated with that land use type; and (3) Pollutants expected to be present on site.

(4) Low Impact Development (LID) BMP Requirements

Each Copermittee shall require each Priority Development Project to implement LID BMPs which will collectively minimize directly connected impervious areas and promote infiltration at Priority Development Projects:

- (a) The following LID site design BMPs shall be implemented at all Priority Development Projects as required below:
 - i. For Priority Development Projects with landscaped or other pervious areas, drain a portion of impervious areas (rooftops, parking lots, sidewalks, walkways, patios, etc) into pervious areas prior to discharge to the MS4. The amount of runoff from impervious areas that is to drain to pervious areas shall correspond with the total capacity of the project's pervious areas to infiltrate or treat runoff, taking into consideration the pervious areas' soil conditions, slope, and other pertinent factors.
 - ii. For Priority Development Projects with landscaped or other pervious areas, properly design and construct the pervious areas to effectively receive and infiltrate or treat runoff from impervious areas, taking into consideration the pervious areas' soil conditions, slope, and other pertinent factors.
 - iii. For Priority Development Projects with low traffic areas and appropriate soil conditions, construct a portion of walkways, trails, overflow parking lots, alleys, or other low-traffic areas with permeable surfaces, such as pervious concrete, porous asphalt, unit pavers, and granular materials.
- (b) The following LID BMPs listed below shall be implemented at all Priority Development Projects where applicable and feasible.
 - i. Conserve natural areas, including existing trees, other vegetation, and soils.
 - ii. Construct streets, sidewalks, or parking lot aisles to the minimum widths necessary, provided that public safety and a walkable environment for pedestrians are not compromised.
 - iii. Minimize the impervious footprint of the project.
 - iv. Minimize soil compaction.
 - v. Minimize disturbances to natural drainages (e.g., natural swales, topographic depressions, etc.)

(5) Source Control BMP Requirements

Each Copermittee shall require each Priority Development Project to implement source control BMPs. The source control BMPs to be required shall:

- (a) Minimize storm water pollutants of concern in urban runoff.
- (b) Include storm drain system stenciling or signage.
- (c) Include properly designed outdoor material storage areas.
- (d) Include properly designed trash storage areas.
- (e) Include efficient irrigation systems.
- (f) Include water quality requirements applicable to individual priority project categories.

(6) Treatment Control BMP Requirements⁵

Each Copermittee shall require each Priority Development Project to implement treatment control BMPs which meet the following treatment control BMP requirements:

- (a) Treatment control BMPs for all Priority Development Projects shall mitigate (infiltrate, filter, or treat) the required volume or flow of runoff (identified in section D.1.d.(6)(c)) from all developed portions of the project, including landscaped areas.
- (b) All treatment control BMPs shall be located so as to infiltrate, filter, or treat the required runoff volume or flow prior to its discharge to any waters of the U.S. Multiple Priority Development Projects may use shared treatment control BMPs as long as construction of any shared treatment control BMP is completed prior to the use or occupation of any Priority Development Project from which the treatment control BMP will receive runoff.
- (c) All treatment control BMPs for a single Priority Development Project shall collectively be sized to comply with the following numeric sizing criteria:
 - i. Volume-based treatment control BMPs shall be designed to mitigate (infiltrate, filter, or treat) the volume of runoff produced from a 24-hour 85th percentile storm event, as determined from the County of San Diego's 85th Percentile Precipitation Isopluvial Map; or
 - ii. Flow-based treatment control BMPs shall be designed to mitigate (infiltrate, filter, or treat) either: a) the maximum flow rate of runoff produced from a rainfall intensity of 0.2 inch of rainfall per hour, for each hour of a storm event; or b) the maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity (for each hour of a storm event), as determined from the local historical rainfall record, multiplied by a factor of two.

⁵ LID BMPs that are correctly designed to effectively infiltrate, filter, or treat runoff can be considered treatment control BMPs.

- (d) All treatment control BMPs for Priority Development Projects shall, at a minimum:
- i. Be ranked with a high or medium pollutant removal efficiency for the project's most significant pollutants of concern, as the pollutant removal efficiencies are identified in the Copermittees' Model SUSMP and the most current updates thereto. Treatment control BMPs with a low removal efficiency ranking shall only be approved by a Copermittee when a feasibility analysis has been conducted which exhibits that implementation of treatment control BMPs with high or medium removal efficiency rankings are infeasible for a Priority Development Project or portion of a Priority Development Project.
 - ii. Be correctly sized and designed so as to remove pollutants to the MEP.
 - iii. Target removal of pollutants of concern from urban runoff.
 - iv. Be implemented close to pollutant sources (where shared BMPs are not proposed), and prior to discharging into waters of the U.S.
 - v. Not be constructed within a receiving water.
 - vi. Include proof of a mechanism, to be provided by the project proponent or Copermittee, under which ongoing long-term maintenance will be conducted.

(7) Update of SUSMP BMP Requirements

The Copermittees shall collectively review and update the BMP requirements that are listed in their local SUSMPs. At a minimum, the update shall include removal of obsolete or ineffective BMPs, addition of LID and source control BMP requirements that meet or exceed the requirements of sections D.1.d.(4) and D.1.d.(5), and addition of LID BMPs that can be used for treatment, such as bioretention cells, bioretention swales, etc. The update shall also add appropriate LID BMPs to any tables or discussions in the local SUSMPs addressing pollutant removal efficiencies of treatment control BMPs. In addition, the update shall include review, and revision where necessary, of treatment control BMP pollutant removal efficiencies.

(8) Update of SUSMPs to Incorporate LID and Other BMP Requirements

- (a) In addition to the implementation of the BMP requirements of sections D.1.d.(4-7) within one year of adoption of this Order, the Copermittees shall also develop and submit an updated Model SUSMP that defines minimum LID and other BMP requirements to be incorporated into the Copermittees' local SUSMPs for application to Priority Development Projects. The purpose of the updated Model SUSMP shall be to establish minimum standards to maximize the use of LID practices and principles in local Copermittee programs as a means of reducing stormwater runoff. It shall meet the following minimum requirements:
- i. Establishment of LID BMP requirements that meet or exceed the minimum requirements listed in section D.1.d.(4) above.
 - ii. Establishment of source control BMP requirements that meet or exceed the minimum requirements listed in section D.1.d.(5) above.
 - iii. Establishment of treatment control BMP requirements that meet or exceed the minimum requirements listed in section D.1.d.(6) above.

- iv. Establishment of siting, design, and maintenance criteria for each LID and treatment control BMP listed in the Model SUSMP, so that implemented LID and treatment control BMPs are constructed correctly and are effective at pollutant removal and/or runoff control. LID techniques, such as soil amendments, shall be incorporated into the criteria for appropriate treatment control BMPs.
 - v. Establishment of criteria to aid in determining Priority Development Project conditions where implementation of each LID BMP listed in section D.1.d.(4)(b) is applicable and feasible.
 - vi. Establishment of a requirement for Priority Development Projects with low traffic areas and appropriate or amendable soil conditions to construct a portion of walkways, trails, overflow parking lots, alleys, or other low-traffic areas with permeable surfaces, such as pervious concrete, porous asphalt, unit pavers, and granular materials.
 - vii. Establishment of restrictions on infiltration of runoff from Priority Development Project categories or Priority Development Project areas that generate high levels of pollutants, if necessary.
- (b) The updated Model SUSMP shall be submitted within 18 months of adoption of this Order. If, within 60 days of submittal of the updated Model SUSMP, the Copermittees have not received in writing from the Regional Board either (1) a finding of adequacy of the updated Model SUSMP or (2) a modified schedule for its review and revision, the updated Model SUSMP shall be deemed adequate, and the Copermittees shall implement its provisions in accordance with section D.1.d.(8)(c) below.
- (c) Within 365 days of Regional Board acceptance of the updated Model SUSMP, each Copermittee shall update its local SUSMP to implement the requirements established pursuant to section D.1.d.(8)(a). In addition to the requirements of section D.1.d.(8)(a), each Copermittee's updated local SUSMP shall include the following:
- i. A requirement that each Priority Development Project use the criteria established pursuant to section D.1.d.(8)(a)v to demonstrate applicability and feasibility, or lack thereof, of implementation of the LID BMPs listed in section D.1.d.(4)(b).
 - ii. A review process which verifies that all BMPs to be implemented will meet the designated siting, design, and maintenance criteria, and that each Priority Development Project is in compliance with all applicable SUSMP requirements.

(9) Implementation Process

As part of its local SUSMP, each Copermittee shall implement a process to verify compliance with SUSMP requirements. The process shall identify at what point in the planning process Priority Development Projects will be required to meet SUSMP requirements. The process shall also include identification of the roles and responsibilities of various municipal departments in implementing the SUSMP requirements, as well as any other measures necessary for the implementation of SUSMP requirements.

(10) Downstream Erosion

As part of its local SUSMP, each Copermittee shall develop and apply criteria to Priority Development Projects so that runoff discharge rates, durations, and velocities from Priority Development Projects are controlled to maintain or reduce downstream erosion conditions and protect stream habitat. Upon adoption of the Hydromodification Management Plan (HMP) by the Regional Board (section D.1.g), individual Copermittee criteria for control of downstream erosion shall be superseded by criteria identified in the HMP.

(11) Waiver Provision

(a) A Copermittee may provide for a project to be waived from the requirement of meeting numeric sizing criteria (sections D.1.d.(6)(c) or D.1.d.(8)(a)iii) if infeasibility can be established. A waiver of infeasibility shall only be granted by a Copermittee when all available BMPs have been considered and rejected as infeasible. Copermittees shall notify the Regional Board within 5 days of each waiver issued and shall include the following information in the notification:

- i. Name of the person granting each waiver;
- ii. Name of developer receiving the waiver;
- iii. Site location;
- iv. Reason for waiver; and
- v. Description of BMPs required.

(b) The Copermittees may collectively or individually develop a program to require project proponents who have received waivers to transfer the savings in cost, as determined by the Copermittee(s), to a storm water mitigation fund. This program may be implemented by all Copermittees that issue waivers. Funds may be used on projects to improve urban runoff quality within the watershed of the waived project. The waiver mitigation program should, at a minimum, identify:

- i. The entity or entities that will manage the storm water mitigation fund (i.e., assume full responsibility for);
- ii. The range and types of acceptable projects for which mitigation funds may be expended;
- iii. The entity or entities that will assume full responsibility for each mitigation project including its successful completion; and
- iv. How the dollar amount of fund contributions will be determined.

(12) Infiltration and Groundwater Protection

To protect groundwater quality, each Copermittee shall apply restrictions to the use of treatment control BMPs that are designed to primarily function as centralized infiltration devices (such as large infiltration trenches and infiltration basins). Such restrictions shall be designed so that the use of such infiltration treatment control BMPs shall not cause or contribute to an exceedance of groundwater quality objectives. At a minimum, each treatment control BMP designed to primarily function as a centralized infiltration device shall meet the restrictions below, unless it is demonstrated that a restriction is not necessary to

protect groundwater quality. The Copermittees may collectively or individually develop alternative restrictions on the use of treatment control BMPs which are designed to primarily function as centralized infiltration devices. Alternative restrictions developed by the Copermittees can partially or wholly replace the restrictions listed below. The restrictions are not intended to be applied to small infiltration systems dispersed throughout a development project.

- (a) Urban runoff shall undergo pretreatment such as sedimentation or filtration prior to infiltration;
- (b) All dry weather flows containing significant pollutant loads shall be diverted from infiltration devices;
- (c) Pollution prevention and source control BMPs shall be implemented at a level appropriate to protect groundwater quality at sites where infiltration treatment control BMPs are to be used;
- (d) Infiltration treatment control BMPs shall be adequately maintained so that they remove pollutants to the MEP;
- (e) The vertical distance from the base of any infiltration treatment control BMP to the seasonal high groundwater mark shall be at least 10 feet. Where groundwater basins do not support beneficial uses, this vertical distance criteria may be reduced, provided groundwater quality is maintained;
- (f) The soil through which infiltration is to occur shall have physical and chemical characteristics (such as appropriate cation exchange capacity, organic content, clay content, and infiltration rate) which are adequate for proper infiltration durations and treatment of urban runoff for the protection of groundwater beneficial uses;
- (g) Infiltration treatment control BMPs shall not be used for areas of industrial or light industrial activity; areas subject to high vehicular traffic (25,000 or greater average daily traffic on main roadway or 15,000 or more average daily traffic on any intersecting roadway); automotive repair shops; car washes; fleet storage areas (bus, truck, etc.); nurseries⁶; and other high threat to water quality land uses and activities as designated by each Permittee; and
- (h) Infiltration treatment control BMPs shall be located a minimum of 100 feet horizontally from any water supply wells.

e. TREATMENT CONTROL BMP MAINTENANCE TRACKING

- (1) Each Copermittee shall develop and utilize a watershed-based database to track and inventory approved treatment control BMPs and treatment control BMP maintenance within its jurisdiction. At a minimum, the database shall include information on treatment control BMP type, location, watershed, date of construction, party responsible for maintenance, maintenance certifications or verifications, inspections, inspection findings, and corrective actions.
- (2) Each Copermittee shall develop and implement a program to verify that approved treatment control BMPs are operating effectively and have been adequately maintained. At a minimum, the program shall include the following:
 - (a) An annual inventory of all approved treatment control BMPs within the Copermittee's jurisdiction. The inventory shall also include all treatment control BMPs approved during the previous permit cycle.

⁶ Except with regard to treated nursery runoff or clean storm water runoff.

- (b) The prioritization of all projects with approved treatment control BMPs into high, medium, and low priority categories. At a minimum, projects with drainage insert treatment control BMPs shall be designated as at least a medium priority. Prioritization of other projects with treatment control BMPs shall include consideration of treatment control BMP size, recommended maintenance frequency, likelihood of operational and maintenance issues, location, receiving water quality, and other pertinent factors.
 - (c) 100% of projects with treatment control BMPs that are high priority shall be inspected by the Copermittee annually. 50% of projects with drainage insert treatment control BMPs shall be inspected by the Copermittee annually. Treatment control BMPs that are low priority shall be inspected as needed. All inspections shall verify effective operation and maintenance of the treatment control BMPs, as well as compliance with all ordinances, permits, and this Order. A minimum of 20% of the total number of projects with approved treatment control BMPs, and a maximum of 200% of the average number of projects with treatment control BMPs approved per year, shall be inspected annually.
 - (d) Requirement of annual verification of effective operation and maintenance of each approved treatment control BMP by the party responsible for the treatment control BMP maintenance.
- (3) Operation and maintenance verifications shall be required prior to each rainy season.
 - (4) Inspections of high priority treatment control BMPs shall be conducted prior to each rainy season.
- f. **BMP VERIFICATION**

Prior to occupancy of each Priority Development Project subject to SUSMP requirements, each Copermittee shall inspect the constructed LID, source control, and treatment control BMPs to verify that they have been constructed in compliance with all specifications, plans, permits, ordinances, and this Order. This initial BMP verification inspection does not constitute an operation and maintenance inspection, as required above in section D.1.e.(2)(c).

- g. **HYDROMODIFICATION - LIMITATIONS ON INCREASES OF RUNOFF DISCHARGE RATES AND DURATIONS⁷**

Each Copermittee shall collaborate with the other Copermittees to develop and implement a Hydromodification Management Plan (HMP) to manage increases in runoff discharge rates and durations from all Priority Development Projects, where such increased rates and durations are likely to cause increased erosion of channel

⁷ Updated SUSMP and hydromodification requirements shall apply to all priority projects or phases of priority projects which have not yet begun grading or construction activities at the time any updated SUSMP or hydromodification requirement commences. If a Copermittee determines that lawful prior approval of a project exists, whereby application of an updated SUSMP or hydromodification requirement to the project is infeasible, the updated SUSMP or hydromodification requirement need not apply to the project. Where feasible, the Copermittees shall utilize the SUSMP and hydromodification update periods to ensure that projects undergoing approval processes include application of the updated SUSMP and hydromodification requirements in their plans.

beds and banks, sediment pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force. The HMP, once approved by the Regional Board, shall be incorporated into the local SUSMP and implemented by each Copermittee so that post-project runoff discharge rates and durations shall not exceed estimated pre-project discharge rates and durations where the increased discharge rates and durations will result in increased potential for erosion or other significant adverse impacts to beneficial uses, attributable to changes in the discharge rates and durations.

(1) The HMP shall:

- (a) Identify a standard for channel segments which receive urban runoff discharges from Priority Development Projects. The channel standard shall maintain the pre-project erosion and deposition characteristics of channel segments receiving urban runoff discharges from Priority Development Projects as necessary to maintain or improve the channel segments' stability conditions.
- (b) Utilize continuous simulation of the entire rainfall record to identify a range of runoff flows⁸ for which Priority Development Project post-project runoff flow rates and durations shall not exceed pre-project runoff flow rates and durations, where the increased flow rates and durations will result in increased potential for erosion or other significant adverse impacts to beneficial uses, attributable to changes in the flow rates and durations. The lower boundary of the range of runoff flows identified shall correspond with the critical channel flow that produces the critical shear stress that initiates channel bed movement or that erodes the toe of channel banks. The identified range of runoff flows may be different for specific watersheds, channels, or channel reaches.
- (c) Require Priority Development Projects to implement hydrologic control measures so that Priority Development Projects' post-project runoff flow rates and durations (1) do not exceed pre-project runoff flow rates and durations for the range of runoff flows identified under section D.1.g.(1)(b), where the increased flow rates and durations will result in increased potential for erosion or other significant adverse impacts to beneficial uses, attributable to changes in the flow rates and durations, and (2) do not result in channel conditions which do not meet the channel standard developed under section D.1.g.(1)(a) for channel segments downstream of Priority Development Project discharge points.
- (d) Include other performance criteria (numeric or otherwise) for Priority Development Projects as necessary to prevent urban runoff from the projects from increasing erosion of channel beds and banks, silt pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force.
- (e) Include a review of pertinent literature.
- (f) Include a protocol to evaluate potential hydrograph change impacts to downstream watercourses from Priority Development Projects.
- (g) Include a description of how the Copermittees will incorporate the HMP requirements into their local approval processes.

⁸ The identified range of runoff flows to be controlled should be expressed in terms of peak flow rates of rainfall events, such as "10% of the pre-project 2-year peak flow up to the pre-project 10-year peak flow."

- (h) Include criteria on selection and design of management practices and measures (such as detention, retention, and infiltration) to control flow rates and durations and address potential hydromodification impacts.
 - (i) Include technical information supporting any standards and criteria proposed.
 - (j) Include a description of inspections and maintenance to be conducted for management practices and measures to control flow rates and durations and address potential hydromodification impacts.
 - (k) Include a description of pre- and post-project monitoring and other program evaluations to be conducted to assess the effectiveness of implementation of the HMP.
 - (l) Include mechanisms for addressing cumulative impacts within a watershed on channel morphology.
 - (m) Include information on evaluation of channel form and condition, including slope, discharge, vegetation, underlying geology, and other information, as appropriate.
- (2) The HMP may include implementation of planning measures (e.g., buffers and restoration activities, including revegetation, use of less-impacting facilities at the point(s) of discharge, etc.) to allow expected changes in stream channel cross sections, vegetation, and discharge rates, velocities, and/or durations without adverse impacts to channel beneficial uses. Such measures shall not include utilization of non-naturally occurring hardscape materials such as concrete, riprap, gabions, etc.
- (3) Section D.1.g.(1)(c) does not apply to Development Projects where the project discharges stormwater runoff into channels or storm drains where the pre-existing channel or storm drain conditions result in minimal potential for erosion or other impacts to beneficial uses. Such situations may include discharges into channels that are concrete-lined or significantly hardened (e.g., with rip-rap, sackrete, etc.) downstream to their outfall in bays or the ocean; underground storm drains discharging to bays or the ocean; and construction of projects where the sub-watersheds below the projects' discharge points are highly impervious (e.g., >70%) and the potential for single-project and/or cumulative impacts is minimal. Specific criteria for identification of such situations shall be included as a part of the HMP. However, plans to restore a channel reach may re-introduce the applicability of HMP controls, and would need to be addressed in the HMP.

(4) HMP Reporting

The Copermittees shall collaborate to report on HMP development as required in section J.2.a of this Order.

(5) HMP Implementation

180 days after approval of the HMP by the Regional Board, each Copermittee shall incorporate into its local SUSMP and implement the HMP for all applicable Priority Development Projects. Prior to approval of the HMP by the Regional Board, the early implementation of measures likely to be included in the HMP shall be encouraged by the Copermittees.

(6) Interim Hydromodification Criteria for Projects Disturbing 50 Acres or More

Within 365 days of adoption of this Order, the Copermittees shall collectively identify an interim range of runoff flow rates for which Priority Development Project post-project runoff flow rates and durations shall not exceed pre-project runoff flow rates and durations (Interim Hydromodification Criteria), where the increased discharge flow rates and durations will result in increased potential for erosion or other significant adverse impacts to beneficial uses, attributable to changes in flow rates and durations. Development of the Interim Hydromodification Criteria shall include identification of methods to be used by Priority Development Projects to exhibit compliance with the criteria, including continuous simulation of the entire rainfall record. Starting 365 days after adoption of this Order and until the final Hydromodification Management Plan standard and criteria are implemented, each Copermittee shall require Priority Development Projects disturbing 50 acres or more to implement hydrologic controls to manage post-project runoff flow rates and durations as required by the Interim Hydromodification Criteria. Development Projects disturbing 50 acres or more are exempt from this requirement when:

- (a) The project would discharge into channels that are concrete-lined or significantly hardened (e.g., with rip-rap, sackcrete, etc.) downstream to their outfall in bays or the ocean;
- (b) The project would discharge into underground storm drains discharging directly to bays or the ocean; or
- (c) The project would discharge to a channel where the watershed areas below the project's discharge points are highly impervious (e.g. >70%).

h. ENFORCEMENT OF DEVELOPMENT SITES

Each Copermittee shall enforce its storm water ordinance for all Development Projects and at all development sites as necessary to maintain compliance with this Order. Copermittee ordinances or other regulatory mechanisms shall include appropriate sanctions to achieve compliance. Sanctions shall include the following or their equivalent: Non-monetary penalties, fines, bonding requirements, and/or permit or occupancy denials for non-compliance.

2. Construction Component

Each Copermittee shall implement a construction program which meets the requirements of this section, reduces construction site discharges of pollutants from the MS4 to the MEP, and prevents construction site discharges from the MS4 from causing or contributing to a violation of water quality standards.

a. ORDINANCE UPDATE AND APPROVAL PROCESS

- (1) Within 365 days of adoption of this Order, each Copermittee shall review and update its grading ordinances and other ordinances as necessary to achieve full compliance with this Order, including requirements for the implementation of all designated BMPs and other measures.
- (2) Prior to approval and issuance of local construction and grading permits, each Copermittee shall:

- (a) Require all individual proposed construction sites to implement designated BMPs and other measures so that pollutants discharged from the site will be reduced to the maximum extent practicable and will not cause or contribute to a violation of water quality standards.
- (b) Prior to permit issuance, require and review the project proponent's storm water management plan to verify compliance with their grading ordinance, other ordinances, and this Order.
- (c) Verify that project proponents subject to California's statewide General NPDES Permit for Storm Water Discharges Associated With Construction Activities, (hereinafter General Construction Permit), have existing coverage under the General Construction Permit.

b. SOURCE IDENTIFICATION

Each Copermittee shall maintain and update monthly a watershed based inventory of all construction sites within its jurisdiction. The use of an automated database system, such as Geographical Information System (GIS) is highly recommended.

c. BMP IMPLEMENTATION

- (1) Each Copermittee shall designate a minimum set of BMPs and other measures to be implemented at construction sites. The designated minimum set of BMPs shall include, at a minimum:

(a) General Site Management

- i. Pollution prevention, where appropriate.
- ii. Development and implementation of a storm water management plan.
- iii. Minimization of areas that are cleared and graded to only the portion of the site that is necessary for construction;
- iv. Minimization of exposure time of disturbed soil areas;
- v. Minimization of grading during the wet season and correlation of grading with seasonal dry weather periods to the extent feasible.
- vi. Limitation of grading to a maximum disturbed area as determined by each Copermittee before either temporary or permanent erosion controls are implemented to prevent storm water pollution. The Copermittee has the option of temporarily increasing the size of disturbed soil areas by a set amount beyond the maximum, if the individual site is in compliance with applicable storm water regulations and the site has adequate control practices implemented to prevent storm water pollution.
- vii. Temporary stabilization and reseedling of disturbed soil areas as rapidly as feasible;
- viii. Preservation of natural hydrologic features where feasible;
- ix. Preservation of riparian buffers and corridors where feasible;
- x. Maintenance of all BMPs, until removed; and
- xi. Retention, reduction, and proper management of all pollutant discharges on site to the MEP standard.

(b) Erosion and Sediment Controls

- i. Erosion prevention, to be used as the most important measure for keeping sediment on site during construction, but never as the single method;
 - ii. Sediment controls, to be used as a supplement to erosion prevention for keeping sediment on-site during construction;
 - iii. Slope stabilization on all inactive slopes during the rainy season and during rain events in the dry season;
 - iv. Slope stabilization on all active slopes during rain events regardless of the season; and
 - v. Permanent revegetation or landscaping as early as feasible.
- (2) Each Copermittee shall require implementation of advanced treatment for sediment at construction sites that are determined by the Copermittee to be an exceptional threat to water quality. In evaluating the threat to water quality, the following factors shall be considered by the Copermittee:
 - (a) Soil erosion potential or soil type;
 - (b) The site's slopes;
 - (c) Project size and type;
 - (d) Sensitivity of receiving water bodies;
 - (e) Proximity to receiving water bodies;
 - (f) Non-storm water discharges;
 - (g) Ineffectiveness of other BMPs; and
 - (h) Any other relevant factors.
- (3) Each Copermittee shall implement, or require the implementation of, the designated minimum BMPs and any additional measures necessary to comply with this Order at each construction site within its jurisdiction year round. However, BMP implementation requirements can vary based on wet and dry seasons. Dry season BMP implementation must plan for and address rain events that may occur during the dry season.
- (4) Each Copermittee shall implement, or require implementation of, additional controls for construction sites tributary to CWA section 303(d) water body segments impaired for sediment as necessary to comply with this Order. Each Copermittee shall implement, or require implementation of, additional controls for construction sites within or adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas (as defined in section Attachment C of this Order) as necessary to comply with this Order.

d. INSPECTION OF CONSTRUCTION SITES

Each Copermittee shall conduct construction site inspections for compliance with its local ordinances (grading, storm water, etc.), permits (construction, grading, etc.), and this Order.

- (1) During the wet season, each Copermittee shall inspect at least biweekly (every two weeks), all construction sites within its jurisdiction meeting the following

criteria:

- (a) All sites 50 acres or more in size and grading will occur during the wet season;
- (b) All sites 1 acre or more, and tributary to a CWA section 303(d) water body segment impaired for sediment or within or directly adjacent to or discharging directly to a receiving water within an ESA; and
- (c) Other sites determined by the Copermittees or the Regional Board as a significant threat to water quality. In evaluating threat to water quality, the following factors shall be considered:
 - i. soil erosion potential;
 - ii. site slope;
 - iii. project size and type;
 - iv. sensitivity of receiving water bodies;
 - v. proximity to receiving water bodies;
 - vi. non-storm water discharges;
 - vii. past record of non-compliance by the operators of the construction site; and
 - viii. any other relevant factors.
- (2) During the wet season, each Copermittee shall inspect at least monthly, all construction sites with one acre or more of soil disturbance not meeting the criteria specified above in section D.2.c.(1).
- (3) During the wet season, each Copermittee shall inspect as needed, construction sites less than 1 acre in size.
- (4) Each Copermittee shall inspect all construction sites as needed during the dry season.
- (5) Based upon site inspection findings, each Copermittee shall implement all follow-up actions (i.e., reinspection, enforcement) necessary to comply with this Order.
- (6) Inspections of construction sites shall include, but not be limited to:
 - (a) Check for coverage under the General Construction Permit (Notice of Intent (NOI) and/or Waste Discharge Identification No.) during initial inspections;
 - (b) Assessment of compliance with Permittee ordinances and permits related to urban runoff, including the implementation and maintenance of designated minimum BMPs;
 - (c) Assessment of BMP effectiveness;
 - (d) Visual observations for non-storm water discharges, potential illicit connections, and potential discharge of pollutants in storm water runoff;
 - (e) Education and outreach on storm water pollution prevention, as needed; and
 - (f) Creation of a written or electronic inspection report.
- (7) The Copermittees shall track the number of inspections for the inventoried construction sites throughout the reporting period to verify that the sites are inspected at the minimum frequencies required.

e. ENFORCEMENT OF CONSTRUCTION SITES

Each Copermittee shall develop and implement an escalating enforcement process that achieves prompt corrective actions at construction sites for violations of the Copermittee's water quality protection permit requirements and ordinances. This enforcement process shall include authorizing the Copermittee's construction site inspectors to take immediate enforcement actions when appropriate and necessary. The enforcement process shall include appropriate sanctions such as stop work orders, non-monetary penalties, fines, bonding requirements, and/or permit denials for non-compliance.

f. REPORTING OF NON-COMPLIANT SITES

In addition to the notification requirements in section 5(e) of Attachment B, each Copermittee shall notify the Regional Board when the Copermittee issues a stop work order or other high level enforcement to a construction site in their jurisdiction as a result of storm water violations.

3. Existing Development Component

a. MUNICIPAL

Each Copermittee shall implement a municipal program which meets the requirements of this section, reduces municipal discharges of pollutants from the MS4 to the MEP, and prevents municipal discharges from the MS4 from causing or contributing to a violation of water quality standards.

(1) Source Identification

Each Copermittee shall annually update a watershed based inventory of municipal areas and activities. The inventory shall include the name, address (if applicable), and a description of the area/activity, which pollutants are potentially generated by the area/activity, and identification of whether the area/activity is tributary to a CWA section 303(d) water body segment and generates pollutants for which the water body segment is impaired. The use of an automated database system, such as Geographical Information System (GIS) is highly recommended when applicable, but not required.

(2) BMP Implementation

- (a) Each Copermittee shall implement pollution prevention methods in its municipal program and shall require their use by appropriate municipal departments and personnel, where appropriate.
- (b) Each Copermittee shall designate a minimum set of BMPs for all municipal areas and activities. The designated minimum BMPs for municipal areas and activities shall be area or activity specific as appropriate.
- (c) Each Copermittee shall implement, or require the implementation of, the designated minimum BMPs and any additional measures necessary to comply with this Order for each municipal area or activity within its

jurisdiction.

- (d) Each Copermittee shall evaluate existing flood control devices to determine if retrofitting the device to provide additional pollutant removal from urban runoff is feasible. When conducting flood control device retrofit projects, each Copermittee shall incorporate permanent pollutant removal measures into the projects, where feasible.
- (e) Each Copermittee shall implement, or require implementation of, any additional controls for municipal areas and activities tributary to CWA section 303(d) impaired water body segments (where an area or activity generates pollutants for which the water body segment is impaired) as necessary to comply with this Order. Each Copermittee shall implement, or require implementation of, additional controls for municipal areas and activities within or directly adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas (as defined in Attachment C of this Order) as necessary to comply with this Order.
- (f) Each Copermittee shall implement, or require implementation of, additional controls for special events within their jurisdiction that are expected to generate significant trash and litter. Controls to consider shall include:
 - i. Temporary screens on catch basins and storm drain inlets;
 - ii. Temporary fencing to prevent windblown trash from entering adjacent water bodies and MS4 channels;
 - iii. Proper management of trash and litter;
 - iv. Catch basin cleaning following the special event and prior to an anticipated rain event;
 - v. Street sweeping of roads, streets, highways and parking facilities following the special event; and
 - vi. Other equivalent controls.

(3) Operation and Maintenance of Municipal Separate Storm Sewer System and Structural Controls

- (a) Each Copermittee shall implement a schedule of inspection and maintenance activities to verify proper operation of all municipal structural treatment controls designed to reduce pollutant discharges to or from its MS4s and related drainage structures.
- (b) Each Copermittee shall implement a schedule of maintenance activities for the MS4 and MS4 facilities (catch basins, storm drain inlets, open channels, etc). The maintenance activities shall, at a minimum, include:
 - i. Inspection at least once a year between May 1 and September 30 of each year for all MS4 facilities that receive or collect high volumes of trash and debris. All other MS4 facilities shall be inspected at least annually throughout the year.
 - ii. Following two years of inspections, any MS4 facility that requires inspection and cleaning less than annually may be inspected as needed, but not less than every other year.

- iii. Any catch basin or storm drain inlet that has accumulated trash and debris greater than 33% of design capacity shall be cleaned in a timely manner. Any MS4 facility that is designed to be self cleaning shall be cleaned of any accumulated trash and debris immediately. Open channels shall be cleaned of observed anthropogenic litter in a timely manner.
- iv. Record keeping of the maintenance and cleaning activities including the overall quantity of waste removed.
- v. Proper disposal of waste removed pursuant to applicable laws.
- vi. Measures to eliminate waste discharges during MS4 maintenance and cleaning activities.

(4) Management of Pesticides, Herbicides, and Fertilizers

The Copermittees shall implement BMPs to reduce the contribution of pollutants associated with the application, storage, and disposal of pesticides, herbicides and fertilizers from municipal areas and activities to MS4s. Important municipal areas and activities include municipal facilities, public rights-of-way, parks, recreational facilities, golf courses, cemeteries, botanical or zoological gardens and exhibits, landscaped areas, etc.

Such BMPs shall include, at a minimum: (1) educational activities, permits, certifications and other measures for municipal applicators and distributors; (2) integrated pest management measures that rely on non-chemical solutions; (3) the use of native vegetation; (4) schedules for irrigation and chemical application; and (5) the collection and proper disposal of unused pesticides, herbicides, and fertilizers.

(5) Sweeping of Municipal Areas

Each Copermittee shall implement a program to sweep improved (possessing a curb and gutter) municipal roads, streets, highways, and parking facilities. The program shall include the following measures:

- (a) Roads, streets, highways, and parking facilities identified as consistently generating the highest volumes of trash and/or debris shall be swept at least two times per month.
- (b) Roads, streets, highways, and parking facilities identified as consistently generating moderate volumes of trash and/or debris shall be swept at least monthly.
- (c) Roads, streets, highways, and parking facilities identified as generating low volumes of trash and/or debris shall be swept as necessary, but no less than once per year.

(6) Infiltration From Sanitary Sewer to MS4/Provide Preventive Maintenance of Both

Each Copermittee shall implement controls and measures to prevent and eliminate infiltration of seepage from municipal sanitary sewers to MS4s through thorough, routine preventive maintenance of the MS4. Each Copermittee that

operates both a municipal sanitary sewer system and a MS4 shall implement controls and measures to prevent and eliminate infiltration of seepage from the municipal sanitary sewers to the MS4s that shall include overall sanitary sewer and MS4 surveys and thorough, routine preventive maintenance of both.

(7) Inspection of Municipal Areas and Activities

- (a) At a minimum, each Copermittee shall inspect the following high priority municipal areas and activities annually:
 - i. Roads, Streets, Highways, and Parking Facilities.
 - ii. Flood Management Projects and Flood Control Devices.
 - iii. Areas and activities tributary to a C WA section 303(d) impaired water body segment, where an area or activity generates pollutants for which the water body segment is impaired. Areas and activities within or adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas (as defined in Attachment C of this Order).
 - iv. Municipal Facilities.
 - [1] Active or closed municipal landfills;
 - [2] Publicly owned treatment works (including water and wastewater treatment plants) and sanitary sewage collection systems;
 - [3] Solid waste transfer facilities;
 - [4] Land application sites;
 - [5] Corporate yards including maintenance and storage yards for materials, waste, equipment and vehicles; and
 - [6] Household hazardous waste collection facilities.
 - v. Municipal airfields.
 - vi. Parks and recreation facilities.
 - vii. Special event venues following special events (festivals, sporting events, etc.)
 - viii. Power washing.
 - ix. Other municipal areas and activities that the Copermittee determines may contribute a significant pollutant load to the MS4.
- (b) Other municipal areas and activities shall be inspected as needed.
- (c) Based upon site inspection findings, each Copermittee shall implement all follow-up actions necessary to comply with this Order.

(8) Enforcement of Municipal Areas and Activities

Each Copermittee shall enforce its storm water ordinance for all municipal areas and activities as necessary to maintain compliance with this Order.

b. INDUSTRIAL AND COMMERCIAL

Each Copermittee shall implement an industrial and commercial program which meets the requirements of this section, reduces industrial and commercial discharges of pollutants from the MS4 to the MEP, and prevents industrial and commercial discharges from the MS4 from causing or contributing to a violation of water quality standards.

(1) Source Identification

Each Copermittee shall annually update a watershed-based inventory of all industrial and commercial sites/sources within its jurisdiction (regardless of ownership) that could contribute a significant pollutant load to the MS4. The inventory shall include the following minimum information for each industrial and commercial site/source: name; address; pollutants potentially generated by the site/source (and identification of whether the site/source is tributary to a Clean Water Act section 303(d) water body segment and generates pollutants for which the water body segment is impaired); and a narrative description including SIC codes which best reflects the principal products or services provided by each facility. The use of an automated database system, such as Geographical Information System (GIS) is highly recommended.

At a minimum, the following sites/sources shall be included in the inventory:

(a) Commercial Sites/Sources:

- i. Automobile repair, maintenance, fueling, or cleaning;
- ii. Airplane repair, maintenance, fueling, or cleaning;
- iii. Boat repair, maintenance, fueling, or cleaning;
- iv. Equipment repair, maintenance, fueling, or cleaning;
- v. Automobile and other vehicle body repair or painting;
- vi. Mobile automobile or other vehicle washing;
- vii. Automobile (or other vehicle) parking lots and storage facilities;
- viii. Retail or wholesale fueling;
- ix. Pest control services;
- x. Eating or drinking establishments, including food markets;
- xi. Mobile carpet, drape or furniture cleaning;
- xii. Cement mixing or cutting;
- xiii. Masonry;
- xiv. Painting and coating;
- xv. Botanical or zoological gardens and exhibits;
- xvi. Landscaping;
- xvii. Nurseries and greenhouses;
- xviii. Golf courses, parks and other recreational areas/facilities;
- xix. Cemeteries;
- xx. Pool and fountain cleaning;
- xxi. Marinas;
- xxii. Portable sanitary services;
- xxiii. Building material retailers and storage;
- xxiv. Animal facilities; and
- xxv. Power washing services.

(b) Industrial Sites/Sources:

- i. Industrial Facilities, as defined at 40 CFR § 122.26(b)(14), including those subject to the General Industrial Permit or other individual NPDES permit;
- ii. Operating and closed landfills;
- iii. Facilities subject to SARA Title III; and

iv. Hazardous waste treatment, disposal, storage and recovery facilities.

- (c) All other commercial or industrial sites/sources tributary to a CWA Section 303(d) impaired water body segment, where the site/source generates pollutants for which the water body segment is impaired. All other commercial or industrial sites/sources within or directly adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas (as defined in Attachment C of this Order).
- (d) All other commercial or industrial sites/sources that the Copermittee determines may contribute a significant pollutant load to the MS4.

(2) BMP Implementation

- (a) Each Copermittee shall require the use of pollution prevention methods by industrial and commercial sites/sources, where appropriate.
- (b) Each Copermittee shall designate a minimum set of BMPs for all industrial and commercial sites/sources. The designated minimum BMPs shall be specific to facility types and pollutant generating activities, as appropriate.
- (c) Within the first three years of implementation of the updated Jurisdictional Urban Runoff Management Program, each Copermittee shall notify the owner/operator of each inventoried industrial and commercial site/source of the BMP requirements applicable to the site/source.
- (d) Each Copermittee shall implement, or require the implementation of, the designated minimum BMPs and any additional measures necessary to comply with this Order at each industrial and commercial site/source within its jurisdiction.
- (e) Each Copermittee shall implement, or require implementation of, additional controls for industrial and commercial sites/sources tributary to CWA section 303(d) impaired water body segments (where a site/source generates pollutants for which the water body segment is impaired) as necessary to comply with this Order. Each Copermittee shall implement, or require implementation of, additional controls for industrial and commercial sites/sources within or directly adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas (as defined in Attachment C of this Order) as necessary to comply with this Order.

(3) Inspection of Industrial and Commercial Sites/Sources

- (a) Each Copermittee shall conduct industrial and commercial site inspections for compliance with its ordinances, permits, and this Order. Inspections shall include but not be limited to:
 - i. Review of BMP implementation plans, if the site uses or is required to use such a plan;
 - ii. Review of facility monitoring data, if the site monitors its runoff;

- iii. Check for coverage under the General Industrial Permit (Notice of Intent (NOI) and/or Waste Discharge Identification No.), if applicable;
 - iv. Assessment of compliance with Copermittee ordinances and permits related to urban runoff;
 - v. Assessment of BMP implementation, maintenance and effectiveness;
 - vi. Visual observations for non-storm water discharges, potential illicit connections, and potential discharge of pollutants in storm water runoff; and
 - vii. Education and training on storm water pollution prevention, as conditions warrant.
- (b) At a minimum, 50% of all sites (excluding mobile sources) determined to pose a high threat to water quality shall be inspected in the first year of implementation of the updated Jurisdictional Urban Runoff Management Program, regardless of whether this exceeds the number of inspections required in section D.3.b.(3)(c). This requirement shall increase to 100% of the sites in the second year, and 100% annually thereafter. In any year that the total number of required inspection per section D.3.b.(3)(c) exceeds the number of high threat to water quality sites, all high threat to water quality sites shall be inspected. In evaluating threat to water quality, each Copermittee shall address, at a minimum, the following:
- i. Type of activity (SIC code);
 - ii. Materials used at the facility;
 - iii. Wastes generated;
 - iv. Pollutant discharge potential;
 - v. Non-storm water discharges;
 - vi. Size of facility;
 - vii. Proximity to receiving water bodies;
 - viii. Sensitivity of receiving water bodies;
 - ix. Whether the facility is subject to the General Industrial Permit or an individual NPDES permit;
 - x. Whether the facility has filed a No Exposure Certification/Notice of Non-Applicability;
 - xi. Facility design;
 - xii. Total area of the site, area of the site where industrial or commercial activities occur, and area of the site exposed to rainfall and runoff;
 - xiii. The facility's compliance history; and
 - xiv. Any other relevant factors.
- (c) At a minimum, 20% of the sites inventoried as required in section D.3.b.(1) above (excluding mobile sources) shall be inspected in the first year of implementation of the updated Jurisdictional Urban Runoff Management Program. This requirement shall increase to 25% of the sites in the second year, and 25% annually thereafter.
- (d) Each Copermittee may develop and implement a third party inspection program for verifying industrial and commercial site/source compliance with its ordinances, permits, and this Order. The third party inspections can satisfy up to 30% of the inspection requirements in section D.3.b.(3)(c), with the Copermittee having to fulfill the remaining required inspections. To the extent that third party inspections are conducted to fulfill the requirements of

section D.3.b(3)(c), the Copermittee will be responsible for the inspection of an additional site for every three sites inspected by a third party. The additional inspections may be conducted by the Copermittee or a third party inspector. The Copermittees third party inspection program must include the following:

- i. A description of facility types proposed to be inspected by third parties, including SIC codes;
 - ii. A third party inspector certification program;
 - iii. The inspection requirements described in section D.3.b.(3)(a);
 - iv. Inspection form templates for third party inspector use;
 - v. Photo documentation of potential storm water violations identified during the third party inspection;
 - vi. An annual Copermittee audit of random, representative sites that were inspected by a third party;
 - vii. An annual Copermittee audit of random, representative third party inspectors;
 - viii. Reporting to the Copermittee of identified significant potential violations within 24 hours of the third party inspection;
 - ix. Reporting to the Copermittee of all inspection findings within one week of the inspection being conducted; and
 - x. Copermittee follow-up and/or enforcement actions for identified potential storm water violations within 2 business days of the inspection or potential violation report receipt.
- (e) Based upon site inspection findings, each Copermittee shall implement all follow-up actions and enforcement necessary to comply with this Order.
- (f) To the extent that the Regional Board has conducted an inspection of an industrial site during a particular year, the requirement for the responsible Copermittee to inspect this facility during the same year will be satisfied.
- (g) The Copermittees shall track the number of inspections for the inventoried industrial and commercial sites/sources throughout the reporting period to verify that the sites/sources are inspected at the minimum frequencies listed in sections D.3.b.(3)(b) and D.3.b.(3)(c).

(4) Regulation of Mobile Businesses

- (a) Each Copermittee shall develop and implement a program to reduce the discharge of pollutants from mobile businesses to the MEP. Each Copermittee shall keep as part of their inventory (section D.3.b.(1) above), a listing of mobile businesses known to operate within its jurisdiction. The program shall include:
- i. Development and implementation of minimum standards and BMPs to be required for each of the various types of mobile businesses.
 - ii. Development and implementation of an enforcement strategy which specifically addresses the unique characteristics of mobile businesses.
 - iii. Notification of those mobile businesses known to operate within the Copermittee's jurisdiction of the minimum standards and BMP requirements and local ordinances.

- iv. Development and implementation of an outreach and education strategy.
- v. Inspection of mobile businesses as needed.

- (b) If they choose to, the Copermittees may cooperate in developing and implementing their programs for mobile businesses, including sharing of mobile business inventories, BMP requirements, enforcement action information, and education.

(5) Enforcement of Industrial and Commercial Sites/Sources

Each Copermittee shall enforce its storm water ordinance for all industrial and commercial sites/sources as necessary to maintain compliance with this Order. Copermittee ordinances or other regulatory mechanisms shall include appropriate sanctions to achieve compliance. Sanctions shall include the following or their equivalent: Non-monetary penalties, fines, bonding requirements, and/or permit denials for non-compliance.

(6) Reporting of Industrial Non-Filers

As part of each Annual Report, each Copermittee shall report a list of industrial sites, including the name, address, and SIC code, that may require coverage under the General Industrial Permit for which a NOI has not been filed.

c. RESIDENTIAL

Each Copermittee shall implement a residential program which meets the requirements of this section, reduces residential discharges of pollutants from the MS4 to the MEP, and prevents residential discharges from the MS4 from causing or contributing to a violation of water quality standards.

(1) Threat to Water Quality Prioritization

Each Copermittee shall identify high threat to water quality residential areas and activities. At a minimum, these shall include:

- (a) Automobile repair, maintenance, washing, and parking;
- (b) Home and garden care activities and product use (pesticides, herbicides, and fertilizers);
- (c) Disposal of trash, pet waste, green waste, and household hazardous waste (e.g., paints, cleaning products);
- (d) Any other residential source that the Copermittee determines may contribute a significant pollutant load to the MS4;
- (e) Any residential areas tributary to a CWA section 303(d) impaired water body, where the residence generates pollutants for which the water body is impaired; and
- (f) Any residential areas within or directly adjacent to or discharging directly to a coastal lagoon or other receiving waters within an environmentally sensitive area (as defined in Attachment C of this Order).

(2) BMP Implementation

- (a) Each Copermittee shall designate minimum BMPs for high threat to water quality residential areas and activities. The designated minimum BMPs for high threat to water quality municipal areas and activities shall be area or activity specific.
- (b) Each Copermittee shall encourage the use of pollution prevention methods by residents, where appropriate.
- (c) Each Copermittee shall facilitate the proper management and disposal of used oil, toxic materials, and other household hazardous wastes. Such facilitation shall include educational activities, public information activities, and establishment of collection sites operated by the Copermittee or a private entity. Curbside collection of household hazardous wastes is encouraged.
- (d) Each Copermittee shall implement, or require implementation of, the designated minimum BMPs and any additional measures necessary to comply with this Order for high threat to water quality residential areas and activities.
- (e) Each Copermittee shall implement, or require implementation of, BMPs for residential areas and activities that have not been designated a high threat to water quality, as necessary.
- (f) Each Copermittee shall implement, or require implementation of, any additional controls for residential areas and activities tributary to CWA section 303(d) impaired water body segments (where a residential area or activity generates pollutants for which the water body segment is impaired) as necessary to comply with this Order. Each Copermittee shall implement, or require implementation of, additional controls for residential areas within or directly adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas (as defined in section Attachment C of this Order) as necessary to comply with this Order.

(3) Enforcement of Residential Areas and Activities

Each Copermittee shall enforce its storm water ordinance for all residential areas and activities as necessary to maintain compliance with this Order.

(4) Evaluation of Oversight of Residential Areas and Activities

The Copermittees are encouraged to individually or collectively evaluate their methods used for oversight of residential areas and activities, including assessment of inspections of residential areas and activities. The evaluation should consider various oversight and inspection approaches to identify an effective and appropriate oversight and inspection approach for residential areas and activities.

(5) Regional Residential Education Program

Each Copermittee shall collaborate with the other Copermittees to develop and implement the Regional Residential Education Program required in section F.1 of this Order.

4. Illicit Discharge Detection and Elimination Component

Each Copermittee shall implement an Illicit Discharge Detection and Elimination program which meets the requirements of this section and actively seeks and eliminates illicit discharges and connections.

a. **ILLICIT DISCHARGES AND CONNECTIONS**

Each Copermittee shall implement a program to actively seek and eliminate illicit discharges and connections into its MS4. The program shall include utilization of appropriate municipal personnel to assist in identifying illicit discharges and connections during their daily activities. The program shall address all types of illicit discharges and connections excluding those non-storm water discharges not prohibited by the Copermittee in accordance with section B of this Order.

b. **DEVELOP/MAINTAIN MS4 MAP**

Each Copermittee shall develop and/or update its labeled map of its entire MS4 and the corresponding drainage areas within its jurisdiction. The use of a GIS is highly recommended. The accuracy of the MS4 map shall be confirmed during dry weather field screening and analytical monitoring and shall be updated at least annually.

c. **DRY WEATHER FIELD SCREENING AND ANALYTICAL MONITORING**

Each Copermittee shall conduct dry weather field screening and analytical monitoring of MS4 outfalls and other portions of its MS4 within its jurisdiction to detect illicit discharges and connections in accordance with Receiving Waters and Urban Runoff Monitoring and Reporting Program No. R9-2007-0001.

d. **INVESTIGATION/INSPECTION AND FOLLOW-UP**

- (1) Each Copermittee shall investigate and inspect any portion of the MS4 that, based on visual observations, dry weather field screening and analytical monitoring results, or other appropriate information, indicates a reasonable potential for illicit discharges, illicit connections, or other sources of non-storm water (including non-prohibited discharge(s) identified in section B of this Order). Each Copermittee shall develop/update and utilize numeric criteria action levels (or other actions level criteria where appropriate) to determine when follow-up investigations will be performed.
- (2) Within two business days of receiving dry weather field screening results that exceed action levels, the Copermittees shall either conduct an investigation to identify the source of the discharge or provide the rationale for why the discharge does not pose a threat to water quality and does not need further investigation. Within two business days, where applicable, of receiving analytical laboratory results that exceed action levels, the Copermittees shall either conduct an investigation to identify the source of the discharge or provide the rationale for why the discharge does not pose a threat to water quality and does not need further investigation. Obvious illicit discharges (i.e. color, odor, or significant exceedances of action levels) shall be investigated immediately.

e. ELIMINATION OF ILLICIT DISCHARGES AND CONNECTIONS

Each Copermittee shall take immediate action to eliminate all detected illicit discharges, illicit discharge sources, and illicit connections as soon as possible after detection. Elimination measures may include an escalating series of enforcement actions for those illicit discharges that are not a serious threat to public health or the environment. Illicit discharges that pose a serious threat to the public's health or the environment must be eliminated immediately.

f. ENFORCE ORDINANCES

Each Copermittee shall implement and enforce its ordinances, orders, or other legal authority to prevent illicit discharges and connections to its MS4. Each Copermittee shall also implement and enforce its ordinance, orders, or other legal authority to eliminate detected illicit discharges and connections to it MS4.

g. PREVENT AND RESPOND TO SEWAGE SPILLS (INCLUDING FROM PRIVATE LATERALS AND FAILING SEPTIC SYSTEMS) AND OTHER SPILLS

Each Copermittee shall prevent, respond to, contain and clean up all sewage and other spills that may discharge into its MS4 from any source (including private laterals and failing septic systems). Spill response teams shall prevent entry of spills into the MS4 and contamination of surface water, ground water and soil to the maximum extent practicable. Each Copermittee shall coordinate spill prevention, containment and response activities throughout all appropriate departments, programs and agencies so that maximum water quality protection is available at all times.

Each Copermittee shall develop and implement a mechanism whereby it is notified of all sewage spills from private laterals and failing septic systems into its MS4. Each Copermittee shall prevent, respond to, contain and clean up sewage from any such notification.

h. FACILITATE PUBLIC REPORTING OF ILLICIT DISCHARGES AND CONNECTIONS - PUBLIC HOTLINE

Each Copermittee shall promote, publicize and facilitate public reporting of illicit discharges or water quality impacts associated with discharges into or from MS4s. Each Copermittee shall facilitate public reporting through development and operation of a public hotline. Public hotlines can be Copermittee-specific or shared by Copermittees. All storm water hotlines shall be capable of receiving reports in both English and Spanish 24 hours per day / seven days per week. Copermittees shall respond to and resolve each reported incident in a timely manner. All reported incidents, and how each was resolved, shall be summarized in each Copermittee's individual JURMP Annual Report.

5. Education Component

Each Copermittee shall implement an education program using all media as appropriate to (1) measurably increase the knowledge of the target communities regarding MS4s, impacts of urban runoff on receiving waters, and potential BMP solutions for the target audience; and (2) to measurably change the behavior of target communities and thereby reduce pollutant releases to MS4s and the environment. At a minimum, the education

program shall meet the requirements of this section and address the following target communities:

- Municipal Departments and Personnel
- Construction Site Owners and Developers
- Industrial Owners and Operators
- Commercial Owners and Operators
- Residential Community, General Public, and School Children

a. GENERAL REQUIREMENTS

(1) Each Copermittee shall educate each target community on the following topics where appropriate:

Table 3. Education

Laws, Regulations, Permits, & Requirements	Best Management Practices
<ul style="list-style-type: none"> • Federal, state, and local water quality laws and regulations • Statewide General NPDES Permit for Storm Water Discharges Associated with Industrial Activities (Except Construction). • Statewide General NPDES Permit for Storm Water Discharges Associated with Construction Activities • Regional Board's General NPDES Permit for Ground Water Dewatering • Regional Board's 401 Water Quality Certification Program • Statewide General NPDES Utility Vault Permit • Requirements of local municipal permits and ordinances (e.g., storm water and grading ordinances and permits) 	<ul style="list-style-type: none"> • Pollution prevention and safe alternatives • Good housekeeping (e.g., sweeping impervious surfaces instead of hosing) • Proper waste disposal (e.g., garbage, pet/animal waste, green waste, household hazardous materials, appliances, tires, furniture, vehicles, boat/recreational vehicle waste, catch basin/ MS4 cleanout waste) • Non-storm water disposal alternatives (e.g., all wash waters) • Methods to minimized the impact of land development and construction • Erosion prevention • Methods to reduce the impact of residential and charity car-washing • Preventive Maintenance • Equipment/vehicle maintenance and repair • Spill response, containment, and recovery • Recycling • BMP maintenance
General Urban Runoff Concepts	Other Topics
<ul style="list-style-type: none"> • Impacts of urban runoff on receiving waters • Distinction between MS4s and sanitary sewers • BMP types: facility or activity specific, LID, source control, and treatment control • Short- and long-term water quality impacts associated with urbanization (e.g., land-use decisions, development, construction) • Non-storm water discharge prohibitions • How to conduct a storm water inspections 	<ul style="list-style-type: none"> • Public reporting mechanisms • Water quality awareness for Emergency/ First Responders • Illicit Discharge Detection and Elimination observations and follow-up during daily work activities • Potable water discharges to the MS4 • Dechlorination techniques • Hydrostatic testing • Integrated pest management • Benefits of native vegetation • Water conservation

	<ul style="list-style-type: none"> • Alternative materials and designs to maintain peak runoff values • Traffic reduction, alternative fuel use
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- (2) Copermittee educational programs shall emphasize underserved target audiences, high-risk behaviors, and “allowable” behaviors and discharges, including various ethnic and socioeconomic groups and mobile sources.

b. SPECIFIC REQUIREMENTS

(1) Municipal Departments and Personnel Education

- (a) Municipal Development Planning – Each Copermittee shall implement an education program so that its planning and development review staffs (and Planning Boards and Elected Officials, if applicable) have an understanding of:
- i. Federal, state, and local water quality laws and regulations applicable to Development Projects;
 - ii. The connection between land use decisions and short and long-term water quality impacts (i.e., impacts from land development and urbanization);
 - iii. How to integrate LID BMP requirements into the local regulatory program(s) and requirements; and
 - iv. Methods of minimizing impacts to receiving water quality resulting from development, including:
 - [1] Storm water management plan development and review;
 - [2] Methods to control downstream erosion impacts;
 - [3] Identification of pollutants of concern;
 - [4] LID BMP techniques;
 - [5] Source control BMPs; and
 - [6] Selection of the most effective treatment control BMPs for the pollutants of concern.
- (b) Municipal Construction Activities – Each Copermittee shall implement an education program that includes annual training prior to the rainy season so that its construction, building, code enforcement, and grading review staffs, inspectors, and other responsible construction staff have, at a minimum, an understanding of the following topics, as appropriate for the target audience:
- i. Federal, state, and local water quality laws and regulations applicable to construction and grading activities.
 - ii. The connection between construction activities and water quality impacts (i.e., impacts from land development and urbanization and impacts from construction material such as sediment).
 - iii. Proper implementation of erosion and sediment control and other BMPs to minimize the impacts to receiving water quality resulting from construction activities.
 - iv. The Copermittee’s inspection, plan review, and enforcement policies and procedures to verify consistent application.
 - v. Current advancements in BMP technologies.

vi. SUSMP Requirements including treatment options, LID BMPs, source control, and applicable tracking mechanisms.

(c) Municipal Industrial/Commercial Activities - Each Copermittee shall train staff responsible for conducting storm water compliance inspections and enforcement of industrial and commercial facilities at least once a year. Training shall cover inspection and enforcement procedures, BMP implementation, and reviewing monitoring data.

(d) Municipal Other Activities – Each Copermittee shall implement an education program so that municipal personnel and contractors performing activities which generate pollutants have an understanding of the activity specific BMPs for each activity to be performed.

(2) New Development and Construction Education

As early in the planning and development process as possible and all through the permitting and construction process, each Copermittee shall implement a program to educate project applicants, developers, contractors, property owners, community planning groups, and other responsible parties. The education program shall provide an understanding of the topics listed in Sections D.5.b.(1)(a) and D.5.b.(1)(b) above, as appropriate for the audience being educated. The education program shall also educate project applicants, developers, contractors, property owners, and other responsible parties on the importance of educating all construction workers in the field about stormwater issues and BMPs through formal or informal training.

(3) Residential, General Public, and School Children Education

Each Copermittee shall collaboratively conduct or participate in development and implementation of a plan to educate residential, general public, and school children target communities. The plan shall evaluate use of mass media, mailers, door hangers, booths at public events, classroom education, field trips, hands-on experiences, or other educational methods.

6. Public Participation Component

Each Copermittee shall incorporate a mechanism for public participation in the updating, development, and implementation of the Jurisdictional Urban Runoff Management Program.

E. WATERSHED URBAN RUNOFF MANAGEMENT PROGRAM

1. Each Copermittee shall implement all requirements of section E of this Order no later than 365 days after adoption of this Order, unless otherwise specified in this Order. Prior to 365 days after adoption of this Order, each Copermittee shall collaborate with the other Copermittees within its Watershed Management Area(s) (WMA) to at a minimum implement its Watershed URMP document, as the document was developed and amended to comply with the requirements of Order No. 2001-01.
2. Each Copermittee shall collaborate with other Copermittees within its WMA(s) as shown in Table 4 below to develop and implement an updated Watershed Urban Runoff

Management Program for each watershed. Each updated Watershed Urban Runoff Management Program shall meet the requirements of section E of this Order, reduce the discharge of pollutants from the MS4 to the MEP, and prevent urban runoff discharges from the MS4 from causing or contributing to a violation of water quality standards. At a minimum, each Watershed Urban Runoff Management Program shall include the elements described below:

a. Lead Watershed Permittee Identification

Watershed Copermittees shall identify the Lead Watershed Permittee for their WMA. In the event that a Lead Watershed Permittee is not selected and identified by the Watershed Copermittees, by default the Copermittee identified in Table 4 as the Lead Watershed Permittee for that WMA shall be responsible for implementing the requirements of the Lead Watershed Permittee in that WMA. The Lead Watershed Copermittees shall serve as liaisons between the Copermittees and Regional Board, where appropriate.

b. Watershed Map

Watershed Copermittees shall develop and periodically update a map of the WMA to facilitate planning, assessment, and collaborative decision-making. As determined appropriate, the map shall include features such as receiving waters (including the Pacific Ocean); Clean Water Act section 303(d) impaired receiving waters; land uses, MS4s; major highways; jurisdictional boundaries; and inventoried commercial, industrial, and municipal sites.

c. Watershed Water Quality Assessment

Watershed Copermittees shall annually assess the water quality of receiving waters in their WMA. This assessment shall use applicable water quality data, reports, and analysis generated in accordance with the requirements of the Receiving Waters Monitoring and Reporting Program, as well as applicable information available from other public and private organizations.

The assessment and analysis shall annually identify the WMA's water quality problems that are partially or fully attributable to MS4 discharges. Identified water quality problems shall include CWA section 303(d) listings, persistent violations of water quality standards, toxicity, impacts to beneficial uses, and other pertinent conditions. From the list of water quality problems, the high priority water quality problems of the WMA shall be identified, which shall include those water quality problems which most significantly exceed or impact water quality standards (water quality objectives and beneficial uses).

The assessment shall include annual identification of the likely sources of the WMA's high priority water quality problems.

d. Watershed-based Land Use Planning

The Watershed Copermittees shall develop, implement, and modify, as necessary, a program for encouraging collaborative, watershed-based, land use planning in their jurisdictional planning departments.

e. Watershed Strategy

Watershed Copermittees shall develop and implement a collective watershed strategy to abate the sources and reduce the discharge of pollutants causing the high priority water quality problems of the WMA. The strategy shall guide Watershed Copermittee selection and implementation of Watershed Activities, so that the Watershed Activities selected and implemented are appropriate for each Watershed Copermittee's contribution to the WMA's high priority water quality problems.

f. Watershed Activities

- (1) The Watershed Copermittees shall identify and implement Watershed Activities that address the high priority water quality problems in the WMA. Watershed Activities shall include both Watershed Water Quality Activities and Watershed Education Activities. These activities may be implemented individually or collectively, and may be implemented at the regional, watershed, or jurisdictional level.
 - (a) Watershed Water Quality Activities are activities other than education that address the high priority water quality problems in the WMA. A Watershed Water Quality Activity implemented on a jurisdictional basis must be organized and implemented to target a watershed's high priority water quality problems or must exceed the baseline jurisdictional requirements of section D of this Order.
 - (b) Watershed Education Activities are outreach and training activities that address high priority water quality problems in the WMA.
- (2) A Watershed Activities List shall be submitted with each updated WURMP and updated annually thereafter. The Watershed Activities List shall include both Watershed Water Quality Activities and Watershed Education Activities, along with a description of how each activity was selected, and how all of the activities on the list will collectively abate sources and reduce pollutant discharges causing the identified high priority water quality problems in the WMA.
- (3) Each activity on the Watershed Activities List shall include the following information:
 - (a) A description of the activity;
 - (b) A time schedule for implementation of the activity, including key milestones;
 - (c) An identification of the specific responsibilities of Watershed Copermittees in completing the activity;
 - (d) A description of how the activity will address the identified high priority water quality problem(s) of the watershed;
 - (e) A description of how the activity is consistent with the collective watershed strategy;
 - (f) A description of the expected benefits of implementing the activity; and
 - (g) A description of how implementation effectiveness will be measured.
- (4) Each Watershed Copermittee shall implement identified Watershed Activities pursuant to established schedules. For each Permit year, no less than two Watershed Water Quality Activities and two Watershed Education Activities shall be in an active implementation phase. A Watershed Water Quality Activity

is in an active implementation phase when significant pollutant load reductions, source abatement, or other quantifiable benefits to discharge or receiving water quality can reasonably be established in relation to the watershed's high priority water quality problem(s). Watershed Water Quality Activities that are capital projects are in active implementation for the first year of implementation only. A Watershed Education Activity is in an active implementation phase when changes in attitudes, knowledge, awareness, or behavior can reasonably be established in target audiences.

g. Copermittee Collaboration

Watershed Copermittees shall collaborate to develop and implement the Watershed Urban Runoff Management Programs. Watershed Copermittee collaboration shall include frequent regularly scheduled meetings.

h. Public Participation

Watershed Copermittees shall implement a watershed-specific public participation mechanism within each watershed. The mechanism shall encourage participation from other organizations within the watershed (such as the Department of Defense, Caltrans, lagoon foundations, etc.)

i. WURMP Review and Updates

Each WURMP shall be reviewed annually to identify needed modifications and improvements. Pursuant to the requirements of Section I.2.b of this Order the Watershed Copermittees shall develop and implement a plan and schedule to address the identified modifications and improvements. All updates to the WURMP shall be documented in the Watershed Urban Runoff Management Program Annual Reports. Individual Watershed Copermittees shall also review and modify their jurisdictional activities and JURMPs as necessary so that they are consistent with the requirements of the WURMP.

Table 4. Watershed Management Areas and Watershed Copermittees

RESPONSIBLE WATERSHED COPERMITTEE(S)	WATERSHED MANAGEMENT AREA	HYDROLOGIC UNIT OR AREA	MAJOR RECEIVING WATER BODIES
1. County of San Diego	Santa Margarita River	Santa Margarita HU (902.00)	Santa Margarita River and Estuary, Pacific Ocean
2. City of Oceanside 3. City of Vista 4. County of San Diego	San Luis Rey River	San Luis Rey HU (903.00)	San Luis Rey River and Estuary, Pacific Ocean
1. City of Carlsbad 2. City of Encinitas 3. City of Escondido 4. City of Oceanside 5. City of San Marcos 6. City of Solana Beach 7. City of Vista 8. County of San Diego	Carlsbad	Carlsbad HU (904.00)	Batiquitos Lagoon San Elijo Lagoon Agua Hedionda Lagoon Buena Vista Lagoon and Tributary Streams Pacific Ocean
1. City of Del Mar 2. City of Escondido 3. City of Poway 4. City of San Diego 5. City of Solana Beach 6. County of San Diego	San Dieguito River	San Dieguito HU (905.00)	San Dieguito River and Estuary Pacific Ocean

RESPONSIBLE WATERSHED COPERMITTEE(S)	WATERSHED MANAGEMENT AREA	HYDROLOGIC UNIT OR AREA	MAJOR RECEIVING WATER BODIES
1. City of Del Mar 2. City of Poway 3. City of San Diego 4. County of San Diego	Peñasquitos	Miramar Reservoir HA (906.10) Poway HA (906.20)	Los Peñasquitos Creek Los Peñasquitos Lagoon Pacific Ocean
1. City of San Diego	Mission Bay	Scripps HA (906.30) Miramar HA(906.40) Tecolote HA (906.50)	Mission Bay Pacific Ocean
1. City of El Cajon 2. City of La Mesa 3. City of San Diego 4. City of Santee 5. County of San Diego	San Diego River	San Diego HU (907.00)	San Diego River Pacific Ocean
1. City of Chula Vista 2. City of Coronado 3. City of Imperial Beach 4. City of La Mesa 5. City of Lemon Grove 6. City of National City 7. City of San Diego 8. County of San Diego 9. San Diego Unified Port District 10. San Diego County Regional Airport Authority	San Diego Bay	Pueblo San Diego HU (908.00) Sweetwater HU (909.00) Otay HU (910.00)	San Diego Bay Sweetwater River Otay River Pacific Ocean
1. City of Imperial Beach 2. City of San Diego 3. County of San Diego	Tijuana River	Tijuana (911.00)	Tijuana River and Estuary Pacific Ocean

- The Lead Watershed Permittee for each watershed is highlighted

F. REGIONAL URBAN RUNOFF MANAGEMENT PROGRAM

The Copermittees shall implement all requirements of section F of this Order no later than 365 days after adoption of this Order, unless otherwise specified in this Order.

Each Copermittee shall collaborate with the other Copermittees to develop, implement, and update as necessary a Regional Urban Runoff Management Program. The Regional Urban Runoff Management Program shall meet the requirements of section F of this Order, reduce the discharge of pollutants from the MS4 to the MEP, and prevent urban runoff discharges from the MS4 from causing or contributing to a violation of water quality standards. The Regional Urban Runoff Management Program shall, at a minimum:

1. Develop and implement a Regional Residential Education Program. The program shall include:
 - a. Pollutant specific education which focuses educational efforts on bacteria, nutrients, sediment, pesticides, and trash. If a different pollutant is determined to be more critical for the education program, the pollutant can be substituted for one of these pollutants.
 - b. Education efforts focused on the specific residential sources of the pollutants listed in section F.1.a.
2. Develop the standardized fiscal analysis method required in section G of this Order.
3. Facilitate the assessment of the effectiveness of jurisdictional, watershed, and regional programs.

As options, the Regional Urban Runoff Management Program may:

1. Develop and implement urban runoff management activities on a regional level, as determined to be necessary by the Copermittees.

2. Develop and implement a strategy to integrate management, implementation, and reporting of jurisdictional, watershed, and regional activities, as determined to be necessary by the Copermittees. Any such integration shall assure compliance with the jurisdictional requirements of section D and the watershed requirements of section E.
3. Facilitate TMDL management and implementation, as determined to be necessary by the Copermittees.
4. Facilitate development of strategies for implementation of activities on a watershed level, as determined to be necessary by the Copermittees.

G. FISCAL ANALYSIS

1. Each Copermittee shall secure the resources necessary to meet all requirements of this Order.
2. As part of the Regional Urban Runoff Management Program, the Copermittees shall collectively develop a standardized method and format for annually conducting and reporting fiscal analyses of their urban runoff management programs in their entirety (including jurisdictional, watershed, and regional activities). This standardized method shall:
 - a. Identify the various categories of expenditures attributable to the urban runoff management programs, including a description of the specific items to be accounted for in each category of expenditures.
 - b. Identify expenditures that contribute to multiple programs or were in existence prior to implementation of the urban runoff management program.
 - c. Identify a metric or metrics to be used to report program component and total program expenditures.
3. Each Copermittee shall conduct an annual fiscal analysis. Starting January 31, 2010, the annual fiscal analysis shall be conducted consistent with the standardized fiscal analysis method included in the January 31, 2009 Regional Urban Runoff Management Program Annual Report. The annual fiscal analysis shall be conducted and reported on as part of each Copermittee's Jurisdictional Urban Runoff Management Program Annual Reports. For convenience, the fiscal analysis included in the Jurisdictional Urban Runoff Management Program Annual Reports shall address the Copermittee's urban runoff management programs in their entirety, including jurisdictional, watershed, and regional activities. The fiscal analysis shall provide the Copermittee's urban runoff management program budget for the current reporting period. The fiscal analysis shall include a description of the source(s) of the funds that are proposed to be used to meet the necessary expenditures, including legal restrictions on the use of such funds.

H. TOTAL MAXIMUM DAILY LOADS

1. **Chollas Creek Diazinon TMDL Water Quality Based Effluent Limits (WQBELs)**
 - a. The Copermittees in the Chollas Creek watershed shall implement BMPs capable of achieving the interim and final diazinon Waste Load Allocation (WLA) concentration in the storm water discharge in Chollas Creek listed in Table 5.

Table 5. Chollas Creek Diazinon Schedule

Calendar Year	Year	Waste Load Allocation	Interim TMDL Numeric Target	% Reduction
2004	1	0.460 µg/L	0.5 µg/L	0
2005	2	0.460 µg/L	0.5 µg/L	0
2006	3	0.460 µg/L	0.5 µg/L	0
2007	4	0.414 µg/L	0.45 µg/L	10
2008	5	0.322 µg/L	0.35 µg/L	20
2009	6	0.184 µg/L	0.20 µg/L	30
2010	7	0.045 µg/L	0.05 µg/L	30

- b. The Copermittees in the Chollas Creek watershed shall not cause or contribute to the violation of the Interim TMDL Numeric Targets in Chollas Creek as listed in Table 5. If the Interim TMDL Numeric Target is violated in Chollas Creek in more than one sample in any three consecutive years, the Copermittees shall submit a report that either 1) documents compliance with the WLA through additional sampling of the urban runoff discharge or 2) demonstrates, using modeling or other technical or scientific basis, the effectiveness of additional BMPs that will be implemented to achieve the WLA. The report may be incorporated into the Watershed Urban Runoff Management Program Annual Report unless the Regional Board directs an earlier submittal. The report shall include an implementation schedule.
- c. The Copermittees in the Chollas Creek watershed shall implement the Diazinon Toxicity Control Plan and Diazinon Public Outreach/Education Program as described in the report titled, "Technical Report for Total Maximum Daily Load for Diazinon in Chollas Creek Watershed, San Diego County, August 14, 2002," including subsequent modifications, in order to achieve the WLA listed in Table 5.

2. Shelter Island Yacht Basin WQBELs

- a. The Copermittees in the Shelter Island Yacht Basin watershed shall implement BMPs to maintain a total annual copper discharge load of less than or equal to 30 kg copper / year.
- b. The Copermittees in the Shelter Island Yacht Basin watershed shall implement, at a minimum, the BMPs included in the Copermittees' Jurisdictional Urban Runoff Management Plan, including subsequent modifications, which address the discharge of copper to achieve the annual copper load in Section H.2.a above.

I. PROGRAM EFFECTIVENESS ASSESSMENT

1. Jurisdictional

- a. As part of its Jurisdictional Urban Runoff Management Program, each Copermittee shall annually assess the effectiveness of its Jurisdictional Urban Runoff Management Program implementation. At a minimum, the annual effectiveness assessment shall:
 - (1) Specifically assess the effectiveness of each of the following:

- (a) Each significant jurisdictional activity/BMP or type of jurisdictional activity/BMP implemented;
 - (b) Implementation of each major component of the Jurisdictional Urban Runoff Management Program (Development Planning, Construction, Municipal, Industrial/Commercial, Residential, Illicit Discharge Detection and Elimination, and Education); and
 - (c) Implementation of the Jurisdictional Urban Runoff Management Program as a whole.
- (2) Identify and utilize measurable targeted outcomes, assessment measures, and assessment methods for each of the items listed in section I.1.a.(1) above.
- (3) Utilize outcome levels 1-6⁹ to assess the effectiveness of each of the items listed in section I.1.a.(1) above, where applicable and feasible.
- (4) Utilize monitoring data and analysis from the Receiving Waters Monitoring Program to assess the effectiveness each of the items listed in section I.1.a.(1) above, where applicable and feasible.
- (5) Utilize Implementation Assessment, Water Quality Assessment, and Integrated Assessment, where applicable and feasible.¹⁰
- b. Based on the results of the effectiveness assessment, each Copermittee shall annually review its jurisdictional activities or BMPs to identify modifications and improvements needed to maximize Jurisdictional Urban Runoff Management Program effectiveness, as necessary to achieve compliance with section A of this Order. The Copermittees shall develop and implement a plan and schedule to address the identified modifications and improvements. Jurisdictional activities/BMPs that are ineffective or less effective than other comparable jurisdictional activities/BMPs shall be replaced or improved upon by implementation of more effective jurisdictional activities/BMPs. Where monitoring data exhibits persistent water quality problems that are caused or contributed to by MS4 discharges, jurisdictional activities or BMPs applicable to the water quality problems shall be modified and improved to correct the water quality problems.
- c. As part of its Jurisdictional Urban Runoff Management Program Annual Reports, each Copermittee shall report on its Jurisdictional Urban Runoff Management Program effectiveness assessment as implemented under each of the requirements of sections I.1.a and I.1.b above.

2. Watershed

- a. As part of its Watershed Urban Runoff Management Program, each watershed group of Copermittees (as identified in Table 4) shall annually assess the effectiveness of its Watershed Urban Runoff Management Program implementation. At a minimum, the annual effectiveness assessment shall:
 - (1) Specifically assess the effectiveness of each of the following:

⁹ Effectiveness assessment outcome levels are defined in Attachment C of this Order.

¹⁰ Implementation Assessment, Water Quality Assessment, and Integrated Assessment are defined in Attachment C of this Order.

- (a) Each Watershed Water Quality Activity implemented;
 - (b) Each Watershed Education Activity implemented; and
 - (c) Implementation of the Watershed Urban Runoff Management Program as a whole.
 - (2) Identify and utilize measurable targeted outcomes, assessment measures, and assessment methods for each of the items listed in section I.2.a.(1) above.
 - (3) Utilize outcome levels 1-6 to assess the effectiveness of each of the items listed in sections I.2.a.(1)(a) and I.2.a.(1)(b) above, where applicable and feasible.
 - (4) Utilize outcome levels 1-4 to assess the effectiveness of implementation of the Watershed Urban Runoff Management Program as a whole, where applicable and feasible.
 - (5) Utilize outcome levels 5 and 6 to qualitatively assess the effectiveness of implementation of the Watershed Urban Runoff Management Program as a whole, focusing on the high priority water quality problem(s) of the watershed. These assessments shall attempt to exhibit the impact of Watershed Urban Runoff Management Program implementation on the high priority water quality problem(s) within the watershed.
 - (6) Utilize monitoring data and analysis from the Receiving Waters Monitoring Program to assess the effectiveness each of the items listed in section I.2.a.(1) above, where applicable and feasible.
 - (7) Utilize Implementation Assessment, Water Quality Assessment, and Integrated Assessment, where applicable and feasible.
- b. Based on the results of the effectiveness assessment, the watershed Copermittees shall annually review their Watershed Water Quality Activities, Watershed Education Activities, and other aspects of the Watershed Urban Runoff Management Program to identify modifications and improvements needed to maximize Watershed Urban Runoff Management Program effectiveness, as necessary to achieve compliance with section A of this Order. The Copermittees shall develop and implement a plan and schedule to address the identified modifications and improvements. Watershed Water Quality Activities/Watershed Education Activities that are ineffective or less effective than other comparable Watershed Water Quality Activities/Watershed Education Activities shall be replaced or improved upon by implementation of more effective Watershed Water Quality Activities/Watershed Education Activities. Where monitoring data exhibits persistent water quality problems that are caused or contributed to by MS4 discharges, Watershed Water Quality Activities and Watershed Education Activities applicable to the water quality problems shall be modified and improved to correct the water quality problems.
- c. As part of its Watershed Urban Runoff Management Program Annual Reports, each watershed group of Copermittees (as identified in Table 4) shall report on its Watershed Urban Runoff Management Program effectiveness assessment as implemented under each of the requirements of section I.2.a and I.2.b above.

3. Regional

- a. As part of the Regional Urban Runoff Management Program, the Copermittees shall annually assess the effectiveness of Regional Urban Runoff Management Program implementation. At a minimum, the annual effectiveness assessment shall:
 - (1) Specifically assess the effectiveness of each of the following:
 - (a) Each regional activity/BMP or type of regional activity/BMP implemented, including regional residential education activities; and
 - (b) The Regional Urban Runoff Management Program as a whole.
 - (2) Identify and utilize measurable targeted outcomes, assessment measures, and assessment methods for each of the items listed in section I.3.a.(1) above.
 - (3) Utilize outcome levels 1-6 to assess the effectiveness of each of the items listed in sections I.3.a.(1) above, where applicable and feasible.
 - (4) Utilize monitoring data and analysis from the Receiving Waters Monitoring Program to assess the effectiveness each of the items listed in section I.3.a.(1) above, where applicable and feasible.
 - (5) Utilize Implementation Assessment, Water Quality Assessment, and Integrated Assessment, where applicable and feasible.
 - (6) Include evaluation of whether the Copermittees' jurisdictional, watershed, and regional effectiveness assessments are meeting the following objectives:
 - (a) Assessment of watershed health and identification of water quality issues and concerns.
 - (b) Evaluation of the degree to which existing source management priorities are properly targeted to, and effective in addressing, water quality issues and concerns.
 - (c) Evaluation of the need to address additional pollutant sources not already included in Copermittee programs.
 - (d) Assessment of progress in implementing Copermittee programs and activities.
 - (e) Assessment of the effectiveness of Copermittee activities in addressing priority constituents and sources.
 - (f) Assessment of changes in discharge and receiving water quality.
 - (g) Assessment of the relationship of program implementation to changes in pollutant loading, discharge quality, and receiving water quality.
 - (h) Identification of changes necessary to improve Copermittee programs, activities, and effectiveness assessment methods and strategies.
- b. Based on the results of the effectiveness assessment, the Copermittees shall annually review their regional activities and other aspects of the Regional Urban Runoff Management Program to identify modifications and improvements needed maximize Regional Urban Runoff Management Program effectiveness, as necessary to achieve compliance with section A of this Order. The Copermittees shall develop and implement a plan and schedule to address the identified modifications and improvements. Regional activities that are ineffective or less effective than other

comparable regional activities shall be replaced or improved upon by implementation of more effective regional activities. Where monitoring data exhibits persistent water quality problems that are caused or contributed to by MS4 discharges, regional activities applicable to the water quality problems shall be modified and improved to correct the water quality problems.

- c. Based on the results of the Copermittees' evaluation of their effectiveness assessments, the Copermittees shall modify their effectiveness assessment methods to improve their ability to accurately assess the effectiveness of their urban runoff management programs.
- d. As part of its Regional Urban Runoff Management Program Annual Reports, the Copermittees shall report on its Regional Urban Runoff Management Program effectiveness assessment as implemented under each of the requirements of sections I.3.a, I.3.b, and I.3.c above.

4. TMDL BMP Implementation Plan

- a. For each TMDL in a watershed, the Copermittees subject to the TMDL within the watershed shall annually assess the effectiveness of its TMDL BMP Implementation Plan or equivalent plan.¹¹ At a minimum, the annual effectiveness assessment shall:
 - (1) Specifically assess the effectiveness of each of the following:
 - (a) Each activity/BMP or type of activity/BMP implemented; and
 - (b) Implementation of the TMDL BMP Implementation Plan or equivalent plan as a whole.
 - (2) Identify and utilize measurable targeted outcomes, assessment measures, and assessment methods for each of the items listed in sections I.4.a.(1) above.
 - (3) Utilize outcome levels 1-6 to assess the effectiveness of each of the items listed in section I.4.a.(1)(a) above, where applicable and feasible.
 - (4) Utilize outcome levels 1-4 to assess the effectiveness of implementation of the TMDL BMP Implementation Plan or equivalent plan as a whole, where applicable and feasible.
 - (5) Utilize outcome levels 5 and 6 to qualitatively assess the effectiveness of the TMDL BMP Implementation Plan or equivalent plan as a whole. These assessments shall attempt to exhibit the effects of the TMDL BMP Implementation Plan or equivalent plan on the impairment that is targeted.
- b. Based on the results of the effectiveness assessment, the Copermittees subject to the TMDL shall modify their BMPs and other aspects of the TMDL BMP Implementation Plan or equivalent plan in order to maximize TMDL BMP Implementation Plan or equivalent plan effectiveness. BMPs that are ineffective or less effective than other comparable BMPs shall be replaced or improved upon by implementation of more effective BMPs. Where monitoring data exhibits persistent

¹¹ This requirement applies to those TMDLs where a TMDL BMP Implementation Plan or equivalent plan has been developed and submitted to the Regional Board.

water quality problems that are caused or contributed to by MS4 discharges, BMPs applicable to the water quality problems shall be modified and improved to correct the water quality problems.

- c. As part of its Watershed Urban Runoff Management Program Annual Reports, each group of Copermittees subject to a TMDL shall report on any TMDL BMP Implementation Plan or equivalent plan effectiveness assessments as implemented under each of the requirements of sections I.4.a and I.4.b above.

5. Long-term Effectiveness Assessment

- a. Each Copermittee shall collaborate with the other Copermittees to develop a Long-term Effectiveness Assessment (LTEA), which shall build on the results of the Copermittees' August 2005 Baseline LTEA. The LTEA shall be submitted by the Principal Permittee to the Regional Board no later than 210 days in advance of the expiration of this Order.
- b. The LTEA shall be designed to address each of the objectives listed in section I.3.a.(6) of this Order, and to serve as a basis for the Copermittees' Report of Waste Discharge for the next permit cycle.
- c. The LTEA shall address outcome levels 1-6, and shall specifically include an evaluation of program implementation to changes in water quality (outcome levels 5 and 6).
- d. The LTEA shall assess the effectiveness of the Receiving Waters Monitoring Program in meeting its objectives and its ability to answer the five core management questions. This shall include assessment of the frequency of monitoring conducted through the use of power analysis and other pertinent statistical methods. The power analysis shall identify the frequency and intensity of sampling needed to identify a 10% reduction in the concentration of constituents causing the high priority water quality problems within each watershed over the next permit term with 80% confidence.
- e. The LTEA shall address the jurisdictional, watershed, and regional programs, with an emphasis on watershed assessment.

J. REPORTING

1. Urban Runoff Management Plans

a. JURISDICTIONAL URBAN RUNOFF MANAGEMENT PLANS

- (1) Copermittees - The written account of the overall program to be conducted by each Copermittee to meet the jurisdictional requirements of section D of this Order is referred to as the Jurisdictional Urban Runoff Management Plan (JURMP). Each Copermittee shall revise and update its JURMP so that it describes all activities the Copermittee will undertake to implement the requirements of each component of Jurisdictional Urban Runoff Management Program section D of this Order. Each Copermittee shall submit its updated and revised JURMP to the Principal Permittee by the date specified by the Principal

Permittee.

- (2) Principal Permittee –The Principal Permittee shall be responsible for collecting and assembling the individual JURMPs which cover the activities conducted by each individual Copermittee. The Principal Permittee shall submit the JURMPs to the Regional Board 365 days after adoption of this Order.
- (3) At a minimum, each Copermittee's JURMP shall be updated and revised to contain the following information:
 - (a) Non-Storm Water Discharges
 - i. Identification of non-storm water discharge categories identified as a source of pollutants to waters of the U.S.
 - ii. A description of whether non-storm water discharge categories identified under section (a)i above will be prohibited or required to implement appropriate control measures to reduce the discharge of pollutants to the MEP.
 - iii. Identification of any control measures to be required and implemented for non-storm water discharge categories identified under section (a)i above.
 - iv. A description of a program to reduce pollutants from non-emergency fire fighting flows identified by the Copermittee to be significant sources of pollutants.
 - (b) Administrative and Legal Procedures
 - i. Certified statement by the chief legal counsel that the Copermittee has adequate legal authority to implement and enforce each of the requirements contained in 40 CFR 122.26(d)(2)(i)(A-F) and this Order.
 - ii. Identification of all departments within the jurisdiction that conduct urban runoff related activities, and their roles and responsibilities under the Order. Include an up-to-date organizational chart specifying these departments and key personnel.
 - iii. Updated urban runoff related ordinances, with explanations of how they are enforceable.
 - iv. Identification of the local administrative and legal procedures available to mandate compliance with urban runoff related ordinances and therefore with the conditions of the Order.
 - v. Description of how urban runoff related ordinances are implemented and appealed.
 - vi. Description of whether the municipality can issue administrative orders and injunctions or if it must go through the court system for enforcement actions.
 - (c) Development Planning
 - i. A description of the water quality and watershed protection principles that have been or will be included in the Copermittee's General Plan, and a time schedule for when modifications are planned, if applicable.
 - ii. A description of the Copermittee's current environmental review process and how it addresses impacts to water quality and appropriate mitigation measures. If the Copermittee plans to modify the process during the permit term, a time schedule for modifications shall be included.

- iii. A description of the development project approval process and requirements.
- iv. An updated SUSMP document that meets the applicable requirements specified in sections D.1.d and D.1.g(6), including a description of LID BMP requirements to be used prior to the Model SUSMP update. The updated SUSMP may be submitted under separate cover as an attachment to the JURMP.
- v. A description of the database to be used to track and inventory approved treatment control BMPs and treatment control BMP maintenance.
- vi. A completed watershed-based inventory of approved treatment control BMPs.
- vii. A description of the program to be implemented to verify approved treatment control BMPs are operating effectively and have been adequately maintained, including information on treatment control BMP inventory, prioritization, inspection, and annual verification.
- viii. A description of inspections that will be conducted to verify BMPs have been constructed according to requirements.
- ix. A description of collaboration efforts to be conducted to develop the HMP.
- x. A description of enforcement mechanisms and how they will be used.

(d) Construction

- i. Updated grading and other applicable ordinances.
- ii. A description of the construction and grading approval processes.
- iii. Updated construction and grading project requirements.
- iv. A completed watershed-based inventory of all construction sites.
- v. A description of steps that will be taken to maintain and update monthly a watershed-based inventory of all construction sites.
- vi. A list and description of the minimum BMPs that will be implemented, or required to be implemented, including pollution prevention.
- vii. A description of the maximum disturbed area allowed for grading before either temporary or permanent erosion controls are implemented.
- viii. A description of construction site conditions where advanced treatment will be required.
- ix. A description of the steps that will be taken to require and verify the implementation of the designated BMPs at all construction sites.
- x. A description of planned inspection frequencies.
- xi. A description of inspection procedures.
- xii. A description of steps that will be taken to track construction site inspections to verify that all construction sites are inspected at the minimum frequencies required.
- xiii. A description of available enforcement mechanisms, under what conditions each will be used, and how they will escalate.
- xiv. A description of notification procedures for non-compliant sites.

(e) Municipal

- i. A completed inventory of all municipal facilities and activities.
- ii. A description of which BMPs will be implemented, or required to be implemented, for municipal facilities and activities, including pollution prevention.
- iii. A description of which BMPs will be implemented, or required to be implemented, for special events.

- iv. A description of steps that will be taken to require and verify the implementation of designated BMPs at municipal facilities and activities.
 - v. A description of MS4 and MS4 facility inspection and maintenance activities and schedules.
 - vi. A description of the management strategy and BMPs to be implemented for pesticides, herbicides, and fertilizer use.
 - vii. A description of street and parking facility sweeping activities and schedules.
 - viii. A description of controls and measures to be implemented to prevent and eliminate infiltration of seepage from sanitary sewers to MS4s.
 - ix. A description of inspection frequencies and procedures.
 - x. A description of enforcement mechanisms and how they will be used.
- (f) Industrial and Commercial
- i. A completed and prioritized inventory of all industrial and commercial sites/sources that could contribute a significant pollutant load to the MS4.
 - ii. A list of minimum BMPs that will be implemented, or required to be implemented, for each facility type or pollutant-generating activity, including pollution prevention.
 - iii. A description of the steps that will be taken to require and verify the implementation of designated BMPs, including notification efforts.
 - iv. Identification of high priority sites/sources and sites/sources to be inspected during the first year of implementation.
 - v. A description of the steps taken to identify sites/sources to be inspected during the first year of implementation, including rationale for their selection.
 - vi. A description of steps that will be taken to identify sites/sources to be inspected in subsequent years.
 - vii. A description of inspection procedures.
 - viii. A description of any third party inspection program to be implemented.
 - ix. A description of the program to be implemented to regulate mobile businesses, including notification of BMP requirements and local ordinances.
 - x. A description of enforcement mechanisms and how they will be used.
 - xi. A description of steps that will be taken to identify non-filers and notify the Regional Board of non-filers.
- (g) Residential
- i. A list of residential areas and activities that have been identified as high priority.
 - ii. A list of minimum BMPs that will be implemented, or required to be implemented, for high priority residential activities.
 - iii. A description of which pollution prevention methods will be encouraged for implementation, and the steps that will be taken to encourage implementation.
 - iv. A description of the steps that will be taken to require and verify the implementation of prescribed BMPs for high priority residential activities.
 - v. A description of efforts to facilitate proper disposal of used oil and other toxic materials.

- vi. A description of efforts to evaluate methods used for oversight of residential areas and activities.
 - vii. A description of enforcement mechanisms and how they will be used.
- (h) Illicit Discharge Detection and Elimination
- i. A description of the program to actively seek and eliminate illicit discharges and illicit connections.
 - ii. An updated MS4 map, including locations of the MS4, dry weather field screening and analytical monitoring sites, and watersheds.
 - iii. A description of dry weather field screening and analytical monitoring to be conducted (including procedures) which addresses all requirements included in sections B.1-4 of Receiving Waters Monitoring and Reporting Program No. R9-2006-0011.
 - iv. A description of investigation and inspection procedures to follow up on dry weather monitoring results or other information which indicate potential for illicit discharges and illicit connections.
 - v. A description of procedures to eliminate detected illicit discharges and illicit connections.
 - vi. A description of enforcement mechanisms and how they will be used.
 - vii. A description of the mechanism to receive notification of spills.
 - viii. A description of measures to prevent, respond to, contain, and clean up all sewage and other spills.
 - ix. A description of efforts to facilitate public reporting of illicit discharges and connections, including a public hotline.
- (i) Education
- i. A description of the content, form, and frequency of education efforts for each target community.
 - ii. A description of steps to be taken to educate underserved target audiences, high-risk behaviors, and “allowable” behaviors and discharges, including various ethnic and socioeconomic groups and mobile sources.
 - iii. A description of the content, form, and frequency of education efforts targeting municipal staff working on development planning, construction, municipal, industrial/commercial, and other aspects of the Jurisdictional Urban Runoff Management Program.
 - iv. A description of the content, form, and frequency of education efforts targeting new development and construction target communities.
 - v. A description of the content, form, and frequency of jurisdictional education efforts for the residential, general public, and school children target communities.
- (j) Public Participation
- i. A description of the steps that will be taken to include public participation in the development and implementation of each Copermittee’s Jurisdictional Urban Runoff Management Program.
- (k) Fiscal Analysis
- i. A description of the fiscal analysis to be conducted annually, as required by section G of this Order.

(l) Program Effectiveness Assessment

- i. A description of steps that will be taken to annually conduct program effectiveness assessments in compliance with section I.1 of the Order.
- ii. Identify measurable targeted outcomes, assessment measures, and assessment methods to be used to assess the effectiveness of: (1) Each significant jurisdictional activity or BMP to be implemented; (2) Implementation of each major component of the Jurisdictional Urban Runoff Management Program; and (3) Implementation of the Jurisdictional Urban Runoff Management Program as a whole.
- iii. Identify which of the outcome levels 1-6 will be utilized to assess the effectiveness of each of the items listed in sections J.1.a.(3)(l)ii(1-3). Where an outcome level is determined to not be applicable or feasible for an item listed in sections J.1.a.(3)(l)ii(1-3), the Copermittee shall provide a discussion exhibiting inapplicability or infeasibility.
- iv. A description of the steps that will be taken to utilize monitoring data to assess the effectiveness of each of the items listed in sections J.1.a.(3)(l)ii(1-3).
- v. A description of the steps that will be taken to improve the Copermittee's ability to assess program effectiveness using measurable targeted outcomes, assessment measures, assessment methods, and outcome levels 1-6. Include a time schedule for when improvement will occur.
- vi. A description of the steps that will be taken to identify aspects of the Copermittee's Jurisdictional Urban Runoff Management Program that will be changed, based on the results of the effectiveness assessment.

(m) JURMP Modification

- i. Identification of the location in the JURMP of any changes made to the JURMP in order to meet the requirements of Order No. R9-2007-0001.

b. WATERSHED URBAN RUNOFF MANAGEMENT PLANS

- (1) Copermittees - The written account of the program conducted by each watershed group of Copermittees is referred to as the Watershed Urban Runoff Management Plan (WURMP). The Copermittees within each watershed shall be responsible for updating and revising each WURMP, as specified in Table 4 above. Each WURMP shall be updated and revised to describe all activities the watershed Copermittees will undertake to implement the Watershed Urban Runoff Management Program requirements of section E of this Order.
- (2) Lead Watershed Permittee - Each Lead Watershed Permittee shall be responsible for producing its respective WURMP, as well as for coordination and meetings amongst all member watershed Copermittees. Each Lead Watershed Permittee is further responsible for the submittal of the WURMP to the Principal Permittee by the date specified by the Principal Permittee.
- (3) Principal Permittee – The Principal Permittee shall assemble and submit the WURMPs to the Regional Board 365 days after adoption of this Order.
- (4) Each WURMP shall include:
 - (a) Identification of the Lead Watershed Permittee for the watershed.
 - (b) An updated watershed map.

- (c) Identification and description of all applicable water quality data, reports, analyses, and other information to be used to assess receiving water quality.
- (d) Assessment and analysis of the watershed's water quality data, reports, analyses, and other information, including identification and prioritization of the watershed's water quality problems. Water quality problems and high priority water quality problems shall be identified.
- (e) Identification of the likely sources, pollutant discharges, and/or other factors causing the high priority water quality problems within the watershed.
- (f) A description of the program to be implemented to encourage collaborative, watershed-based, land-use planning.
- (g) A description of the strategy to be used to guide Copermittee implementation of Watershed Water Quality Activities and Watershed Education Activities, including criteria for evaluating and identifying effective activities.
- (h) A list of potential Watershed Water Quality Activities, including a description of each activity and its location(s).
- (i) Identification and description of the Watershed Water Quality Activities to be implemented by each Copermittee for the first year of implementation, including justification for why the activities were chosen and a description of how the activities are expected to reduce discharged pollutant loads, abate pollutant sources, or result in other quantifiable benefits to discharge or receiving water quality, in relation to the watershed's high priority water quality problem(s). Plans for activity implementation beyond the first year of implementation should also be provided.
- (j) A list of potential Watershed Education Activities.
- (k) Identification and description of the Watershed Education Activities to be implemented by each Copermittee for the first year of implementation, including justification for why the activities were chosen and a description of how the activities are expected to directly target the sources and discharges of pollutants causing the watershed's high priority water quality problems. Plans for activity implementation beyond the first year of implementation should also be provided.
- (l) A description of the public participation mechanisms to be used and the parties anticipated to be involved.
- (m) A description of Copermittee collaboration to occur, including a schedule for WURMP meetings.
- (n) A description of any TMDL BMP Implementation Plan or equivalent plan to be implemented under section H of this Order.¹²
- (o) A detailed description of the effectiveness assessment to be conducted for the WURMP, including a description how each of the requirements in section I.2 of this Order will be met.

c. REGIONAL URBAN RUNOFF MANAGEMENT PLAN

- (1) Copermittees - The written account of the regional program to be conducted is referred to as the Regional Urban Runoff Management Plan (RURMP). Each Copermittee shall collaborate with the other Copermittees to develop the RURMP. The RURMP shall describe all activities the Copermittees will undertake to implement the requirements of each component of Regional Urban

¹² For TMDLs not yet approved by the Office of Administrative Law at the time of adoption of this Order, TMDL BMP Implementation Plans shall be submitted separately 365 days following approval of the TMDL.

Runoff Management Program section F of this Order. At a minimum, the RURMP shall contain the following information:

- (a) A common activities section that describes the urban runoff management activities to be implemented on a regional level. For regional activities which are to be implemented in compliance with any jurisdictional requirements of section D or watershed requirements of section E, it shall be described how the regional activities achieve compliance with the subject jurisdictional and/or watershed requirements.
 - (b) A description of steps that will be taken to facilitate assessment of the effectiveness of jurisdictional, watershed, and regional programs.
 - (c) A description of the regional residential education program to be implemented.
 - (d) A description of the strategy for development of the standardized fiscal analysis method required by section G of this Order.
 - (e) A detailed description of the effectiveness assessment to be conducted for the Regional Urban Runoff Management Program, including a description how each of the requirements in section I.3 of this Order will be met.
- (2) The Principal Permittee shall be responsible for creating and submitting the RURMP. The Principal Permittee shall submit the RURMP to the Regional Board 365 days after adoption of this Order.

2. Other Required Reports and Plans

a. HYDROMODIFICATION MANAGEMENT PLAN

- (1) Copermittees - Each Copermittee shall collaborate with the other Copermittees to develop the HMP. The HMP shall be submitted for approval by the Regional Board.
- (2) Principal Permittee - The Principal Permittee shall be responsible for producing and submitting each document according to the schedule below.
 - (a) Within 180 days of adoption of the Order: Submit a detailed workplan and schedule for completion of the literature review, development of a protocol to identify an appropriate channel standard and limiting range of flow rates, development of guidance materials, and other required information;
 - (b) Within 18 months of adoption of the Order: Submit progress report on completion of requirements of the HMP;
 - (c) Within 2 years of adoption of the Order: Submit a draft HMP, including the analysis that identifies the appropriate limiting range of flow rates;
 - (d) Within 180 days of receiving comments from the Regional Board: Submit the HMP for Regional Board approval.

b. SUSMP UPDATES

Each Copermittee shall collaborate with the other Copermittees to update the Model SUSMP. The Principal Permittee shall be responsible for producing and submitting the updated Model SUSMP in accordance with the requirements of section D.1.d.(8)(b). Each Copermittee shall submit its updated local SUSMP, consistent

with the updated Model SUSMP, in accordance with the requirements of section D.1.d.(8)(c).

c. **LONG-TERM EFFECTIVENESS ASSESSMENT**

In accordance with section I.5 of this Order, the Principal Permittee shall submit the LTEA to the Regional Board no later than 210 days in advance of the expiration of this Order.

d. **REPORT OF WASTE DISCHARGE**

The Principal Permittee shall submit to the Regional Board, no later than 210 days in advance of the expiration date of this Order, a Report of Waste Discharge (ROWD) as an application for issuance of new waste discharge requirements. At a minimum, the ROWD shall include the following: (1) Proposed changes to the Copermittees' urban runoff management programs; (2) Proposed changes to monitoring programs; (3) Justification for proposed changes; (4) Name and mailing addresses of the Copermittees; (5) Names and titles of primary contacts of the Copermittees; and (6) Any other information necessary for the reissuance of this Order.

3. Annual Reports

a. **JURISDICTIONAL URBAN RUNOFF MANAGEMENT PROGRAM ANNUAL REPORTS**

Each Jurisdictional Urban Runoff Management Program Annual Report shall contain a comprehensive description of all activities conducted by the Copermittee to meet all requirements of section D. The reporting period for these annual reports shall be the previous fiscal year. For example, the report submitted September 30, 2008 shall cover the reporting period July 1, 2007 to June 30, 2008.

- (1) Copermittees – Each Copermittee shall generate individual Jurisdictional Urban Runoff Management Program Annual Reports which cover implementation of its jurisdictional activities during the past annual reporting period. Each Copermittee shall submit to the Principal Permittee its individual Jurisdictional Urban Runoff Management Program Annual Report by the date specified by the Principal Permittee. Each individual Jurisdictional Urban Runoff Management Program Annual Report shall be a comprehensive description of all activities conducted by the Copermittees to meet all requirements of each component of section D of this Order.
- (2) Principal Permittee – The Principal Permittee shall submit Unified Jurisdictional Urban Runoff Management Program Annual Reports to the Regional Board by September 30 of each year, beginning on September 30, 2008. The Unified Jurisdictional Urban Runoff Management Program Annual Report shall contain the twenty-one individual Jurisdictional Urban Runoff Management Program Annual Reports.

The Principal Permittee shall also be responsible for collecting and assembling each Copermittees' individual Jurisdictional Urban Runoff Management Program Annual Report.

(3) At a minimum, each Jurisdictional Urban Runoff Management Program Annual Report shall contain the following information:

(a) Development Planning

- i. A description of any amendments to the General Plan, the environmental review process, development project approval processes, or development project requirements.
- ii. Confirmation that all development projects were required to undergo the Copermittee's urban runoff approval process and meet the applicable project requirements, including a description of how this information was tracked.
- iii. A listing of the development projects to which SUSMP requirements were applied.
- iv. Confirmation that all applicable SUSMP BMP requirements were applied to all priority development projects, including a description of how this information was tracked.
- v. At least one example of a priority development project that was conditioned to meet SUSMP requirements and a description of the required BMPs.
- vi. A listing of the priority development projects which were allowed to implement treatment control BMPs with low removal efficiency rankings, including the feasibility analyses which were conducted to exhibit that more effective BMPs were infeasible.
- vii. An updated treatment control BMP inventory.
- viii. The number of treatment control BMPs inspected, including a summary of inspection results and findings.
- ix. A description of the annual verification of operation and maintenance of treatment control BMPs, including a summary of verification results and findings.
- x. Confirmation that BMP verification was conducted for all priority development projects prior to occupancy, including a description of how this information was tracked.
- xi. A listing of any projects which received a SUSMP waiver.
- xii. A description of implementation of any SUSMP waiver mitigation program.
- xiii. A description of Hydromodification Management Plan (HMP) development collaboration and participation.
- xiv. A listing of development projects required to meet HMP requirements, including a description of hydrologic control measures implemented.
- xv. A listing of priority development projects not required to meet HMP requirements, including a description of why the projects were found to be exempt from the requirements.
- xvi. A listing of development projects disturbing 50 acres or more, including information on whether Interim Hydromodification Criteria were met by each of the projects, together with a description of hydrologic control measures implemented for each applicable project.
- xvii. The number of violations and enforcement actions (including types) taken for development projects, including information on any necessary follow-up actions taken. The discussion should exhibit that compliance has been achieved, or describe actions that are being taken to achieve compliance.

- xviii. A description of notable activities conducted to manage urban runoff from development projects.

(b) Construction

- i. Confirmation that all construction sites were required to undergo the Copermittee's construction urban runoff approval process and meet the applicable construction requirements, including a description of how this information was tracked.
- ii. Confirmation that a regularly updated construction site inventory was maintained, including a description of how the inventory was managed.
- iii. A description of modifications made to the construction and grading ordinances and approval processes.
- iv. Confirmation that the designated BMPs were implemented, or required to be implemented, for all construction sites.
- v. Confirmation that a maximum disturbed area for grading was applied to all applicable construction sites.
- vi. A listing of all construction sites with conditions requiring advanced treatment, together with confirmation that advanced treatment was required at such construction sites.
- vii. For each construction site within each priority category (high, medium, and low), identification of the period of time (weeks) the site was active within the rainy season, the number of inspections conducted during the rainy season, and the number of inspections conducted during the dry season, and the total number of inspections conducted for all sites.
- viii. A description of the general results of the inspections.
- ix. Confirmation that the inspections conducted addressed all the required inspection steps to determine full compliance.
- x. The number of violations and enforcement actions (including types) taken for construction sites, including information on any necessary follow-up actions taken. The discussion should exhibit that compliance has been achieved, or describe actions that are being taken to achieve compliance.
- xi. A description of notable activities conducted to manage urban runoff from construction sites.

(c) Municipal

- i. Any updates to the municipal inventory and prioritization.
- ii. Confirmation that the designated BMPs were implemented, or required to be implemented, for municipal areas and activities, as well as special events.
- iii. A description of inspections and maintenance conducted for municipal treatment controls.
- iv. Identification of the total number of catch basins and inlets, the number of catch basins and inlets inspected, the number of catch basins and inlets found with accumulated waste exceeding cleaning criteria, and the number of catch basins and inlets cleaned.
- v. Identification of the total distance (miles) of the MS4, the distance of the MS4 inspected, the distance of the MS4 found with accumulated waste exceeding cleaning criteria, and the distance of the MS4 cleaned.
- vi. Identification of the total distance (miles) of open channels, the distance of open channels inspected, the distance of open channels found with anthropogenic litter, and the distance of open channels cleaned.

- vii. Amount of waste and litter (tons) removed from catch basins, inlets, the MS4, and open channels, by category.
 - viii. Identification of any MS4 facility found to require inspection less than annually following two years of inspection, including justification for the finding.
 - ix. Confirmation that the designated BMPs for pesticides, herbicides, and fertilizers were implemented, or required to be implemented, for municipal areas and activities.
 - x. Identification of the total distance of curb-miles of improved roads, streets, and highways identified as consistently generating the highest volumes of trash and/or debris, as well as the frequency of sweeping conducted for such roads, streets, and highways.
 - xi. Identification of the total distance of curb-miles of improved roads, streets, and highways identified as consistently generating moderate volumes of trash and/or debris, as well as the frequency of sweeping conducted for such roads, streets, and highways.
 - xii. Identification of the total distance of curb-miles of improved roads, streets, and highways identified as consistently generating low volumes of trash and/or debris, as well as the frequency of sweeping conducted for such roads, streets, and highways.
 - xiii. Identification of the total distance of curb-miles swept.
 - xiv. Identification of the number of municipal parking lots, the number of municipal parking lots swept, and the frequency of sweeping.
 - xv. Amount of material (tons) collected from street and parking lot sweeping.
 - xvi. A description of efforts implemented to prevent and eliminate infiltration from the sanitary sewer to the MS4
 - xvii. Identification of the number of sites requiring inspections, the number of sites inspected, and the frequency of the inspections.
 - xviii. A description of the general results of the inspections.
 - xix. Confirmation that the inspections conducted addressed all the required inspection steps to determine full compliance.
 - xx. The number of violations and enforcement actions (including types) taken for municipal areas and activities, including information on any necessary follow-up actions taken. The discussion should exhibit that compliance has been achieved, or describe actions that are being taken to achieve compliance.
 - xxi. A description of notable activities conducted to manage urban runoff from municipal areas and activities.
- (d) Industrial and Commercial
- i. Any updates to the industrial and commercial inventory.
 - ii. Confirmation that the designated BMPs were implemented, or required to be implemented, for industrial and commercial sites/sources.
 - iii. A description of efforts taken to notify owners/operators of industrial and commercial sites/sources of BMP requirements, including mobile businesses.
 - iv. Identification of the total number of industrial and commercial sites/sources inventoried and the total number inspected.
 - v. Justification and rationale for why the industrial and commercial sites/sources inspected were chosen for inspection.

- vi. Confirmation that all inspections conducted addressed all the required inspection steps to determine full compliance.
- vii. Identification of the number of third party inspections conducted.
- viii. Identification of efforts conducted to verify third party inspection effectiveness.
- ix. A description of efforts implemented to address mobile businesses.
- x. The number of violations and enforcement actions (including types) taken for industrial and commercial sites/sources, including information on any necessary follow-up actions taken. The discussion should exhibit that compliance has been achieved, or describe actions that are being taken to achieve compliance.
- xi. A description of steps taken to identify non-filers and a list of non-filers (under the General Industrial Permit) identified by the Copermittees.
- xii. A description of notable activities conducted to manage urban runoff from industrial and commercial sites/sources.

(e) Residential

- i. Identification of the high threat to water quality residential areas and activities that were focused on.
- ii. Confirmation that the designated BMPs were implemented, or required to be implemented, for residential areas and activities.
- iii. A description of efforts implemented to facilitate proper management and disposal of used oil and other household hazardous materials.
- iv. Types and amounts of household hazardous wastes collected, if applicable.
- v. A description of any evaluation of methods used for oversight of residential areas and activities, as well as any findings of the evaluation.
- vi. The number of violations and enforcement actions (including types) taken for residential areas and activities, including information on any necessary follow-up actions taken. The discussion should exhibit that compliance has been achieved, or describe actions that are being taken to achieve compliance.
- vii. A description of collaboration efforts taken to develop and implement the Regional Residential Education Program.
- viii. A description of notable activities conducted to manage urban runoff from residential areas and activities.

(f) Illicit Discharge Detection and Elimination

- i. Correction of any inaccuracies in either the MS4 map or the Dry Weather Field Screening and Analytical Stations Map.
- ii. Reporting of all dry weather field screening and analytical monitoring results. The data should be presented in tabular and graphical form. The reporting shall include station locations, all dry weather field screening and analytical monitoring results, identification of sites where results exceeded action levels, follow-up and elimination activities for potential illicit discharges and connections, the rationale for why follow-up investigations were not conducted at sites where action levels were exceeded, any Copermittee or consultant program recommendations/changes resulting from the monitoring, and documentation that these recommendations/changes have been implemented. Dry weather field screening and analytical monitoring reporting shall comply with all monitoring and standard reporting

requirements in Attachment B of Order No. R9-2007-0001 and Receiving Waters Monitoring and Reporting Program No. R9-2007-0001.

- iii. Any dry weather field screening and analytical monitoring consultant reports generated, to be provided as an attachment to the annual report.
- iv. A brief description of any other investigations and follow-up activities for illicit discharges and connections.
- v. The number and brief description of illicit discharges and connections identified.
- vi. The number of illicit discharges and connections eliminated.
- vii. Identification and description of all spills to the MS4 and response to the spills.
- viii. A description of activities implemented to prevent sewage and other spills from entering the MS4.
- ix. A description of the mechanism whereby notification of sewage spills from private laterals and septic systems is received.
- x. Number of times the hotline was called, as compared to previous reporting periods, and a summary of the calls.
- xi. A description of efforts to publicize and facilitate public reporting of illicit discharges.
- xii. The number of violations and enforcement actions (including types) taken for illicit discharges and connections, including information on any necessary follow-up actions taken. The discussion should exhibit that compliance has been achieved, or describe actions that are being taken to achieve compliance.
- xiii. A description of notable activities conducted to manage illicit discharges and connections.

(g) Education

- i. A description of education efforts conducted for each target community.
- ii. A description of how education efforts targeted underserved target audiences, high-risk behaviors, and “allowable” behaviors and discharges.
- iii. A description of education efforts conducted for municipal departments and personnel.
- iv. A description of education efforts conducted for the new development and construction communities.
- v. A description of jurisdictional education efforts conducted for residents, the general public, and school children.

(h) Public Participation

- i. A description of public participation efforts conducted.

(i) Program Effectiveness Assessment

- i. An assessment of the effectiveness of the Jurisdictional Urban Runoff Management Program which meets all requirements of section I.1 of this Order.

(j) Fiscal Analysis

- i. A fiscal analysis of the Copermittee’s urban runoff management programs which meets all requirements of section G of this Order.

- (k) Special Investigations
 - i. A description of any special investigations conducted.
 - (l) Non-Emergency Fire Fighting
 - i. A description of any efforts conducted to reduce pollutant discharges from non-emergency fire fighting flows.
 - (m) JURMP Revisions
 - i. A description of any proposed revisions to the JURMP.
- b. WATERSHED URBAN RUNOFF MANAGEMENT PROGRAM ANNUAL REPORTS
 - (1) Lead Watershed Permittee - Each Lead Watershed Permittee shall generate watershed specific Watershed Urban Runoff Management Program Annual Reports for their respective watershed(s), as they are outlined in Table 4 of Order No. R9-2007-0001. Copermittees within each watershed shall collaborate with the Lead Watershed Permittee to generate the Watershed Urban Runoff Management Program Annual Reports.
 - (2) Each Watershed Urban Runoff Management Program Annual Report shall be a comprehensive documentation of all activities conducted by the watershed Copermittees during the previous annual reporting period to meet all requirements of section E of Order No. R9-2007-0001. Each Watershed Urban Runoff Management Program Annual Report shall also serve as an update to the WURMP.¹³ Each Watershed Urban Runoff Management Program Annual Report shall, at a minimum, contain the following for its reporting period:
 - (a) A comprehensive description of all activities conducted by the watershed Copermittees to meet all requirements of section E of Order No. R9-2007-0001.
 - (b) Any updates to the watershed map.
 - (c) An updated assessment and analysis of the watershed's current and past applicable water quality data, reports, analyses, and other information, including identification of the watershed's water quality problems and high priority water quality problem(s) during the reporting period. The annual report shall clearly state if the watershed's high priority water quality problem(s) changed from the previous reporting period, and provide justification for the change(s).
 - (d) Identification of the likely sources, pollutant discharges, and/or other factors causing the high priority water quality problems within the watershed. The annual report shall clearly describe any changes to the identified sources, pollutant discharges, and/or other factors that have occurred since the previous reporting period, and provide justification for the changes.

¹³ The first annual report to be submitted is not anticipated to be an update to the WURMP, since it will cover the reporting period which begins immediately after WURMP submittal.

- (e) An updated list of potential Watershed Water Quality Activities. The annual report shall clearly describe any changes to the list of Watershed Water Quality Activities that have occurred since the previous reporting period, and provide justification for the changes.
- (f) Identification and description of the Watershed Water Quality Activities implemented by each Copermittee during the reporting period, including information on the activities' location(s), as well as information exhibiting that the activities in active implementation phase reduced discharged pollutant loads, abated pollutant sources, or resulted in other quantifiable benefits to discharge or receiving water quality, in relation to the watershed's high priority water quality problem(s). The annual report shall clearly describe any changes to Watershed Water Quality Activities implementation that have occurred since the previous reporting period, and provide justification for the changes.
- (g) An updated list of potential Watershed Education Activities. The annual report shall clearly describe any changes to the list of Watershed Education Activities that have occurred since the previous reporting period, and provide justification for the changes.
- (h) Identification and description of the Watershed Education Activities implemented by each Copermittee for the reporting period, including information exhibiting that the activities directly targeted the sources and discharges of pollutants causing the watershed's high priority water quality problems, and that activities in active implementation phase changed target audience attitudes, knowledge, awareness, or behavior. The annual report shall clearly describe any changes to Watershed Education Activities implementation that have occurred since the previous reporting period, and provide justification for the changes.
- (i) A description of the public participation mechanisms used during the reporting period and the parties that were involved.
- (j) A description of Copermittee collaboration efforts.
- (k) A description of efforts implemented to encourage collaborative, watershed-based, land-use planning.
- (l) A description of all TMDL activities implemented (including BMP Implementation Plan or equivalent plan activities) for each approved TMDL in the watershed. The description shall include:
 - i. Any additional source identification information;
 - ii. The number, type, location, and other relevant information about BMP implementation, including any expanded or better tailored BMPs necessary to meet the WLAs;
 - iii. Updates in the BMP implementation prioritization and schedule;
 - iv. An assessment of the effectiveness of the BMP Implementation Plan, which meets the requirements of section I.4 Order No. R9-2007-0001; and

- v. A discussion of the progress to date in meeting the TMDL Numeric Targets and WLAs, which incorporates the results of the effectiveness assessment, compliance monitoring, and an evaluation of additional efforts needed to date.
 - (m) An assessment of the effectiveness of the WURMP, which meets the requirements of section I.2 of Order No. R9-2007-0001. The effectiveness assessment shall attempt to qualitatively or quantitatively exhibit the impact that implementation of the Watershed Water Quality Activities and the Watershed Education Activities had on the high priority water quality problem(s) within the watershed. This information shall document changes in pollutant load discharges, urban runoff and discharge quality, and receiving water quality, where applicable and feasible.
- (3) Principal Permittee – The Unified Watershed Urban Runoff Management Program Annual Report shall contain the nine separate Watershed Urban Runoff Management Program Annual Reports. Each Lead Watershed Copermittee shall submit to the Principal Permittee a Watershed Urban Runoff Management Program Annual Report by the date specified by the Principal Permittee. The Principal Permittee shall assemble and submit the Unified Watershed Urban Runoff Management Program Annual Report to the Regional Board by January 31, 2009 and every January 31 thereafter. The reporting period for these annual reports shall be the previous fiscal year. For example, the report submitted January 31, 2009 shall cover the reporting period July 1, 2007 to June 30, 2008.
- c. REGIONAL URBAN RUNOFF MANAGEMENT PROGRAM ANNUAL REPORTS

The Principal Permittee shall generate the Regional Urban Runoff Management Program Annual Reports. All Copermittees shall collaborate with the Principal Permittee to generate the Regional Urban Runoff Management Program Annual Reports. Each Regional Urban Runoff Management Program Annual Report shall be a comprehensive documentation of all regional activities conducted by the Copermittees during the previous annual reporting period to meet all requirements of section F of Order No. R9-2007-0001.

The Principal Permittee shall submit the Regional Urban Runoff Management Program Annual Report to the Regional Board by January 31, 2009 and every January 31 thereafter. The reporting period for these annual reports shall be the previous fiscal year. For example, the report submitted January 31, 2009 shall cover the reporting period July 1, 2007 to June 30, 2008.

Each Regional Urban Runoff Management Program Annual Report shall, at a minimum, contain the following:

- (1) A common activities section that describes the urban runoff management activities or BMPs implemented on a regional level, including information on how the activities complied with jurisdictional or watershed requirements, if applicable.
- (2) A description of steps taken to facilitate assessment of the effectiveness of jurisdictional, watershed, and regional programs.

- (3) A description of the regional residential education activities implemented as part of the regional residential education program.
- (4) A description of steps taken to develop and implement the standardized fiscal analysis method.
- (5) An assessment of the effectiveness of the Regional Urban Runoff Management Program which meets the requirements of section I.3 of Order No. R9-2007-0001.

4. Interim Reporting Requirements - For the July 2006–June 2007 reporting period, Jurisdictional URMP and Watershed URMP Annual Reports shall be submitted on January 31, 2008. Each Jurisdictional URMP and Watershed URMP Annual Report submitted for this reporting period shall at a minimum be comprehensive descriptions of all activities conducted to fully implement the Copermittees' Jurisdictional URMP and Watershed URMP documents, as those documents were developed to comply with the requirements of Order No. 2001-01. The Principal Permittee shall be responsible for submitting these documents in a unified manner, consistent with the unified reporting requirements of Order No. 2001-01.

5. Annual Report Integration

- a. The Copermittees are encouraged to submit, for Regional Board review and approval, an annual reporting format which integrates the information submitted in the JURMP, WURMP, and RURMP Annual Reports and Monitoring Reports. This document shall be called the "Integrated Annual Report Format." The Integrated Annual Report Format should:
 - (1) Exhibit compliance with all requirements of JURMP, WURMP, and RURMP sections D, E, and F of Order No. R9-2007-0001.
 - (2) Report all information required in section J.3 of Order No. R9-2007-0001.
 - (3) Report all information required in the Monitoring and Reporting program.
 - (4) Provide consistent and comparable reporting of jurisdictional and watershed information by all Copermittees and watershed groups.
 - (5) Specifically identify all types of information that will be reported (e.g., amount of debris collected during street sweeping), including reporting criteria for each type of information (e.g., reported in tons).
 - (6) Describe quality assurance/quality control methods to be used to assess accuracy of jurisdictional and watershed information conveyed.
 - (7) Describe each Copermittee's reporting responsibilities under the format.
 - (8) Improve the Copermittees' ability to assess JURMP and WURMP effectiveness in terms of water quality.
 - (9) Include a separate section for reporting on each Copermittee's activities.
 - (10) Include a separate section for reporting on each watershed's activities.
- b. Upon approval of the Integrated Annual Report Format by the Regional Board, an Integrated Annual Report shall be submitted annually, which may substitute for the JURMP Annual Reports, WURMP Annual Reports, RURMP Annual Report, and/or Monitoring Reports, as approved by the Regional Board. The Principal Permittee shall be responsible for the generation and submittal of the Integrated Annual Reports. Each Copermittee shall be responsible for the information in the Integrated Annual Report pertaining to its jurisdictional, watershed, regional, and monitoring responsibilities. The Integrated Annual Report shall be submitted the first January 31 following approval of the reporting format by the Regional Board, and every January

31 thereafter. The reporting period for Integrated Annual Reports shall be the previous fiscal year. For example, a report submitted January 31, 2010 shall cover the reporting period July 1, 2008 to June 30, 2009.

- c. The format and information provided in Integrated Annual Reports shall match and be consistent with the format and information described in the Integrated Annual Report Format.

6. Universal Reporting Requirements

All submittals shall include an executive summary, introduction, conclusion, recommendations, and signed certified statement. Each Copermittee shall submit a signed certified statement covering its responsibilities for each applicable submittal. The Principal Permittee shall submit a signed certified statement covering its responsibilities for each applicable submittal and the sections of the submittals for which it is responsible.

K. MODIFICATION OF PROGRAMS

Modifications of Jurisdictional Urban Runoff Management Programs, Watershed Urban Runoff Management Programs, and/or the Regional Urban Runoff Management Program may be initiated by the Executive Officer or by the Copermittees. Requests by Copermittees shall be made to the Executive Officer, and shall be submitted during the annual review process. Requests for modifications should be incorporated, as appropriate, into the Annual Reports or other deliverables required or allowed under this Order.

1. Minor Modifications – Minor modifications to Jurisdictional Urban Runoff Management Programs, Watershed Urban Runoff Management Programs, and/or the Regional Urban Runoff Management Program may be accepted by the Executive Officer where the Executive Officer finds the proposed modification complies with all discharge prohibitions, receiving water limitations, and other requirements of this Order.
2. Modifications Requiring an Amendment to this Order – Proposed modifications that are not minor shall require amendment of this Order in accordance with this Order's rules, policies, and procedures.

L. ALL COPERMITTEE COLLABORATION

1. Each Copermittee collaborate with all other Copermittees regulated under this Order to address common issues, promote consistency among Jurisdictional Urban Runoff Management Programs and Watershed Urban Runoff Management Programs, and to plan and coordinate activities required under this Order.
 - a. Management Structure - All Copermittees shall jointly execute and submit to the Regional Board no later than 180 days after adoption of this Order, a Memorandum of Understanding, Joint Powers Authority, or other instrument of formal agreement which at a minimum:
 - (1) Identifies and defines the responsibilities of the Principal Permittee and Lead Watershed Permittees;
 - (2) Identifies Copermittees and defines their individual and joint responsibilities, including watershed responsibilities;

- (3) Establishes a management structure to promote consistency and develop and implement regional activities;
- (4) Establishes standards for conducting meetings, decision-making, and cost-sharing;
- (5) Provides guidelines for committee and workgroup structure and responsibilities;
- (6) Lays out a process for addressing Copermittee non-compliance with the formal agreement; and
- (7) Includes any and all other collaborative arrangements for compliance with this Order.

M. PRINCIPAL PERMITTEE RESPONSIBILITIES

Within 180 days of adoption of this Order, the Copermittees shall designate the Principal Permittee and notify the Regional Board of the name of the Principal Permittee. The Principal Permittee shall, at a minimum:

1. Serve as liaison between the Copermittees and the Regional Board on general permit issues, and when necessary and appropriate, represent the Copermittees before the Regional Board.
2. Coordinate permit activities among the Copermittees and facilitate collaboration on the development and implementation of programs required under this Order.
3. Integrate individual Copermittee documents and reports into single unified documents and reports for submittal to the Regional Board as required under this Order.
4. Produce and submit documents and reports as required by section J of this Order and Receiving Waters and Urban Runoff Monitoring and Reporting Program No. R9-2007-0001.
5. Submit to the Regional Board, within 180 days of adoption of this Order, a formal agreement between the Copermittees which provides a management structure for meeting the requirements of this Order (as described in section L).
6. Coordinate joint development by all of the Copermittees of standardized format(s) for all documents and reports required under this Order (e.g., JURMPs, WURMPs, annual reports, monitoring reports, etc.). The standardized reporting format(s) shall be used by all Copermittees. The Principal Permittee shall submit the standardized format(s) to the Regional Board for review no later than 180 days after adoption of this Order.

N. RECEIVING WATERS MONITORING AND REPORTING PROGRAM

Pursuant to CWC section 13267, the Copermittees shall comply with all the requirements contained in Receiving Waters and Urban Runoff Monitoring and Reporting Program No. R9-2007-0001.

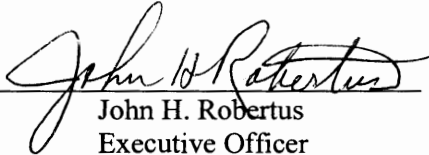
O. STANDARD PROVISIONS, REPORTING REQUIREMENTS, AND NOTIFICATIONS

1. Each Copermittee shall comply with Standard Provisions, Reporting Requirements, and Notifications contained in Attachment B of this Order. This includes 24 hour/5day reporting requirements for any instance of non-compliance with this Order as described

in section 5.e of Attachment B.

2. All plans, reports and subsequent amendments submitted in compliance with this Order shall be implemented immediately (or as otherwise specified). All submittals by Copermittees must be adequate to implement the requirements of this Order.

I, John H. Robertus, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on January 24, 2007.


John H. Robertus
Executive Officer

ATTACHMENT A**BASIN PLAN PROHIBITIONS**

California Water Code Section 13243 provides that a Regional Board, in a water quality control plan, may specify certain conditions or areas where the discharge of waste, or certain types of waste is not permitted. The following discharge prohibitions are applicable to any person, as defined by Section 13050(c) of the California Water Code, who is a citizen, domiciliary, or political agency or entity of California whose activities in California could affect the quality of waters of the state within the boundaries of the San Diego Region.

1. The discharge of waste to waters of the state in a manner causing, or threatening to cause a condition of pollution, contamination or nuisance as defined in California Water Code Section 13050, is prohibited.
2. The discharge of waste to land, except as authorized by waste discharge requirements or the terms described in California Water Code Section 13264 is prohibited.
3. The discharge of pollutants or dredged or fill material to waters of the United States except as authorized by a NPDES permit or a dredged or fill material permit (subject to the exemption described in California Water Code Section 13376) is prohibited.
4. Discharges of recycled water to lakes or reservoirs used for municipal water supply or to inland surface water tributaries thereto are prohibited, unless this Regional Board issues a NPDES permit authorizing such a discharge; the proposed discharge has been approved by the State Department of Health Services and the operating agency of the impacted reservoir; and the discharger has an approved fail-safe long-term disposal alternative.
5. The discharge of waste to inland surface waters, except in cases where the quality of the discharge complies with applicable receiving water quality objectives, is prohibited. Allowances for dilution may be made at the discretion of the Regional Board. Consideration would include streamflow data, the degree of treatment provided and safety measures to ensure reliability of facility performance. As an example, discharge of secondary effluent would probably be permitted if streamflow provided 100:1 dilution capability.
6. The discharge of waste in a manner causing flow, ponding, or surfacing on lands not owned or under the control of the discharger is prohibited, unless the discharge is authorized by the Regional Board.
7. The dumping, deposition, or discharge of waste directly into waters of the state, or adjacent to such waters in any manner which may permit its being transported into the waters, is prohibited unless authorized by the Regional Board.
8. Any discharge to a storm water conveyance system that is not composed entirely of "storm water" is prohibited unless authorized by the Regional Board. [The federal regulations, 40 CFR 122.26(b)(13), define storm water as storm water runoff, snow melt runoff, and surface runoff and drainage. 40 CFR 122.26(b)(2) defines an illicit discharge as any discharge to a storm water conveyance system that is not composed entirely of storm water except discharges pursuant to a NPDES permit and discharges resulting from

fire fighting activities. [§122.26 amended at 56 FR 56553, November 5, 1991; 57 FR 11412, April 2, 1992].

9. The unauthorized discharge of treated or untreated sewage to waters of the state or to a storm water conveyance system is prohibited.
10. The discharge of industrial wastes to conventional septic tank/subsurface disposal systems, except as authorized by the terms described in California Water Code Section 13264, is prohibited.
11. The discharge of radioactive wastes amenable to alternative methods of disposal into the waters of the state is prohibited.
12. The discharge of any radiological, chemical, or biological warfare agent into waters of the state is prohibited.
13. The discharge of waste into a natural or excavated site below historic water levels is prohibited unless the discharge is authorized by the Regional Board.
14. The discharge of sand, silt, clay, or other earthen materials from any activity, including land grading and construction, in quantities which cause deleterious bottom deposits, turbidity or discoloration in waters of the state or which unreasonably affect, or threaten to affect, beneficial uses of such waters is prohibited.
15. The discharge of treated or untreated sewage from vessels to Mission Bay, Oceanside Harbor, Dana Point Harbor, or other small boat harbors is prohibited.
16. The discharge of untreated sewage from vessels to San Diego Bay is prohibited.
17. The discharge of treated sewage from vessels to portions of San Diego Bay that are less than 30 feet deep at mean lower low water (MLLW) is prohibited.
18. The discharge of treated sewage from vessels, which do not have a properly functioning US Coast Guard certified Type I or Type II marine sanitation device, to portions of San Diego Bay that are greater than 30 feet deep at mean lower low water (MLLW) is prohibited.

ATTACHMENT B**STANDARD PROVISIONS, REPORTING REQUIREMENTS, AND NOTIFICATIONS****1. STANDARD PROVISIONS – PERMIT COMPLIANCE [40 CFR 122.41]****(a) *Duty to comply* [40 CFR 122.41(a)].**

- (1) The Copermittee must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code (CWC) and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.
- (2) The Copermittee shall comply with effluent standards or prohibitions established under section 307(a) of the CWA toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the Order has not yet been modified to incorporate the requirement.

(b) *Need to halt or reduce activity not a defense* [40 CFR 122.41(c)]. It shall not be a defense for the Copermittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order.**(c) *Duty to mitigate* [40 CFR 122.41(d)].** The Copermittee shall take all reasonable steps to minimize or prevent any discharge or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment.**(d) *Proper operation and maintenance* [40 CFR 122.41(e)].** The Copermittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Copermittee to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by the Copermittee only when necessary to achieve compliance with the conditions of this Order.**(e) *Property rights* [40 CFR 122.41(g)].**

- (1) This Order does not convey any property rights of any sort or any exclusive privilege.
- (2) The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations.

(f) *Inspection and entry* [40 CFR 122.41(i)]. The Copermittee shall allow the Regional Water Quality Control Board, San Diego Region (Regional Board), State Water Resources Control Board (SWRCB), United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon presentation of credentials and other documents as may be required by law, to:

- (1) Enter upon the Copermittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;
- (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;
- (3) Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and
- (4) Sample or monitor, at reasonable times, for the purpose of assuring Order compliance or as otherwise authorized by the CWA or the CWC, any substances or parameters at any location.

(g) *Bypass* [40 CFR 122.41(m)]

(1) Definitions:

- i) "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
- ii) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

(2) Bypass not exceeding limitations - The Copermittee may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance (g)(3), (g)(4) and (g)(5) below.

(3) Prohibition of Bypass - Bypass is prohibited, and the Regional Board may take enforcement action against a Copermittee for bypass, unless:

- i) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- ii) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
- iii) The Copermittee submitted notice as required under Standard Provisions – Permit Compliance (g)(3) above.

(4) Notice

- i) Anticipated bypass. If the Copermittee knows in advance of the need for a bypass, it shall submit a notice, if possible at least ten days before the date of the bypass.
- ii) Unanticipated bypass. The Copermittee shall submit notice of an unanticipated bypass as required in Standard Provisions 5(e) below (24-hour notice).

- (h) *Upset* [40 CFR 122.41(n)] Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based effluent limitations because of factors beyond the reasonable control of the Copermittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
- (1) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance (h)(2) below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
- (2) Conditions necessary for a demonstration of upset. A Copermittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
- i) An upset occurred and that the Copermittee can identify the cause(s) of the upset;
 - ii) The permitted facility was at the time being properly operated;
 - iii) The Copermittee submitted notice of the upset as required in Standard Provisions – Permit Compliance (5)(e)(ii)(B) below (24-hour notice); and
 - iv) The Copermittee complied with any remedial measures required under Standard Provisions – Permit Compliance 1(c) above.
- (3) Burden of Proof. In any enforcement proceeding, the Copermittee seeking to establish the occurrence of an upset has the burden of proof.

2. STANDARD PROVISIONS – PERMIT ACTION

- (a) *General* [40 CFR 122.41(f)] This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Copermittee for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition.
- (b) *Duty to reapply* [40 CFR 122.41(b)]. If the Copermittee wishes to continue an activity regulated by this Order after the expiration date of this Order, the Copermittee must apply for and obtain new permit.
- (c) *Transfers*. This Order is not transferable to any person except after notice to the Regional Board. The Regional Board may require modification or revocation and reissuance of the Order to change the name of the Copermittee and incorporate such other requirements as may be necessary under the CWA and the CWC.

3. STANDARD PROVISIONS – MONITORING

- (a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. [40 CFR Section 122.41 (j) (1)]
- (b) Monitoring results must be conducted according to test procedures under 40 CFR Part 136, or in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise

specified in 40 CFR Part 503 unless other test procedures have been specified in this Order [40 CFR Section 122.41(j)(4)][40 CFR Section 122.44(i)(1)(iv)].

4. STANDARD PROVISIONS – RECORDS

- (a) Except for records of monitoring information required by this Order related to the Copermittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), the Copermittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time [40 CFR Section 122.41(j)(2)].
- (b) *Records of monitoring information* [40 CFR 122.41(j) (3)] shall include:
- (1) The date, exact place, and time of sampling or measurements;
 - (2) The individual(s) who performed the sampling or measurements;
 - (3) The date(s) analyses were performed;
 - (4) The individual(s) who performed the analyses;
 - (5) The analytical techniques or methods used; and
 - (6) The results of such analyses.
- (c) *Claims of confidentiality* [40 CFR Section 122.7(b)] of the following information will be denied:
- (1) The name and address of any permit applicant or Copermittee; and
 - (2) Permit applications and attachments, permits and effluent data.

5. STANDARD PROVISIONS – REPORTING

- (a) *Duty to provide information* [40 CFR 122.41(h)]. The Copermittee shall furnish to the Regional Board, SWRCB, or USEPA within a reasonable time, any information which the Regional Board, SWRCB, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Copermittee shall also furnish to the Regional Board, SWRCB, or USEPA, copies of records required to be kept by this Order.
- (b) *Signatory and Certification Requirements* [40 CFR 122.41(k)]
- (1) All applications, reports, or information submitted to the Regional Board, SWRCB, or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting 5(b)ii), 5(b)iii), 5(b)iv), and 5(b) (see 40 CFR 122.22)
 - (2) *Applications* [40 CFR 122.22(a)(3)] All permit applications shall be signed by either a principal executive officer or ranking elected official.
 - (3) *Reports* [40 CFR 122.22(b)]. All reports required by this Order, and other information requested by the Regional Board, SWRCB, or USEPA shall be signed by a person described in Standard Provisions – Reporting 5(b)(2) above, or by a duly authorized

representative of that person. A person is a duly authorized representative only if:

- i) The authorization is made in writing by a person described in Standard Provisions-Reporting 5(b)(2) above;
 - ii) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and,
 - iii) The written authorization is submitted to the Regional Water Board and State Water Board.
- (4) *Changes to authorization* [40 CFR Section 122.22(c)] If an authorization under Standard Provisions – Reporting 5(b)(3) of this reporting requirement is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting 5(b)(3) above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications to be signed by an authorized representative.
- (5) *Certification* [40 CFR Section 122.22(d)] Any person signing a document under Standard Provisions – Reporting 5(b)(2), or 5(b)(3) above shall make the following certification:

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

(c) *Monitoring reports.* [40 CFR 122.41(l)(4)]

- (1) Monitoring results shall be reported at the intervals specified in the Receiving Waters and Urban Runoff Monitoring and Reporting Program No. R9-2007-0001.
- (2) Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Board or SWRCB for reporting results of mentoring of sludge use or disposal practices.
- (3) If the Copermittee monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Board.

- (4) Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order.
- (d) *Compliance schedules.* [40 CFR Section 122.41(l)(5)] Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order shall be submitted no later than 14 days following each schedule date.
- (e) *Twenty-four hour reporting* [40 CFR Section 122.41(l)(6)]
- (1) The Copermittee shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Copermittee becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Copermittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
 - (2) The following shall be included as information, which must be reported within 24 hours under this paragraph:
 - i) Any unanticipated bypass that exceeds any effluent limitation in the Order (See 40 CFR 122.41(g)).
 - ii) Any upset which exceeds any effluent limitation in this Order.
 - (3) The Regional Board may waive the above-required written report under this provision on a case-by-case basis if the oral report has been received within 24 hours.
- (f) *Planned changes.* [40 CFR Section 122.41(l)(1)] The Copermittee shall give notice to the Regional Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when:
- (1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
 - (2) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants, which are not subject to effluent limitations in this Order.
 - (3) The alteration or addition results in a significant change in the Copermittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing Order, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
- (g) *Anticipated noncompliance.* [40 CFR Section 122.41(l)(7)] The Copermittee shall give advance notice to the Regional Board or SWRCB of any planned changes in the permitted facility or activity, which may result in noncompliance with Order requirements.

- (h) *Other noncompliance* [40 CFR Section 122.41(l) 7)] The Copermittee shall report all instances of noncompliance not reported under Standard Provisions 5(c), 5(d), and 5(e) above, at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting 5(e) above.
- (i) *Other information* [40 CFR Section 122.41(l)(8)] When the Copermittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Board, SWRCB, or USEPA, the Copermittee shall promptly submit such facts or information.

6. STANDARD PROVISIONS – ENFORCEMENT

- (a) The Regional Board is authorized to enforce the terms of this permit under several provisions of the CWC, including, but not limited to, Sections 13385, 13386, and 13387.

7. ADDITIONAL STANDARD PROVISIONS

- (a) *Municipal separate storm sewer systems* [40 CFR 122.42(c)]. The operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer that has been designated by the Director under 40 CFR 122.26(a)(1)(v) must submit an annual report by the anniversary of the date of the issuance of the permit for such system. The report shall include:
 - (1) The status of implementing the components of the storm water management program that are established as permit conditions;
 - (2) Proposed changes to the storm water management programs that are established as permit conditions. Such proposed changes shall be consistent with 40 CFR 122.26(d)(2)(iii); and
 - (3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under 40 CFR 122.26(d)(2)(iv) and 40 CFR 122.26(d)(2)(v);
 - (4) A summary of data, including monitoring data, that is accumulated throughout the reporting year;
 - (5) Annual expenditures and budget for year following each annual report;
 - (6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; and
 - (7) Identification of water quality improvements or degradation.
- (b) *Storm water discharges* [40 CFR 122.42(d)]. The initial permits for discharges composed entirely of storm water issued pursuant to 40 CFR 122.26(e)(7) shall require compliance with the conditions of the permit as expeditiously as practicable, but in no event later than three years after the date of issuance of the permit.
- (c) *Other Effluent Limitations and Standards* [40 CFR 122.44(b)(1)]. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the CWA for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this Order, the Regional Board may institute

proceedings under these regulations to modify or revoke and reissue the Order to conform to the toxic effluent standard or prohibition.

- (d) *Discharge is a privilege* [CWC section 13263(g)]. No discharge of waste into the waters of the State, whether or not such discharge is made pursuant to waste discharge requirements, shall create a vested right to continue such discharge. All discharges of waste into waters of the State are privileges, not rights.
- (e) *Review and revision of Order* [CWC section 13263(e)]. Upon application by any affected person, or on its own motion, the Regional Board may review and revise this permit.
- (f) *Termination or modification of Order* [CWC section 13381]. This permit may be terminated or modified for causes, including, but not limited to, all of the following:
 - (1) Violation of any condition contained in this Order;
 - (2) Obtaining this Order by misrepresentation, or failure to disclose fully all relevant facts.
 - (3) A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge.
- (g) *Transfers*. When this Order is transferred to a new owner or operator, such requirements as may be necessary under the CWC may be incorporated into this Order.
- (h) *Conditions not stayed*. The filing of a request by the Copermittee for modification, revocation and reissuance, or termination of this Order, or a notification of planned change in or anticipated noncompliance with this Order does not stay any condition of this Order.
- (i) *Availability*. A copy of this Order shall be kept at a readily accessible location and shall be available to on-site personnel at all times.
- (j) *Duty to minimize or correct adverse impacts*. The Copermittees shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncompliance.
- (k) *Interim Effluent Limitations*. The Copermittee shall comply with any interim effluent limitations as established by addendum, enforcement action, or revised waste discharge requirements which have been, or may be, adopted by this Regional Board.
- (l) *Responsibilities, liabilities, legal action, penalties* [CWC sections 13385 and 13387]. The Porter-Cologne Water Quality Control Act provides for civil and criminal penalties comparable to, and in some cases greater than, those provided for under the CWA.

Nothing in this Order shall be construed to protect the Copermittee from its liabilities under federal, state, or local laws.

Except as provided for in 40CFR 122.41(m) and (n), nothing in this Order shall be construed to relieve the Copermittee from civil or criminal penalties for noncompliance.

Nothing in this Order shall be construed to preclude the institution of any legal action or relieve the Copermittee from any responsibilities, liabilities, or penalties to which the Copermittee is or may be subject to under Section 311 of the CWA.

Nothing in this Order shall be construed to preclude institution of any legal action or relieve the Copermittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authoring preserved by Section 510 of the CWA.

- (m) *Noncompliance.* Any noncompliance with this Order constitutes violation of the CWC and is grounds for denial of an application for modification of the Order (also see 40 CFR 122.41(a)).
- (n) *Director.* For purposes of this Order, the term “Director” used in parts of 40 CFR incorporated into this Order by reference and/or applicable to this Order shall have the same meaning as the term “Regional Board” used elsewhere in this Order, except that in 40 CFR 122.41(h) and (I), “Director” shall mean “Regional Board, SWRCB, and USEPA.”
- (o) The Regional Board has, in prior years, issued a limited number of individual NPDES permits for non-storm water discharges to MS4s. The Regional Board or SWRCB may in the future, upon prior notice to the Copermittee(s), issue an NPDES permit for any non-storm water discharge (or class of non-storm water discharges) to a MS4. Copermittees may prohibit any non-storm water discharge (or class of non-storm water discharges) to a MS4 that is authorized under such separate NPDES permits.
- (p) *Effective date.* This Order shall become effective on the date of its adoption provided the USEPA has no objection. If the USEPA objects to its issuance, this Order shall not become effective until such objection is withdrawn. This Order supersedes Order No. 2001-01 upon the effective date of this Order.
- (q) *Expiration.* This Order expires five years after adoption.
- (r) *Continuation of expired order* [23 CCR 2235.4]. After this Order expires, the terms and conditions of this Order are automatically continued pending issuance of a new permit if all requirements of the federal NPDES regulations on the continuation of expired permits (40 CFR 122.6) are complied with.
- (s) *Applications.* Any application submitted by a Copermittee for reissuance or modification of this Order shall satisfy all applicable requirements specified in federal regulations as well as any additional requirements for submittal of a Report of Waste Discharge specified in the CWC and the California Code of Regulations.
- (t) *Confidentiality.* Except as provided for in 40 CFR 122.7, no information or documents submitted in accordance with or in application for this Order will be considered confidential, and all such information and documents shall be available for review by the public at the Regional Board office.
- (u) *Severability.* The provisions of this Order are severable, and if any provision of this Order, or the application of any provisions of this Order to any circumstance, is held invalid, the application of such provision to other circumstances and the remainder of this Order shall not be affected thereby.
- (v) *Report submittal.* The Copermittee shall submit reports and provide notifications as required by this Order to the following:

SOUTHERN WATERSHED PROTECTION UNIT
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION
9174 SKY PARK COURT, SUITE 100
SAN DIEGO CA 92123-4340
Telephone: (858) 467-2952 Fax: (858) 571-6972

EUGENE BROMLEY
US ENVIRONMENTAL PROTECTION AGENCY
REGION IX
PERMITS ISSUANCE SECTION (W-5-1)
75 HAWTHORNE STREET
SAN FRANCISCO CA 94105

Unless otherwise directed, the Copermitee shall submit one hard copy for the official record and one electronic copy of each report required under this Order to the Regional Board and one electronic copy to the EPA.

ATTACHMENT C

DEFINITIONS

Advanced Treatment- Using mechanical or chemical means to flocculate and remove suspended sediment from runoff from construction sites prior to discharge.

Anthropogenic Litter – Trash generated from human activities, not including sediment.

Basin Plan – Water Quality Control Plan, San Diego Basin, Region 9, and amendments, developed by the Regional Board.

Beneficial Uses - The uses of water necessary for the survival or well being of man, plants, and wildlife. These uses of water serve to promote tangible and intangible economic, social, and environmental goals. “Beneficial Uses” of the waters of the State that may be protected include, but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves. Existing beneficial uses are uses that were attained in the surface or ground water on or after November 28, 1975; and potential beneficial uses are uses that would probably develop in future years through the implementation of various control measures. “Beneficial Uses” are equivalent to “Designated Uses” under federal law. [California Water Code Section 13050(f)].

Best Management Practices (BMPs) - Defined in 40 CFR 122.2 as schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. In the case of municipal storm water permits, BMPs are typically used in place of numeric effluent limits.

Bioassessment - The use of biological community information to evaluate the biological integrity of a water body and its watershed. With respect to aquatic ecosystems, bioassessment is the collection and analysis of samples of the benthic macroinvertebrate community together with physical/habitat quality measurements associated with the sampling site and the watershed to evaluate the biological condition (i.e. biological integrity) of a water body.

Biocriteria - Under the CWA, numerical values or narrative expressions that define a desired biological condition for a water body that are legally enforceable. The USEPA defines biocriteria as: “numerical values or narrative expressions that describe the reference biological integrity of aquatic communities inhabiting waters of a given designated aquatic life use...(that)...describe the characteristics of water body segments least impaired by human activities.”

Biological Integrity - Defined in Karr J.R. and D.R. Dudley. 1981. Ecological perspective on water quality goals. Environmental Management 5:55-68 as: “A balanced, integrated, adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of natural habitat of the region.” Also referred to as ecosystem health.

Clean Water Act Section 402(p) [33 USC 1342(p)] - The federal statute requiring municipal and industrial dischargers to obtain NPDES permits for their discharges of storm water.

Clean Water Act Section 303(d) Water Body - An impaired water body in which water quality does not meet applicable water quality standards and/or is not expected to meet water quality standards, even after the application of technology based pollution controls required by the CWA. The discharge of urban runoff to these water bodies by the Copermittees is significant because these discharges can cause or contribute to violations of applicable water quality standards.

Construction Site – Any project, including projects requiring coverage under the General Construction Permit, that involves soil disturbing activities including, but not limited to, clearing, grading, disturbances to ground such as stockpiling, and excavation.

Contamination - As defined in the Porter-Cologne Water Quality Control Act, contamination is “an impairment of the quality of waters of the State by waste to a degree which creates a hazard to the public health through poisoning or through the spread of disease. ‘Contamination’ includes any equivalent effect resulting from the disposal of waste whether or not waters of the State are affected.”

Critical Channel Flow (Qc) – The channel flow that produces the critical shear stress that initiates bed movement or that erodes the toe of channel banks. When measuring Qc, it should be based on the weakest boundary material – either bed or bank.

CWA – Federal Clean Water Act

CWC – California Water Code

Development Projects - New development or redevelopment with land disturbing activities; structural development, including construction or installation of a building or structure, the creation of impervious surfaces, public agency projects, and land subdivision.

Dry Season – May 1 through September 30 of each year.

Effectiveness Assessment Outcome Level 1 - Compliance with Activity-based Permit Requirements – Level 1 outcomes are those directly related to the implementation of specific activities prescribed by this Order or established pursuant to it.

Effectiveness Assessment Outcome Level 2 - Changes in Attitudes, Knowledge, and Awareness – Level 2 outcomes are measured as increases in knowledge and awareness among target audiences such as residents, businesses, and municipal employees.

Effectiveness Assessment Outcome Level 3 - Behavioral Change and BMP Implementation – Level 3 outcomes measure the effectiveness of activities in affecting behavioral change and BMP implementation.

Effectiveness Assessment Outcome Level 4 - Load Reductions – Level 4 outcomes measure load reductions which quantify changes in the amounts of pollutants associated with specific sources before and after a BMP or other control measure is employed.

Effectiveness Assessment Outcome Level 5 - Changes in Urban Runoff and Discharge Quality – Level 5 outcomes are measured as changes in one or more specific constituents or stressors in discharges into or from MS4s.

Effectiveness Assessment Outcome Level 6 - Changes in Receiving Water Quality – Level 6 outcomes measure changes to receiving water quality resulting from discharges into and from MS4s, and may be expressed through a variety of means such as compliance with water quality objectives or other regulatory benchmarks, protection of biological integrity, or beneficial use attainment.

Effluent Limitations – Any restriction imposed on quantities, discharge rates, and concentrations of pollutants, which are discharged from point sources into waters of the State. The limitations are designed to ensure that the discharge does not cause water quality objectives to be exceeded in the receiving water and does not adversely affect beneficial uses. Effluent limits are typically numeric (e.g., 10 mg/l), but can also be narrative (e.g., no toxics in toxic amounts).

Erosion – When land is diminished or worn away due to wind, water, or glacial ice. Often the eroded debris (silt or sediment) becomes a pollutant via storm water runoff. Erosion occurs naturally but can be intensified by land clearing activities such as farming, development, road building, and timber harvesting.

Environmentally Sensitive Areas (ESAs) - Areas that include but are not limited to all Clean Water Act Section 303(d) impaired water bodies; areas designated as Areas of Special Biological Significance by the State Water Resources Control Board (Water Quality Control Plan for the San Diego Basin (1994) and amendments); water bodies designated with the RARE beneficial use by the State Water Resources Control Board (Water Quality Control Plan for the San Diego Basin (1994) and amendments); areas designated as preserves or their equivalent under the Multi Species Conservation Program within the Cities and County of San Diego; and any other equivalent environmentally sensitive areas which have been identified by the Copermittees.

Feasibility Analysis – Detailed description of the selection process for the treatment control BMPs for a Priority Development Project, including justification of why one BMP is selected over another. For a Priority Development Project where a treatment control BMP with a low removal efficiency ranking (as identified by the Model SUSMP) is proposed, the analysis shall include a detailed and adequate justification exhibiting the reasons implementation of a treatment control BMP with a higher removal efficiency is infeasible for the Priority Development Project or portion of the Priority Development Project.

Flow Duration – The long-term period of time that flows occur above a threshold that causes significant sediment transport and may cause excessive erosion damage to creeks and streams (not a single storm event duration). The simplest way to visualize this is to consider a histogram of pre- and post-project flows using long-term records of hourly data. To maintain pre-project flow duration means that the total number of hours (counts) within each range of flows in a flow-duration histogram cannot increase between the pre- and post-project condition. Flow duration within the range of geomorphologically significant flows is important for managing erosion.

GIS – Geographic Information System

Grading - The cutting and/or filling of the land surface to a desired slope or elevation.

Hazardous Material – Any substance that poses a threat to human health or the environment due to its toxicity, corrosiveness, ignitability, explosive nature or chemical reactivity. These also include materials named by the USEPA in 40 CFR 116 to be reported if a designated quantity of the material is spilled into the waters of the U.S. or emitted into the environment.

Hazardous Waste - Hazardous waste is defined as “any waste which, under Section 600 of Title 22 of this code, is required to be managed according to Chapter 30 of Division 4.5 of Title 22 of this code” [CCR Title 22, Division 4.5, Chapter 11, Article 1].

Household Hazardous Waste – Paints, cleaning products, and other wastes generated during home improvement or maintenance activities.

Hydromodification – The change in the natural watershed hydrologic processes and runoff characteristics (i.e., interception, infiltration, overland flow, interflow and groundwater flow) caused by urbanization or other land use changes that result in increased stream flows and sediment transport. In addition, alteration of stream and river channels, installation of dams and water impoundments, and excessive streambank and shoreline erosion are also considered hydromodification, due to their disruption of natural watershed hydrologic processes.

Illicit Connection – Any connection to the MS4 that conveys an illicit discharge.

Illicit Discharge - Any discharge to the MS4 that is not composed entirely of storm water except discharges pursuant to a NPDES permit and discharges resulting from fire fighting activities [40 CFR 122.26(b)(2)].

Implementation Assessment – Assessment conducted to determine the effectiveness of Copermittee programs and activities in achieving measurable targeted outcomes, and in determining whether priority sources of water quality problems are being effectively addressed.

Inactive Slopes – Slopes on which no grading or other soil disturbing activities are conducted for 10 or more days.

Integrated Assessment – Assessment to be conducted to evaluate whether program implementation is properly targeted to and resulting in the protection and improvement of water quality.

Jurisdictional Urban Runoff Management Plan (JURMP) – A written description of the specific jurisdictional urban runoff management measures and programs that each Copermittee will implement to comply with this Order and ensure that pollutant discharges in urban runoff are reduced to the MEP and do not cause or contribute to a violation of water quality standards.

Low Impact Development (LID) – A storm water management and land development strategy that emphasizes conservation and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely reflect pre-development hydrologic functions.

Maximum Extent Practicable (MEP) – The technology-based standard established by Congress in CWA section 402(p)(3)(B)(iii) that operators of MS4s must meet. Technology-based standards establish the level of pollutant reductions that dischargers must achieve, typically by treatment or by a combination of source control and treatment control BMPs. MEP generally emphasizes pollution prevention and source control BMPs primarily (as the first line of defense) in combination with treatment methods serving as a backup (additional line of defense). MEP considers economics and is generally, but not necessarily, less stringent than BAT. A definition for MEP is not provided either in the statute or in the regulations. Instead the definition of MEP is dynamic and will be defined by the following process over time: municipalities propose their definition of MEP by way of their urban runoff management programs. Their total collective and individual activities conducted pursuant to the urban runoff management programs becomes their

proposal for MEP as it applies both to their overall effort, as well as to specific activities (e.g., MEP for street sweeping, or MEP for MS4 maintenance). In the absence of a proposal acceptable to the Regional Board, the Regional Board defines MEP.

In a memo dated February 11, 1993, entitled "Definition of Maximum Extent Practicable," Elizabeth Jennings, Senior Staff Counsel, SWRCB addressed the achievement of the MEP standard as follows:

“To achieve the MEP standard, municipalities must employ whatever Best Management Practices (BMPs) are technically feasible (i.e., are likely to be effective) and are not cost prohibitive. The major emphasis is on technical feasibility. Reducing pollutants to the MEP means choosing effective BMPs, and rejecting applicable BMPs only where other effective BMPs will serve the same purpose, or the BMPs would not be technically feasible, or the cost would be prohibitive. In selecting BMPs to achieve the MEP standard, the following factors may be useful to consider:

- a. Effectiveness: Will the BMPs address a pollutant (or pollutant source) of concern?*
- b. Regulatory Compliance: Is the BMP in compliance with storm water regulations as well as other environmental regulations?*
- c. Public Acceptance: Does the BMP have public support?*
- d. Cost: Will the cost of implementing the BMP have a reasonable relationship to the pollution control benefits to be achieved?*
- e. Technical Feasibility: Is the BMP technically feasible considering soils, geography, water resources, etc?*

The final determination regarding whether a municipality has reduced pollutants to the maximum extent practicable can only be made by the Regional or State Water Boards, and not by the municipal discharger. If a municipality reviews a lengthy menu of BMPs and chooses to select only a few of the least expensive, it is likely that MEP has not been met. On the other hand, if a municipal discharger employs all applicable BMPs except those where it can show that they are not technically feasible in the locality, or whose cost would exceed any benefit derived, it would have met the standard. Where a choice may be made between two BMPs that should provide generally comparable effectiveness, the discharger may choose the least expensive alternative and exclude the more expensive BMP. However, it would not be acceptable either to reject all BMPs that would address a pollutant source, or to pick a BMP base solely on cost, which would be clearly less effective. In selecting BMPs the municipality must make a serious attempt to comply and practical solutions may not be lightly rejected. In any case, the burden would be on the municipal discharger to show compliance with its permit. After selecting a menu of BMPs, it is the responsibility of the discharger to ensure that all BMPs are implemented.”

Municipal Separate Storm Sewer System (MS4) – A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a State, city town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or designated and approved management agency under section 208 of the CWA that discharges to

waters of the United States; (ii) Designated or used for collecting or conveying storm water; (iii) Which is not a combined sewer; (iv) Which is not part of the Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.26.

National Pollutant Discharge Elimination System (NPDES) - The national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of the CWA.

NOI – Notice of Intent

Non-Storm Water - All discharges to and from a MS4 that do not originate from precipitation events (i.e., all discharges from a MS4 other than storm water). Non-storm water includes illicit discharges, non-prohibited discharges, and NPDES permitted discharges.

Nuisance - As defined in the Porter-Cologne Water Quality Control Act a nuisance is “anything which meets all of the following requirements: 1) Is injurious to health, or is indecent, or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property. 2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal. 3) Occurs during, or as a result of, the treatment or disposal of wastes.”

Order – Order No. R9-2007-0001 (NPDES No. CAS0108758)

Person - A person is defined as an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof [40 CFR 122.2].

Point Source - Any discernible, confined, and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operations, landfill leachate collection systems, vessel, or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

Pollutant - Any agent that may cause or contribute to the degradation of water quality such that a condition of pollution or contamination is created or aggravated.

Pollution - As defined in the Porter-Cologne Water Quality Control Act: “the alteration of the quality of the waters of the State by waste, to a degree that unreasonably affects the either of the following: 1) The waters for beneficial uses; or 2) Facilities that serve these beneficial uses.” Pollution may include contamination.

Pollutants of Concern – Pollutants for which water bodies are listed as impaired under CWA section 303(d), pollutants associated with the land use type of a development, and/or pollutants commonly associated with urban runoff. Pollutants commonly associated with urban runoff include total suspended solids; sediment; pathogens (e.g., bacteria, viruses, protozoa); heavy metals (e.g., copper, lead, zinc, and cadmium); petroleum products and polynuclear aromatic hydrocarbons; synthetic organics (e.g., pesticides, herbicides, and PCBs); nutrients (e.g., nitrogen and phosphorus fertilizers); oxygen-demanding substances (decaying vegetation, animal waste, and anthropogenic litter).

Pollution Prevention - Pollution prevention is defined as practices and processes that reduce or eliminate the generation of pollutants, in contrast to source control BMPs, treatment control BMPs, or disposal.

Post-Construction BMPs - A subset of BMPs including structural and non-structural controls which detain, retain, filter, or educate to prevent the release of pollutants to surface waters during the final functional life of developments.

Pre-Project or Pre-Development Runoff Conditions (Discharge Rates, Durations, Etc.) – Runoff conditions that exist onsite immediately before the planned development activities occur. This definition is not intended to be interpreted as that period before any human-induced land activities occurred. This definition pertains to redevelopment as well as initial development.

Principal Permittee – County of San Diego

Priority Development Projects - New development and redevelopment project categories listed in Section D.1.d(2) of Order No. R9-2007-0001.

Receiving Waters – Waters of the U.S.

Receiving Water Limitations (RWLs) - Waste discharge requirements issued by the Regional Board typically include both: (1) “Effluent Limitations” (or “Discharge Limitations”) that specify the technology-based or water-quality-based effluent limitations; and (2) “Receiving Water Limitations” that specify the water quality objectives in the Basin Plan as well as any other limitations necessary to attain those objectives. In summary, the “Receiving Water Limitations” provision is the provision used to implement the requirement of CWA section 301(b)(1)(C) that NPDES permits must include any more stringent limitations necessary to meet water quality standards.

Redevelopment - The creation, addition, and or replacement of impervious surface on an already developed site. Examples include the expansion of a building footprint, road widening, the addition to or replacement of a structure, and creation or addition of impervious surfaces. Replacement of impervious surfaces includes any activity that is not part of a routine maintenance activity where impervious material(s) are removed, exposing underlying soil during construction. Redevelopment does not include trenching and resurfacing associated with utility work; resurfacing and reconfiguring surface parking lots and existing roadways; new sidewalk construction, pedestrian ramps, or bikelane on existing roads; and routine replacement of damaged pavement, such as pothole repair.

Regional Urban Runoff Management Plan (RURMP) – A written description of the specific regional urban runoff management measures and programs that the Copermitees will collectively implement to comply with this Order and ensure that pollutant discharges in urban runoff are reduced to the MEP and do not cause or contribute to a violation of water quality standards.

Sediment - Soil, sand, and minerals washed from land into water. Sediment resulting from anthropogenic sources (i.e. human induced land disturbance activities) is considered a pollutant. This Order regulates only the discharges of sediment from anthropogenic sources and does not regulate naturally occurring sources of sediment. Sediment can destroy fish-nesting areas, clog animal habitats, and cloud waters so that sunlight does not reach aquatic plants.

Shared Treatment Control BMP - BMPs used by multiple developments to infiltrate, filter, or treat the required volume or flow prior to discharge to a receiving water. This could include, for example, a treatment BMP at the end of an enclosed storm drain that collects runoff from several commercial developments.

Source Control BMP – Land use or site planning practices, or structural or nonstructural measures that aim to prevent urban runoff pollution by reducing the potential for contamination at the source of pollution. Source control BMPs minimize the contact between pollutants and urban runoff.

Storm Water – Per 40 CFR 122.26(b)(13), means storm water runoff, snowmelt runoff and surface runoff and drainage.

Standard Urban Storm Water Mitigation Plan (SUSMP) – A plan developed to mitigate the impacts of urban runoff from Priority Development Projects.

Third Party Inspectors - Industrial and commercial facility inspectors who are not contracted or employed by a regulatory agency or group of regulatory agencies, such as the Regional Board or Copermittees. The third party inspector is not a regular facility employee self-inspecting their own facility. The third party inspector could be a contractor or consultant employed by a facility or group of businesses to conduct inspections.

Total Maximum Daily Load (TMDL) - The maximum amount of a pollutant that can be discharged into a water body from all sources (point and non-point) and still maintain water quality standards. Under CWA section 303(d), TMDLs must be developed for all water bodies that do not meet water quality standards after application of technology-based controls.

Toxicity - Adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies). The water quality objectives for toxicity provided in the Water Quality Control Plan, San Diego Basin, Region 9, (Basin Plan), state in part...“All waters shall be free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life....The survival of aquatic life in surface waters subjected to a waste discharge or other controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge”.

Treatment Control BMP – Any engineered system designed to remove pollutants by simple gravity settling of particulate pollutants, filtration, biological uptake, media absorption or any other physical, biological, or chemical process.

Urban Runoff - All flows in a storm water conveyance system and consists of the following components: (1) storm water (wet weather flows) and (2) non-storm water illicit discharges (dry weather flows).

Waste - As defined in CWC Section 13050(d), “waste includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal.”

Article 2 of CCR Title 23, Chapter 15 (Chapter 15) contains a waste classification system that applies to solid and semi-solid waste, which cannot be discharged directly or indirectly to water of the state and which therefore must be discharged to land for treatment, storage, or disposal in accordance with Chapter 15. There are four classifications of waste (listed in order of highest to lowest threat to water quality): hazardous waste, designated waste, non-hazardous solid waste, and inert waste.

Water Quality Assessment – Assessment conducted to evaluate the condition of non-storm water and storm water discharges, and the water bodies which receive these discharges.

Water Quality Objective - Numerical or narrative limits on constituents or characteristics of water designated to protect designated beneficial uses of the water. [California Water Code Section 13050 (h)]. California's water quality objectives are established by the State and Regional Water Boards in the Water Quality Control Plans.

Numeric or narrative limits for pollutants or characteristics of water designed to protect the beneficial uses of the water. In other words, a water quality objective is the maximum concentration of a pollutant that can exist in a receiving water and still generally ensure that the beneficial uses of the receiving water remain protected (i.e., not impaired). Since water quality objectives are designed specifically to protect the beneficial uses, when the objectives are violated the beneficial uses are, by definition, no longer protected and become impaired. This is a fundamental concept under the Porter Cologne Act. Equally fundamental is Porter Cologne's definition of pollution. A condition of pollution exists when the water quality needed to support designated beneficial uses has become unreasonably affected or impaired; in other words, when the water quality objectives have been violated. These underlying definitions (regarding beneficial use protection) are the reason why all waste discharge requirements implementing the federal NPDES regulations require compliance with water quality objectives. (Water quality objectives are also called water quality criteria in the CWA.)

Water Quality Standards - The beneficial uses (e.g., swimming, fishing, municipal drinking water supply, etc.) of water and the water quality objectives necessary to protect those uses.

Waters of the State - Any water, surface or underground, including saline waters within the boundaries of the State [CWC section 13050 (e)]. The definition of the Waters of the State is broader than that for the Waters of the United States in that all water in the State is considered to be a Waters of the State regardless of circumstances or condition. Under this definition, a MS4 is always considered to be a Waters of the State.

Waters of the United States - As defined in the 40 CFR 122.2, the Waters of the U.S. are defined as: "(a) All waters, which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; (b) All interstate waters, including interstate "wetlands;" (c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation or destruction of which would affect or could affect interstate or foreign commerce including any such waters: (1) Which are or could be used by interstate or foreign travelers for recreational or other purposes; (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (3) Which are used or could be used for industrial purposes by industries in interstate commerce; (d) All impoundments of waters otherwise defined as waters of the United States under this definition: (e) Tributaries of waters identified in paragraphs (a) through (d) of this definition; (f) The territorial seas; and (g) "Wetlands" adjacent to waters (other

than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition. Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the EPA."

Watershed - That geographical area which drains to a specified point on a water course, usually a confluence of streams or rivers (also known as drainage area, catchment, or river basin).

Watershed Urban Runoff Management Plan (WURMP) – A written description of the specific watershed urban runoff management measures and programs that each watershed group of Copermittees will implement to comply with this Order and ensure that pollutant discharges in urban runoff are reduced to the MEP and do not cause or contribute to a violation of water quality standards.

WDRs – Waste Discharge Requirements

Wet Season – October 1 through April 30 of each year.

ATTACHMENT D**SCHEDULED SUBMITTALS SUMMARY**

Submittal	Permit Section	Completion Date	Frequency
Submit identification of discharges not to be prohibited and BMPs required for treatment of discharges not prohibited	B.2	365 days after adoption of the Order	One Time
Submit Certified Statement of Adequate Legal Authority	C.2	365 days after adoption of the Order	One Time
Long-Term Effectiveness Assessment	I.5 and J.2.b	210 days prior to Order expiration	One Time
Submit to Principal Permittee(s) individual JURMPs	J.1.a.(1)	Prior to 365 days after adoption of the Order (Principal Permittee specifies date of submittal)	One Time
Principal Permittee submits JURMPs to Regional Board	J.1.a.(2)	365 days after adoption of the Order	One Time
Lead Watershed Permittees submit WURMPs to Principal Permittee	J..1.b.(2)	Prior to 365 days after adoption of the Order (Principal Permittee specifies date of submittal)	One Time
Principal Permittee submits WURMPs to Regional Board	J.1.b.(3)	365 days after adoption of the Order	One Time
Principal Permittee submits RURMP to Regional Board	J.1.c.(2)	365 days after adoption of the Order	One Time
Principal Permittee submits Hydromodification Management Plan workplan	J.2.a.(2)(a)	180 days after adoption of the Order	One Time
Principal Permittee submits Hydromodification Management Plan progress report	J.2.a.(2)(b)	18 months after adoption of the Order	One Time
Principal Permittee submits draft Hydromodification Management Plan	J.2.a.(2)(c)	2 years after adoption of the Order	One Time
Principal Permittee submits final Hydromodification Management Plan	J.2.a.(2)(d)	180 days after receiving comments from Regional Board	One Time
Principal Permittee submits Model SUSMP update	J.2.b	18 months after adoption of the Order	One Time
Copermittees submit local SUSMP updates	J.2.b	365 days after acceptance of updated Model SUSMP	One Time
Principal Permittee submits Report of Waste Discharge and Long-Term Effectiveness Assessment	J.2.c-d	210 days prior to Order expiration	One Time
Principal Permittee submits Notification of Principal Permittee	M	180 days after adoption of the Order	One Time
Principal Permittee submits formal agreement between Copermittees which provides management structure for meeting Order requirements	M.5	180 days after adoption of Order	One Time
Submit to Principal Permittee individual Jurisdictional Urban Runoff Management Program Annual Reports	J.3.a.(1)	Prior to September 30, 2008, and annually thereafter (Principal Permittee specifies date of submittal)	Annually
Principal Permittee submits unified Jurisdictional Urban Runoff Management Program Annual Report to Regional Board	J.3.a.(2)	September 30, 2008, and annually thereafter	Annually
Lead Watershed Permittees submit to Principal Permittee Watershed Urban Runoff Management Program Annual Reports	J.3.b.(3)	Prior to January 31, 2009 and annually thereafter (Principal Permittee specifies date of submittal)	Annually
Principal Permittee submits unified Watershed Urban Runoff Management Program Annual Report to Regional Board	J.3.b.(3)	January 31, 2009 and annually thereafter	Annually
Principal Permittee submits Regional Urban Runoff	J.3.c	January 31, 2009 and	Annually

Submittal	Permit Section	Completion Date	Frequency
Management Program Annual Report to Regional Board		annually thereafter	
Principal Permittee submits description of Receiving Waters Monitoring Program	Monitoring and Reporting Program, III.A.1	September 1, 2007 and annually thereafter	Annually
Principal Permittee submits description of various monitoring program components	Monitoring and Reporting Program, III.A.3	July 1, 2007 and July 1, 2008	Twice
Principal Permittee submits Receiving Waters Monitoring Program Annual Report	Monitoring and Reporting Program, III.A.2	January 31, 2009 and annually thereafter	Annually
Principal Permittee submits interim Receiving Waters Monitoring Program Annual Report	Monitoring and Reporting Program, III.B	January 31, 2007 and January 31, 2008	Twice
Principal Permittee submits unified interim Jurisdictional URMP and Watershed URMP Annual Reports	J.4	January 31, 2007 and January 31, 2008	Twice
Principal Permittee(s) shall submit standardized formats for all reports required under this Order	M.6	180 days after adoption of Order	One Time

**RECEIVING WATERS AND URBAN RUNOFF MONITORING AND REPORTING
PROGRAM NO. R9-2007-0001**

I. PURPOSE

- A. This Receiving Waters and Urban Runoff Monitoring and Reporting Program is intended to meet the following goals:
1. Assess compliance with Order No. R9-2007-0001;
 2. Measure and improve the effectiveness of the Copermittees' urban runoff management programs;
 3. Assess the chemical, physical, and biological impacts to receiving waters resulting from urban runoff discharges;
 4. Characterize urban runoff discharges;
 5. Identify sources of specific pollutants;
 6. Prioritize drainage and sub-drainage areas that need management actions;
 7. Detect and eliminate illicit discharges and illicit connections to the MS4; and
 8. Assess the overall health of receiving waters.
- B. In addition, this Receiving Waters and Urban Runoff Monitoring and Reporting Program is designed to answer the following core management questions:
1. Are conditions in receiving waters protective, or likely to be protective, of beneficial uses?
 2. What is the extent and magnitude of the current or potential receiving water problems?
 3. What is the relative urban runoff contribution to the receiving water problem(s)?
 4. What are the sources of urban runoff that contribute to receiving water problem(s)?
 5. Are conditions in receiving waters getting better or worse?

II. MONITORING PROGRAM

A. Receiving Waters Monitoring Program

Each Copermittee shall collaborate with the other Copermittees to develop, conduct, and report on a year round watershed based Receiving Waters Monitoring Program. The monitoring program design, implementation, analysis, assessment, and reporting shall be conducted on a watershed basis for each of the hydrologic units. The monitoring program shall be designed to meet the goals and answer the questions listed in section I above. The monitoring program shall include the following components:

1. MASS LOADING STATION (MLS) MONITORING
 - a. The following existing mass loading stations shall continue to be monitored: Santa Margarita River,¹ San Luis Rey River, Agua Hedionda Creek, Escondido Creek, San Dieguito River, Penasquitos, Tecolote Creek, San Diego River,

¹ For the Santa Margarita River mass loading station, if Camp Pendleton will not conduct the required monitoring or prevents access for the Copermittees to conduct the required monitoring, the mass loading station location shall be moved to where the County of San Diego has land-use jurisdiction.

Chollas Creek, Sweetwater River, and Tijuana River. The mass loading stations shall be monitored at the frequency identified in Table 1.

Table 1. Monitoring Rotation and Number of Stations in Watersheds

Watershed Management Area	Watershed	Permit Year 1 2007-2008				Permit Year 2 2008-2009				Permit Year 3 2009-2010				Permit Year 4 2010-2011				Permit Year 5 2011-2012						
		MLS	TWAS	ABLM	BA	MLS	TWAS	ABLM	BA	MLS	TWAS	ABLM	BA	MLS	TWAS	ABLM	BA	MLS	TWAS	ABLM	BA			
Santa Margarita	Santa Margarita River	1		Implement refined program based on assessment	4	1	Bight '08			Implement refined program based on assessment				1		Implement refined program based on assessment	4			Implement refined program based on assessment				
San Luis Rey	San Luis Rey River	1	2			3		1						1	2			3						
Carlsbad	Buena Vista Creek		1			1									1				1					
	Agua Hedionda Creek	1	1			2		1						1	1			2						
	Escondido Creek	1	1			2		1					1	1			2							
San Dieguito	San Dieguito River	1	2			3		1						1	2			3						
Penasquitos	Penasquitos	1	2			3		1						1	2			3						
Mission Bay	Rose Creek											1		1								1		
	Tecolote Creek							1				1	1	2							1	1		
San Diego River	San Diego River							1				1	3	4					1		3			
San Diego Bay	Chollas Creek	1				1		1				1		1	1				1		1			
	Sweetwater River							1				1	1	2							1	1		
	Otay River												1		1							1		
Tijuana	Tijuana River							1				1	2	3								1	1	

- b. Each mass loading station to be monitored in a given year shall be monitored twice during wet weather events and twice during dry weather flow events. The exception is the 2008-2009 monitoring year, which shall include monitoring of all mass loading stations for one wet weather flow event only if the Copermittees participate in Bight '08.

- c. Each mass loading station shall be monitored for the first wet weather event of the season which meets the USEPA's criteria as described in 40 CFR 122.21(g)(7). Monitoring of the second wet weather event shall be conducted after February 1. Dry weather mass loading monitoring events shall be sampled in September or October prior to the start of the wet weather season and in May or June after the end of the wet weather season. If flows are not evident in September or October, then sampling shall be conducted during non-rain events in the wet weather season.
- d. Mass loading sampling and analysis protocols shall be consistent with 40 CFR 122.21(g)(7)(ii) and with the USEPA Storm Water Sampling Guidance Document (EPA 833-B-92-001). If practicable, the protocols for mass loading sampling and analysis should be SWAMP comparable. If the mass loading sampling and analysis are determined to be impracticable with the SWAMP standards, the Copermittees should provide explanation and discussion to this effect in the Receiving Waters and Urban Runoff Monitoring Annual Report. Wet weather samples shall be flow-weighted composites, collected for the duration of the entire runoff event, where practical. Where such monitoring is not practical, such as for large watersheds with significant groundwater recharge flows, composites shall be collected at a minimum during the first 3 hours of flow. Dry weather event samples shall be flow-weighted composites, collected for a time duration adequate to be representative of changes in pollutant concentrations and runoff flows which may occur over a typical 24 hour period. A minimum of 3 sample aliquots, separated by a minimum of 15 minutes, shall be taken for each hour of monitoring, unless the Regional Board Executive Officer approves an alternate protocol. Automatic samplers shall be used to collect samples from mass loading stations. Grab samples shall be taken for temperature, pH, specific conductance, biochemical oxygen demand, oil and grease, total coliform, fecal coliform, and enterococcus.
- e. Copermittees shall measure or estimate flow rates and volumes for each mass loading station sampling event in order to determine mass loadings of pollutants. Data from nearby USGS gauging stations may be utilized, or flow rates may be estimated in accordance with the USEPA Storm Water Sampling Guidance Document (EPA-833-B-92-001), Section 3.2.1.
- f. In the event that the required number of events are not sampled during one monitoring year at any given station, the Copermittees shall submit, with the subsequent Receiving Waters Monitoring Annual Report, a written explanation for a lack of sampling data, including streamflow data from the nearest USGS gauging station.
- g. The following constituents shall be analyzed for each monitoring event at each station:

Table 2. Analytical Testing for Mass Loading and Temporary Watershed Assessment Stations

Conventional, Nutrients, Hydrocarbons	Pesticides	Metals (Total and Dissolved)	Bacteriological
Total Dissolved Solids Total Suspended Solids Turbidity Total Hardness pH Specific Conductance Temperature Dissolved Phosphorus Nitrite Nitrate Total Kjeldahl Nitrogen Ammonia Biological Oxygen Demand, 5-day Chemical Oxygen Demand Total Organic Carbon Dissolved Organic Carbon Methylene Blue Active Substances Oil and Grease	Diazinon Chlorpyrifos Malathion	Antimony Arsenic Cadmium Chromium Copper Lead Nickel Selenium Zinc	Total Coliform Fecal Coliform Enterococcus

- h. In addition to the constituents listed in Table 2 above, monitoring stations in the Chollas Creek watershed shall also analyze samples for polychlorinated biphenyls (PCBs), Chlordane, and polycyclic aromatic hydrocarbons (PAHs) for each monitoring event.
- i. The following toxicity testing shall be conducted for each monitoring event at each station as follows:
 - (1) 7-day chronic test with the cladoceran *Ceriodaphnia dubia* (USEPA protocol EPA-821-R-02-013).
 - (2) Chronic test with the freshwater algae *Selenastrum capricornutum* (USEPA protocol EPA-821-R-02-013).
 - (3) Acute survival test with amphipod *Hyaella azteca* (USEPA protocol EPA-821-R-02-012).
- j. The presence of acute toxicity shall be determined in accordance with USEPA protocol (EPA-821-R-02-012). The presence of chronic toxicity shall be determined in accordance with USEPA protocol (EPA-821-R-02-013).
- k. The Copermittees shall collaborate to develop and implement a program to assess the presence of trash (anthropogenic litter) in receiving waters. The program shall collect and evaluate trash data in conjunction with collection and evaluation of analytical data. This monitoring program shall be implemented within each watershed and shall begin no later than the 2007-2008 monitoring year.

2. TEMPORARY WATERSHED ASSESSMENT STATION (TWAS) MONITORING

- a. The minimum number of temporary watershed assessment stations to be monitored in a given monitoring year is identified in Table 1. The number of stations located within each watershed may change from the number identified in Table 1, provided the total number of stations monitored in a given year is not reduced below the minimum number of stations identified in Table 1. The

temporary watershed assessment stations shall be monitored and located according to a systematic plan which:

- (1) Ensures that the Copermittees' Receiving Waters Monitoring Program most effectively answers questions 1-5 of section I.B above.
 - (2) Provides statistically useful information.
 - (3) Identifies the extent and magnitude of receiving water problems within each watershed.
 - (4) Provides spatial coverage of each watershed.
 - (5) Monitors previously un-assessed sub-watershed areas.
 - (6) Focuses on specific areas of concern and high priority areas.
 - (7) Provides adequate information to assess the effectiveness of implemented programs and control measures in reducing discharged pollutant loads and improving urban runoff and receiving water quality.
- b. For each temporary watershed assessment station identified to be monitored in a given year, the station shall be monitored twice during wet weather events and twice during dry weather flow events.
 - c. Temporary watershed assessment stations shall be monitored in the same manner as the mass loading stations in accordance with the monitoring protocols and requirements outlined in sections II.A.1.c-k above.

3. BIOASSESSMENT (BA) MONITORING

- a. The minimum number of bioassessment stations to be monitored in each watershed in a given monitoring year is identified in Table 1. Bioassessment stations shall include an adequate number of reference stations, with locations of reference stations identified according to protocols outlined in "A Quantitative Tool for Assessing the Integrity of Southern Coastal California Streams," by Ode, et al. 2005.²
- b. Bioassessment stations shall be collocated with both mass loading stations and temporary watershed assessment stations where feasible.
- c. Bioassessment stations to be monitored in a given monitoring year shall be monitored in May or June (to represent the influence of wet weather on the communities) and September or October (to represent the influence of dry weather flows on the communities). The timing of monitoring of bioassessment stations shall coincide with dry weather monitoring of mass loading and temporary watershed assessment stations.
- d. Monitoring of bioassessment stations shall utilize the targeted riffle composite approach, as specified in the Surface Water Ambient Monitoring Program (SWAMP) Quality Assurance Management Plan (QAMP), as amended.

² Ode, et al. 2005. "A Quantitative Tool for Assessing the Integrity of Southern Coastal California Streams." Environmental Management. Vol. 35, No. 1, pp. 1-13.

- e. Monitoring of bioassessment stations shall incorporate assessment of periphyton in addition to macroinvertebrates, using the USEPA's 1999 Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers.³
- f. Bioassessment analysis procedures shall include calculation of the Index of Biotic Integrity (IBI) for benthic macroinvertebrates for all bioassessment stations, as outlined in "A Quantitative Tool for Assessing the Integrity of Southern Coastal California Streams," by Ode, et al. 2005.
- g. A professional environmental laboratory shall perform all sampling, laboratory, quality assurance, and analytical procedures.

4. FOLLOW-UP ANALYSIS AND ACTIONS

When results from the chemistry, toxicity, and bioassessment monitoring described above indicate urban runoff-induced degradation at a mass loading or temporary watershed assessment station, Copermittees within the watershed shall evaluate the extent and causes of urban runoff pollution in receiving waters and prioritize and implement management actions to eliminate or reduce sources. Toxicity Identification Evaluations (TIEs) shall be conducted to determine the cause of toxicity as outlined in Table 3 below. Other follow-up activities which shall be conducted by the Copermittees are also identified in Table 3. Once the cause of toxicity has been identified by a TIE, the Copermittees shall perform source identification projects as needed and implement the measures necessary to reduce the pollutant discharges and abate the sources causing the toxicity.

Table 3. Triad Approach to Determining Follow-Up Actions

	Chemistry ⁴	Toxicity ⁵	Bioassessment ⁶	Action
1.	Persistent exceedance of water quality objectives (high frequency constituent of concern identified)	Evidence of persistent toxicity	Indications of alteration	Conduct TIE to identify contaminants of concern, based on TIE metric. Address upstream sources as a high priority.
2.	No persistent exceedances of water quality objectives	No evidence of persistent toxicity	No indications of alteration	No action necessary.

³ USEPA, 1999. Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers. EPA-841-B-99-002.

⁴ Persistent exceedance shall mean exceedances of established water quality objectives, benchmarks, or action levels by a pollutant known to cause toxicity for two wet weather and/or two dry weather samples in a given year.

⁵ Toxicity shall mean when the Lowest Observed Effect Concentration (LOEC) (for chronic toxicity tests) or median lethal concentration (LC₅₀) (for acute toxicity tests) for any given species is less than or equal to 100% of the test sample and observed effects are significantly different from the control. Evidence of persistent toxicity shall mean toxicity to a specific test organism in more than 50% of the samples taken for a given location during a given monitoring year. When a monitoring event has the potential to indicate evidence of persistent toxicity (e.g. the third event of four monitoring events), sufficient samples shall be collected in order to conduct any TIEs that may be required. When a sample collected in order to conduct a TIE does not result in mortality or exhibit a toxic effect in at least 50% of the applicable test organisms in the 100% storm water sample, the TIE may be conducted with a sample collected during the next monitoring event.

⁶ Indications of alteration shall mean an IBI score of Poor or Very Poor.

	Chemistry⁴	Toxicity⁵	Bioassessment⁶	Action
3.	Persistent exceedance of water quality objectives (high frequency constituent of concern identified)	No evidence of persistent toxicity	No indications of alteration	Address upstream sources as a low priority.
4.	No persistent exceedances of water quality objectives	Evidence of persistent toxicity	No indications of alteration	Conduct TIE to identify contaminants of concern, based on TIE metric. Address upstream sources as medium priority.
5.	No persistent exceedances of water quality objectives	No evidence of persistent toxicity	Indications of alteration	No action necessary to address toxic chemicals. Address potential role of urban runoff in causing physical habitat disturbance.
6.	Persistent exceedance of water quality objective (high frequency constituent of concern identified)	Evidence of persistent toxicity	No indications of alteration	If chemical and toxicity tests indicate persistent degradation, conduct TIE to identify contaminants of concern, based on TIE metric and address upstream source as a medium priority.
7.	No persistent exceedances of water quality objectives	Evidence of persistent toxicity	Indications of alteration	Conduct TIE to identify contaminants of concern, based on TIE metric. Address upstream sources as a high priority. Address potential role of urban runoff causing physical habitat disturbance.
8.	Persistent exceedance of water quality objectives objective (high frequency constituent of concern identified)	No evidence of persistent toxicity	Indications of alteration	Address upstream source as a high priority.

5. AMBIENT BAY AND LAGOON MONITORING (ABLM)

- a. Ambient Bay and Lagoon Monitoring shall be conducted according to the schedule identified in Table 1.
- b. If results of the Ambient Bay and Lagoon Monitoring assessment indicate a general relationship and/or linkage between conditions in bays/lagoons/estuaries with conditions at mass loading stations, then monitoring shall be conducted at the following locations: Santa Margarita River Estuary, Oceanside Harbor, San Luis Rey Estuary, Buena Vista Lagoon, Agua Hedionda Lagoon, Batiquitos Lagoon, San Elijo Lagoon, San Dieguito Lagoon, Los Penasquitos Lagoon, Mission Bay, Sweetwater River Estuary, and Tijuana River Estuary. This monitoring shall be designed to most effectively answer each of questions 1-5 of section I.B above as they pertain to bays/lagoons/estuaries.

- c. If results of the Ambient Bay and Lagoon Monitoring assessment do not indicate a relationship and/or linkage between conditions in bays/lagoons/estuaries with conditions at mass loading stations, then monitoring shall be conducted for special investigations of the bays/lagoons/estuaries. These special investigations shall be designed to most effectively answer each of questions 1-5 of section I.B above as they pertain to bays/lagoons/estuaries, with an emphasis on answering question 4.
- d. Ambient Bay and Lagoon Monitoring shall utilize the triad approach, analyzing chemistry, toxicity, and benthic infauna data.
- e. Ambient Bay and Lagoon Monitoring shall include a water column monitoring component as necessary to supply information needed for the development, implementation, and assessment of Total Maximum Daily Loads (TMDLs).

6. COASTAL STORM DRAIN MONITORING

The Copermittees shall collaborate to develop and implement a coastal storm drain monitoring program. The monitoring program shall include:

- a. Identification of coastal storm drains which discharge to coastal waters.
- b. Monthly sampling of all flowing coastal storm drains identified in section II.A.6.a for total coliform, fecal coliform, and enterococcus.⁷ Where flowing coastal storm drains are discharging to coastal waters, paired samples from the storm drain discharge and coastal water (25 yards down current of the discharge) shall be collected. If flowing coastal storm drains are not discharging to coastal waters, only the storm drain discharge needs to be sampled.
 - (1) Frequency of sampling of coastal storm drains may be reduced to every other month if the paired coastal storm drain data:
 - (a) Exhibits three consecutive storm drain samples with all bacterial indicators below the Copermittees' sampling frequency reduction criteria, as the sampling frequency reduction criteria was developed under Order No. 2001-01.
 - (b) Exhibits that the three consecutive samples discussed in (a) above are paired with receiving water samples that do not exceed Assembly Bill (AB) 411 or Basin Plan standards.
 - (c) Exhibits that less than 20% of the storm drain samples were above any of the sampling frequency reduction criteria during the previous year.
 - (2) The Copermittees shall notify the Regional Board of any coastal storm drains eligible for sampling frequency reduction prior to October 1 of each year. Sampling frequency reduction shall not occur prior to Regional Board

⁷ Coastal storm drains where sampler safety, habitat impacts from sampling, or inaccessibility are issues need not be sampled. Such coastal storm drains shall be added to the Copermittee's dry weather field screening and analytical monitoring program where feasible.

notification.

- (3) Re-sampling shall be implemented within one business day of receipt of analytical results for coastal storm drains where:
 - (a) Both storm drain and receiving water samples exceed AB 411 or Basin Plan standards for any bacterial indicator.
 - (b) The storm drain sample exceeds 95th percentile observations of the previous year's data for any bacterial indicator.
- (4) If re-sampling conducted under section (3) above exhibits continued exceedances of a AB 411 or Basin Plan standards in either the storm drain or receiving water, investigations of sources of bacterial contamination shall commence within one business day of receipt of analytical results.
- (5) Investigations of sources of bacterial contamination shall occur immediately if evidence of abnormally high flows, sewage releases, restaurant discharges, and/or similar evidence is observed during sampling.
- (6) Exceedances of public health standards for bacterial indicators shall be reported to the County Department of Environmental Health as soon as possible.

7. PYRETHROIDS MONITORING

The Copermittees shall collaborate to develop and implement a monitoring program to measure and assess the presence of pyrethroids in receiving waters. This monitoring program shall be implemented within each watershed and shall begin no later than the 2007-2008 monitoring year.

B. Urban Runoff Monitoring

Each Copermittee shall collaborate with the other Copermittees to develop, conduct, and report on a year round watershed based Urban Runoff Monitoring Program. The monitoring program design, implementation, analysis, assessment, and reporting shall be conducted on a watershed basis for each of the hydrologic units. The monitoring program shall be designed to meet the goals and answer the questions listed in section I above. The monitoring program shall include the following components

1. MS4 OUTFALL MONITORING

The Copermittees shall collaborate to develop and implement a monitoring program to characterize pollutant discharges from MS4 outfalls in each watershed during wet and dry weather. The program shall include rationale and criteria for selection of outfalls to be monitored. The program shall at a minimum include collection of samples for those pollutants causing or contributing to violations of water quality standards within the watershed. This monitoring program shall be implemented within each watershed and shall begin within the 2007-2008 monitoring year.

2. SOURCE IDENTIFICATION MONITORING

The Copermittees shall collaborate to develop and implement a monitoring program to identify sources of discharges of pollutants causing the priority water quality problems within each watershed. The monitoring program shall include focused monitoring which moves upstream into each watershed as necessary to identify sources. The monitoring program shall use source inventories and "Threat to Water Quality" analysis to guide monitoring efforts. This monitoring program shall be implemented within each watershed and shall begin no later than the 2008-2009 monitoring year.

3. DRY WEATHER FIELD SCREENING AND ANALYTICAL MONITORING

As part of its Jurisdictional Urban Runoff Management Program, each Copermittee shall update as necessary its dry weather field screening and analytical monitoring program to meet or exceed the requirements of this section. Dry weather analytical and field screening monitoring consists of (1) field observations; (2) field screening monitoring; and (3) analytical monitoring at selected stations. The Dry Weather Field Screening and Analytical Monitoring program is not required to be SWAMP comparable. Each Copermittee's program shall be designed to detect and eliminate illicit connections and illegal discharges to the MS4 using frequent, geographically widespread dry weather discharge monitoring and follow-up investigations. Each Copermittee shall conduct the following dry weather field screening and analytical monitoring tasks:

a. Select Dry Weather Field Screening and Analytical Monitoring Stations

Based upon a review of its past Dry Weather Monitoring Program, each Copermittee shall select dry weather field screening and analytical monitoring stations within its jurisdiction. No more than 500 dry weather field screening and analytical monitoring stations (excluding alternate stations) need to be selected by any individual Copermittee for any given year. Stations shall be selected according to one of the following methods:

- (1) Stations shall be either major outfalls or other outfall points (or any other point of access such as manholes) randomly located throughout the MS4 by placing a grid over a drainage system map and identifying those cells of the grid which contain a segment of the MS4 or major outfall. This random selection has to use the following guidelines and criteria:
 - (a) A grid system consisting of perpendicular north-south and east-west lines spaced $\frac{1}{4}$ mile apart shall be overlaid on a map of the MS4, creating a series of cells;
 - (b) All cells that contain a segment of the MS4 shall be identified and one dry weather analytical monitoring station shall be selected in each cell.
 - (c) Each Copermittee shall determine alternate stations to be sampled in place of selected stations that do not have flow.
- (2) Stations may be selected non-randomly provided adequate coverage of the entire MS4 system is ensured and that the selection of stations meets,

exceeds, or provides equivalent coverage to the requirements given above. The dry weather analytical and field screening monitoring stations shall be established using the following guidelines and criteria:

- (a) Stations should be located downstream of any sources of suspected illegal or illicit activity;
- (b) Stations shall be located to the degree practicable at the farthest manhole or other accessible location downstream in the system within each cell;
- (c) Hydrological conditions, total drainage area of the site, traffic density, age of the structures or buildings in the area, history of the area, and land use types shall be considered in locating stations;
- (d) Each Copermittee shall determine alternate stations to be sampled in place of selected stations that do not have flow.

b. Complete MS4 Map

Each Copermittee shall clearly identify each dry weather field screening and analytical monitoring station on its MS4 Map as either a separate GIS layer or a map overlay hereafter referred to as a Dry Weather Field Screening and Analytical Stations Map. Each Copermittee shall confirm that each drainage area within its jurisdiction contains at least one station.

c. Develop Dry Weather Field Screening and Analytical Monitoring Procedures

Each Copermittee shall develop and/or update written procedures for dry weather field screening and analytical monitoring (for analytical monitoring only, these procedures must be consistent with 40 CFR part 136), including field observations, monitoring, and analyses to be conducted. At a minimum, the procedures must meet the following guidelines and criteria:

- (1) Determining Sampling Frequency: Dry weather field screening and analytical monitoring shall be conducted at each identified station at least once between May 1st and September 30th of each year or as often as the Copermittee determines is necessary to comply with the requirements of section D.4 of Order No. R9-2007-0001.
- (2) If flow or ponded runoff is observed at a dry weather field screening or analytical monitoring station and there has been at least seventy-two (72) hours of dry weather, make observations and collect at least one (1) grab sample. Record general information such as time since last rain, quantity of last rain, site descriptions (i.e., conveyance type, dominant watershed land uses), flow estimation (i.e., width of water surface, approximate depth of water, approximate flow velocity, flow rate), and visual observations (i.e., odor, color, clarity, floatables, deposits/stains, vegetation condition, structural condition, and biology).
- (3) At a minimum, collect samples for analytical laboratory analysis of the following constituents for at least twenty five percent (25%) of the dry weather monitoring stations where water is present:

- (a) Total Hardness
 - (b) Oil and Grease
 - (c) Diazinon and Chlorpyrifos
 - (d) Cadmium (Dissolved)
 - (e) Lead (Dissolved)
 - (f) Zinc (Dissolved)
 - (g) Copper (Dissolved)
 - (h) Enterococcus bacteria⁸
 - (i) Total Coliform bacteria⁸
 - (j) Fecal Coliform bacteria⁸
- (4) At a minimum, conduct field screening analysis of the following constituents at all dry weather monitoring stations where water is present:
- (a) Specific conductance (calculate estimated Total Dissolved Solids).
 - (b) Turbidity
 - (c) pH
 - (d) Reactive Phosphorous
 - (e) Nitrate Nitrogen
 - (f) Ammonia Nitrogen
 - (g) Surfactants (MBAS)
- (5) If the station is dry (no flowing or ponded runoff), make and record all applicable observations and select another station from the list of alternate stations for monitoring.
- (6) Develop and/or update criteria for dry weather field screening and analytical monitoring results whereby exceedance of the criteria will require follow-up investigations to be conducted to identify and eliminate the source causing the exceedance of the criteria.
- (7) Assess the presence of trash in receiving waters and urban runoff at each dry weather field screening or analytical monitoring station. Assessments of trash shall provide information on the spatial extent and amount of trash present, as well as the nature of the types of trash present.
- (8) Dry weather field screening and analytical monitoring stations identified to exceed dry weather monitoring criteria for any constituents shall continue to be screened in subsequent years.
- (9) Develop and/or update procedures for source identification follow up investigations in the event of exceedance of dry weather field screening and analytical monitoring result criteria. These procedures shall be consistent with procedures required in section D.4.d of Order No. R9-2007-0001.
- (10) Develop and/or update procedures to eliminate detected illicit discharges and connections. These procedures shall be consistent with each Copermittees

⁸ Colilert and Enterolert may be used as alternative methods with Fecal Coliform determined by calculations.

Illicit Discharge and Elimination component of its Jurisdictional Urban Runoff Management Plan as discussed in section D.4 of Order No. R9-2007-0001.

d. Conduct Dry Weather Field Screening and Analytical Monitoring

The Copermittees shall commence implementation of dry weather field screening and analytical monitoring under the requirements of this Order by May 1, 2008. Each Copermittee shall conduct dry weather analytical and field screening monitoring in accordance with its storm water conveyance system map and dry weather analytical and field screening monitoring procedures as described in section II.B.3 above. If monitoring indicates an illicit connection or illegal discharge, conduct the follow-up investigation and elimination activities as described in submitted dry weather field screening and analytical monitoring procedures and sections D.4.d and D.4.e of Order No. R9-2007-0001. Until the dry weather field screening and analytical monitoring program is implemented under the requirements of this Order, each Copermittee shall continue to implement dry weather field screening and analytical monitoring as it was most recently implemented pursuant to Order No. 2001-01.

C. Regional Monitoring Program

1. The Copermittees shall participate and coordinate with federal, state, and local agencies and other dischargers in development and implementation of a regional watershed monitoring program as directed by the Executive Officer.
2. Bight '08
 - a. During the 2008-2009 monitoring year (Permit Year 2), the Copermittees may participate in the Bight '08 study. The Copermittees shall ensure that such participation results in collection and analysis of data useful in addressing the goals and management questions of the Receiving Waters Monitoring Program. Any participation shall include the contribution of all funds not otherwise spent on full implementation of mass loading station, temporary watershed assessment station, ambient bay and lagoon, and bioassessment monitoring. All other monitoring shall continue during the 2008-2009 monitoring year (Permit Year 2) as required.
 - b. If the Copermittees do not participate in Bight '08, mass loading station, temporary watershed assessment station, ambient bay an lagoon, and bioassessment monitoring shall be conducted as follows:
 - (1) Permit Year 3 (2009-2010) monitoring shall be conducted in Permit Year 2 (2008-2009) (see Table 1).
 - (2) Permit Year 4 (2010-2011) monitoring shall be conducted in Permit Year 3 (2009-2010) (see Table 1).
 - (3) Permit Year 5 (2011-2012) monitoring shall be conducted in Permit Year 4 (2010-2011).

(4) Permit Year 1 (2007-2008) monitoring shall be conducted in Permit Year 5 (2011-2012).

- c. If the Copermittees partially participate in Bight '08, monitoring shall be conducted as described in section II.C.2.b above, with the exception of any monitoring offset by the contribution of funds to Bight '08.

D. Special Studies

1. TMDL MONITORING

- a. All monitoring shall be conducted as required in Investigation Order No. R9-2004-0277 for Chollas Creek.

2. REGIONAL HARBOR MONITORING

- a. The Copermittees which discharge to harbors shall participate in the development and implementation of the Regional Harbor Monitoring Program.

- 3. The Copermittees shall conduct special studies, including any monitoring required for TMDL development and implementation, as directed by the Executive Officer.

E. Monitoring Provisions

All monitoring activities shall meet the following requirements:

- 1. Where procedures are not otherwise specified in this Receiving Waters Monitoring and Reporting Program (e.g., Dry Weather Field Screening and Analytical Monitoring), sampling, analysis and quality assurance/quality control must be conducted in accordance with the Quality Assurance Management Plan (QAMP) for the State of California's Surface Water Ambient Monitoring Program (SWAMP), adopted by the State Water Resources Control Board (SWRCB).
- 2. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity [40 CFR 122.41(j)(1)].
- 3. The Copermittees shall retain records of all monitoring information, including all calibration and maintenance of monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the Report of Waste Discharge and application for this Order, for a period of at least five (5) years from the date of the sample, measurement, report, or application. This period may be extended by request of the Regional Board or USEPA at any time and shall be extended during the course of any unresolved litigation regarding this discharge. [40 CFR 122.41(j)(2), CWC section 13383(a)]
- 4. Records of monitoring information shall include [40 CFR 122.41(j)(3)]:
 - a. The date, exact place, and time of sampling or measurements;
 - b. The individual(s) who performed the sampling or measurements;
 - c. The date(s) analyses were performed;

- d. The individual(s) who performed the analyses;
 - e. The analytical techniques or methods used; and
 - f. The results of such analyses.
5. All sampling, sample preservation, and analyses must be conducted according to test procedures approved under 40 CFR part 136, unless other test procedures have been specified in this Receiving Waters Monitoring and Reporting Program or approved by the Executive Officer [40 CFR 122.41(j)(4)].
 6. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this Order shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than two years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four years, or both. [40 CFR 122.41(j)(5)]
 7. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this Receiving Waters Monitoring and Reporting Program. [40 CFR 122.41(l)(4)(iii)]
 8. All chemical, bacteriological, and toxicity analyses shall be conducted at a laboratory certified for such analyses by the California Department of Health Services or a laboratory approved by the Executive Officer.
 9. For priority toxic pollutants that are identified in the California Toxics Rule (CTR) (65 Fed. Reg. 31682), the Copermittees shall instruct its laboratories to establish calibration standards that are equivalent to or lower than the Minimum Levels (MLs) published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP). If a Copermittee can demonstrate that a particular ML is not attainable, in accordance with procedures set forth in 40 CFR 136, the lowest quantifiable concentration of the lowest calibration standard analyzed by a specific analytical procedure (assuming that all the method specified sample weights, volumes, and processing steps have been followed) may be used instead of the ML listed in Appendix 4 of the SIP. The Copermittee must submit documentation from the laboratory to the Regional Board for approval prior to raising the ML for any priority toxic pollutant.
 10. The Regional Board Executive Officer or the Regional Board may make revisions to this Receiving Waters and Urban Runoff Monitoring and Reporting Program at any time during the term of Order No. R9-2007-0001, and may include a reduction or increase in the number of parameters to be monitored, locations monitored, the frequency of monitoring, or the number and size of samples collected.
 11. The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six

months per violation, or by both. [40 CFR 122.41(k)(2)]

12. Monitoring shall be conducted according the USEPA test procedures approved under 40 CFR 136, "Guidelines Establishing Test Procedures for Analysis of Pollutants under the Clean Water Act" as amended, unless other test procedures have been specified in this Receiving Waters and Urban Runoff Monitoring and Reporting Program, in Order No. R9-2007-0001, or by the Executive Officer.
13. If the discharger monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR part 136, unless otherwise specified in the Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the reports requested by the Regional Board. [40 CFR 122.41(l)(4)(ii)]

III. REPORTING PROGRAM

A. Monitoring Reporting

1. The Principal Permittee shall submit a description of the Receiving Waters and Urban Runoff Monitoring Program to be implemented for every monitoring year. The submittals shall begin on September 1, 2007, and continue every year thereafter. The submittals shall describe all monitoring to be conducted during the upcoming monitoring year. For example, the September 1, 2007 submittal shall describe the monitoring to be conducted from October 1, 2007 through September 30, 2008.

If the Copermittees participate in Bight '08, their submittal for the 2008-2009 monitoring year shall describe the monitoring to be conducted for Bight '08 and exhibit how the monitoring will result in collection and analysis of data useful in addressing the goals and management questions of the Receiving Waters and Urban Runoff Monitoring Program.

2. The Principal Permittee shall submit the Receiving Waters and Urban Runoff Monitoring Annual Report to the Regional Board on January 31 of each year, beginning on January 31, 2009. Receiving Waters and Urban Runoff Monitoring Annual Reports shall meet the following requirements:
 - a. Annual monitoring reports shall include the data/results, methods of evaluating the data, graphical summaries of the data, and an explanation/discussion of the data for each monitoring program component.
 - b. Annual monitoring reports shall include a watershed-based analysis of the findings of each monitoring program component. Each watershed-based analysis shall include:
 - (1) Identification and prioritization of water quality problems within each watershed.
 - (2) Identification and description of the nature and magnitude of potential sources of the water quality problems within each watershed.
 - (3) Exhibition of pollutant load and concentration increases or decreases at each mass loading and temporary watershed assessment station.

- (4) Evaluation of pollutant loads and concentrations at mass loading and temporary watershed assessment stations with respect to land use, population, sources, and other characteristics of watersheds using tools such as multiple linear regression, factor analysis, and cluster analysis.
 - (5) Identification of links between source activities/conditions and observed receiving water impacts.
 - (6) Identification of recommended future monitoring to identify and address sources of water quality problems.
 - (7) Results and discussion of any TIE conducted, together with actions that will be implemented to reduce the discharge of pollutants and abate the sources causing the toxicity.
- c. Annual monitoring reports shall include a detailed description of all monitoring conducted under Investigation Order No. R9-2004-0277 for Chollas Creek. Annual monitoring reports shall also include all information required by Investigation Order No. R9-2004-0277.
- d. Annual monitoring reports shall include discussions for each watershed which answer each of the management questions listed in section I.B of this Receiving Waters Monitoring and Reporting Program.
- e. Annual monitoring reports shall identify how each of the goals listed in section I.A of this Receiving Waters Monitoring and Reporting Program has been addressed by the Copermittees' monitoring.
- f. Annual monitoring reports shall include identification and analysis of any long-term trends in storm water or receiving water quality. Trend analysis shall use nonparametric approaches, such as the Mann-Kendall test, including exogenous variables in a multiple regression model, and/or using a seasonal nonparametric trend model, where applicable.
- g. Annual monitoring reports shall provide an estimation of total pollutant loads (wet weather loads plus dry weather loads) due to urban runoff for each of the watersheds specified in Table 4 of Order No. R9-2007-0001.
- h. Annual monitoring reports shall for each monitoring program component listed above, include an assessment of compliance with applicable water quality standards.
- i. Annual monitoring reports shall describe monitoring station locations by latitude and longitude coordinates, frequency of sampling, quality assurance/quality control procedures, and sampling and analysis protocols.
- j. Annual monitoring reports shall use a standard report format and shall include the following:
 - (1) A stand alone comprehensive executive summary addressing all sections of the monitoring report;
 - (2) Comprehensive interpretations and conclusions; and

(3) Recommendations for future actions.

- k. All monitoring reports submitted to the Principal Permittee or the Regional Board shall contain the certified perjury statement described in Attachment B of Order No. R9-2007-0001.
 - l. Annual monitoring reports shall be reviewed prior to submittal to the Regional Board by a committee (consisting of no less than three members). All review comments shall also be submitted to the Regional Board.
 - m. Annual monitoring reports shall be submitted in both electronic and paper formats.
- 3. The Principal Permittee shall submit by July 1, 2007 a detailed description of the monitoring programs to be implemented under requirements II.A.1.k, II.A.7, and II.B.3.c.(7) of Receiving Waters and Urban Runoff Monitoring and Reporting Program No. R9-2007-0001. The Principal Permittee shall submit by July 1, 2008, a detailed description of the monitoring programs to be implemented under requirement II.B.1 and II.B.2 of Receiving Waters and Urban Runoff Monitoring and Reporting Program No. R9-2007-0001. The description shall identify and provide the rationale for the constituents monitored, locations of monitoring, frequency of monitoring, and analyses to be conducted with the data generated.
 - 4. By January 31, 2010, the City of San Diego shall submit a report which evaluates the data and assumptions used to estimate the WLA to Shelter Island Yacht Basin of 30 kg Cu/year. The report shall evaluate if any changes have occurred in the watershed which could cause or contribute to a higher copper urban runoff discharge and any actions necessary to address these changes. The report shall be an attachment to the Watershed Urban Runoff Management Program Annual Report for the San Diego Bay watershed.
 - 5. Monitoring programs and reports shall comply with section II.E of Receiving Waters and Urban Runoff Monitoring and Reporting Program No. R9-2007-0001 and Attachment B of Order No. R9-2007-0001.
 - 6. Following completion of an annual cycle of monitoring in October, the Copermittees shall make the monitoring data and results available to the Regional Board at the Regional Board's request.

B. Interim Reporting Requirements

For the October 2005-October 2006 and October 2006-October 2007 monitoring periods, the Principal Permittee shall submit the Receiving Waters Monitoring Annual Reports on January 31, 2007 and January 31, 2008, respectively. The Receiving Waters Monitoring Annual Report shall address the monitoring conducted to comply with the requirements of Order No. 2001-01.

APPENDIX I
GENERAL INDUSTRIAL PERMIT

Appendix I – General Industrial Permit





Winston H. Hickox
Secretary for
Environmental
Protection

State Water Resources Control Board

Division of Water Quality

1001 I Street • Sacramento, California 95814 • (916) 341-5538
Mailing Address: P.O. Box 1977 • Sacramento, California • 95812-1977
FAX (916) 341-5543 • Internet Address: <http://www.swrcb.ca.gov>



Gray Davis
Governor

To: STORM WATER DISCHARGER

SUBJECT: CHECKLIST FOR SUBMITTING A NOTICE OF INTENT

In order for the State Water Resources Control Board to expeditiously process your Notice of Intent (NOI), the following items must be submitted to either of the addresses indicated below:

1. _____ NOI (please keep a copy for your files) with all applicable sections completed and original signature of the facility operator;
2. _____ Check made out to the "State Water Resources Control Board" with the appropriate fee. The regular fee is **\$700.00**. Dairy farms pay a one time fee of \$2000.00; and
3. _____ Site Map of the facility (see NOI instructions). DO NOT SEND BLUEPRINTS

U.S. Postal Service Address

State Water Resources Control Board
Division of Water Quality
Attn: Storm Water Section
P.O. Box 1977
Sacramento, CA 95812-1977

Overnight Mailing Address

State Water Resources Control Board
Division Of Water Quality
Attn: Storm Water, 15th Floor
1001 I Street
Sacramento, CA 95814

NOIs are processed in the order they are received. A NOI receipt letter will be mailed to the facility operator within approximately two weeks. Incomplete NOI submittals will be returned to the facility operator within the same timeframe and will specify the reason(s) for return. If you need a receipt letter by a specific date (for example, to provide to a local agency), we advise that you submit your NOI thirty (30) days prior to the date the receipt letter is needed.

Please do not call us to verify your NOI status. A copy of your NOI receipt letter will be available on our web page within twenty-four (24) hours of processing. Go to: <http://esmr.swrcb.ca.gov:7778/dwq/IndReceiptLetter.asp> to retrieve an electronic copy of your NOI receipt letter. If you have any questions regarding this matter, please contact us at (916) 341-5538.

TABLE OF CONTENTS

FOR

STATE WATER RESOURCES CONTROL BOARD (STATE WATER BOARD)
WATER QUALITY ORDER NO. 97-03-DWQ
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT NO. CAS000001 (GENERAL PERMIT)

WASTE DISCHARGE REQUIREMENTS (WDRS)
FOR

DISCHARGES OF STORM WATER ASSOCIATED WITH INDUSTRIAL ACTIVITIES
EXCLUDING CONSTRUCTION ACTIVITIES

FACT SHEET.....I-XIII

GENERAL PERMIT

ORDER1-10

SECTION A: Storm Water Pollution Prevention
Plan (SWPPP)11-23

SECTION B: Monitoring Program and
Reporting Requirements24-44

SECTION C: Standard Provisions45-50

ATTACHMENT 1: Facilities Covered By This Permit

ATTACHMENT 2: Storm Water Contacts For State
and Regional Boards

ATTACHMENT 3: Notice of Intent (NOI) Instructions, Fee
Schedule, Form

ATTACHMENT 4: Definitions

ATTACHMENT 5: Acronyms

TABLES

TABLE A: Five Phases For Developing and
Implementing SWPPPS13

TABLE B: Assessment of Potential Pollutant Sources
and Corresponding BMP Summary18

TABLE C: Reduced Monitoring Sampling Schedule34

TABLE D: Additional Analytical Parameters40-44

FACT SHEET

FOR

**STATE WATER RESOURCES CONTROL BOARD (STATE WATER BOARD)
WATER QUALITY ORDER NO. 97-03-DWQ
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT NO. CAS000001 (GENERAL PERMIT)**

**WASTE DISCHARGE REQUIREMENTS (WDRS)
FOR**

**DISCHARGES OF STORM WATER ASSOCIATED WITH INDUSTRIAL ACTIVITIES
EXCLUDING CONSTRUCTION ACTIVITIES**

BACKGROUND

In 1972, the Federal Water Pollution Control Act (also referred to as the Clean Water Act [CWA]) was amended to provide that the discharge of pollutants to waters of the United States from any point source is effectively prohibited unless the discharge is in compliance with an NPDES permit. The 1987 amendments to the CWA added Section 402(p) that establishes a framework for regulating municipal and industrial storm water discharges under the NPDES Program. On November 16, 1990, the U.S. Environmental Protection Agency (U.S. EPA) published final regulations that establish application requirements for storm water permits. The regulations require that storm water associated with industrial activity (storm water) that discharges either directly to surface waters or indirectly through municipal separate storm sewers must be regulated by an NPDES permit.

U.S. EPA developed a four-tier permit issuance strategy for storm water discharges associated with industrial activity as follows:

Tier I, Baseline Permitting--One or more general permits will be developed to initially cover the majority of storm water discharges associated with industrial activity.

Tier II, Watershed Permitting--Facilities within watersheds shown to be adversely impacted by storm water discharges associated with industrial activity will be targeted for individual or watershed-specific general permits.

Tier III, Industry-Specific Permitting--Specific industry categories will be targeted for individual or Industry-specific general permits.

Tier IV, Facility-Specific Permitting--A variety of factors will be used to target specific facilities for individual permits.

The regulations allow authorized states to issue general permits or individual permits to regulate storm water discharges.

Consistent with Tier I, Baseline Permitting, of the U.S. EPA permitting strategy, the State Water Board issued a statewide General Permit on November 19, 1991 that applied to all storm water discharges requiring a permit except construction activity. The monitoring requirements of this General Permit were amended September 17, 1992. A separate statewide general permit has been issued for construction activity.

To obtain authorization for continued and future storm water discharge under this General Permit, each facility operator must submit a Notice of Intent (NOI). This approach is consistent with the four-tier permitting strategy described in Federal regulations, i.e., Tier 1, Baseline Permitting. Tier 1, Baseline Permitting, enables the State to begin reducing pollutants in industrial storm water in the most efficient manner possible.

This General Permit generally requires facility operators to:

1. Eliminate unauthorized non-storm water discharges;
2. Develop and implement a storm water pollution prevention plan (SWPPP); and
3. Perform monitoring of storm water discharges and authorized non-storm water discharges.

TYPES OF STORM WATER DISCHARGES COVERED BY THIS GENERAL PERMIT

This General Permit is intended to cover all new or existing storm water discharges and authorized non-storm water discharges from facilities required by Federal regulations to obtain a permit including those (1) facilities previously covered by the San Francisco Bay Regional Water Quality Control Board Order No. 92-011 (as amended by Order No. 92-116), (2) facilities designated by the Regional Water Quality Control Boards (Regional Water Boards), (3) facilities whose operators seek coverage under this General Permit, (4) and facilities required by future U.S. EPA storm water regulations.

The General Permit is intended to cover all facilities described in Attachment 1, whether the facility is primary or is auxiliary to the facility operator's function. For example, although a school district's primary function is education, a facility that it operates for vehicle maintenance of school buses is a transportation facility that is covered by this General Permit.

The definition of "storm water associated with industrial activity" is provided in Attachment 4, Definition 9, of this General Permit. Facilities that discharge storm water associated with industrial activity requiring a General Permit are listed by category in 40 Code of Federal Regulations (CFR) Section 122.26(b)(14) (Federal Register, Volume 55 on

Pages 48065-66) and in Attachment 1 of this General Permit. The facilities can be publicly or privately owned. General descriptions of these categories are:

1. Facilities subject to storm water effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards (40 CFR Subchapter N);
2. Manufacturing facilities;
3. Mining/oil and gas facilities;
4. Hazardous waste treatment, storage, or disposal facilities;
5. Landfills, land application sites, and open dumps that receive industrial waste;
6. Recycling facilities such as metal scrap yards, battery reclaimers, salvage yards, automobile yards;
7. Steam electric generating facilities;
8. Transportation facilities that conduct any type of vehicle maintenance such as fueling, cleaning, repairing, etc.;
9. Sewage treatment plants;
10. Construction activity (covered by a separate general permit); and
11. Certain facilities (often referred to as "light industry") where industrial materials, equipment, or activities are exposed to storm water.

For the most part, these facilities are identified in the Federal regulations by a Standard Industrial Classification (SIC).

Category 1 Dischargers

The following categories of facilities currently have storm water effluent limitation guidelines for at least one of their subcategories. They are cement manufacturing (40 CFR Part 411); feedlots (40 CFR Part 412); fertilizer manufacturing (40 CFR Part 418); petroleum refining (40 CFR Part 419); phosphate manufacturing (40 CFR Part 422); steam electric power generation (40 CFR Part 423); coal mining (40 CFR Part 434); mineral mining and processing (40 CFR Part 436); ore mining and dressing (40 CFR Part 440); and asphalt emulsion (40 CFR Part 443). A facility operator whose facility falls into one of these general categories should examine the effluent guidelines to determine if the facility is categorized in one of the subcategories that have storm water effluent guidelines. If

a facility is classified as one of those subcategories, that facility is subject to the standards listed in the CFR for that category and is subject to this General Permit. This General Permit contains additional requirements (see Section B.6.) for facilities with storm water effluent limitations guidelines.

Category 5 Dischargers

Inactive or closed landfills, land application sites, and open dumps that have received industrial wastes (Category 5) may be subject to this General Permit unless the storm water discharges from the sites are already regulated by an NPDES permit issued by the appropriate Regional Water Board. Facility operators of closed landfills that are regulated by waste discharge requirements (WDRs) may be required to comply with this General Permit. In some cases, it may be appropriate for closed landfills to be covered by the State Water Board's General Permit during closure activities. The Construction Activities General Permit should cover new landfill construction. Facility operators should contact their Regional Water Board to determine the appropriate permit coverage.

Category 10 Dischargers

Facility operators of Category 10 (light industry) facilities are not subject to this General Permit if they can certify that the following minimum conditions at their facilities are met:

1. All prohibited non-storm water discharges have been eliminated or otherwise permitted.
2. All areas of past exposure have been inspected and cleaned, as appropriate.
3. All materials related to industrial activity (including waste materials) are not exposed to storm water or authorized non-storm water discharges.
4. All industrial activities and industrial equipment are not exposed to storm water or authorized non-storm water discharges.
5. There is no exposure of materials associated with industrial activity through other direct or indirect pathways such as particulates from stacks and exhaust systems.
6. There is periodic re-evaluation of the facility to ensure Conditions 1, 3, 4, and 5 are continuously met.

Currently, facility operators that can certify that the above conditions are met are not required to notify the State Water

Board or Regional Water Board. These facility operators are advised to retain such certification documentation on site.

The Ninth Circuit Court of Appeals invalidated the exemption granted by U.S. EPA for storm water discharges from facilities in Category 11 that do not have exposure and remanded the regulation to U.S. EPA for further action. The State Water Board, at this time, is not requiring storm water discharges from facilities in Category 11 that do not have exposure to be covered by this General Permit. Instead, the State Water Board will await future U.S. EPA or court action clarifying the types of storm water discharges that must be permitted. If necessary, the State Water Board will reopen the General Permit to accommodate such a clarification.

Section 1068 of the Intermodal Surface Transportation Act of 1991 exempts municipal agencies serving populations of less than 100,000 from Phase I permit requirements for most facilities they operate (uncontrolled sanitary landfills, power plants, and airports are still required to be permitted in Phase I). Phase II of the Permit Program scheduled to begin August 7, 2001 will cover the facilities that are exempt from Phase I permit requirements.

TYPES OF DISCHARGES NOT COVERED BY THIS GENERAL PERMIT

1. CONSTRUCTION ACTIVITY: Discharges from construction activity of five acres or more, including clearing, grading, and excavation. A separate general permit was adopted on August 20, 1992 for this industrial category.
2. FACILITIES WHICH HAVE NPDES PERMITS CONTAINING STORM WATER PROVISIONS: Some storm water discharges may be regulated by other individual or general NPDES permits issued by the State Water Board or the Regional Water Boards. This General Permit shall not regulate these discharges. When the individual or general NPDES permits for such discharges expire, the State Water Board or Regional Water Board may authorize coverage under this General Permit or another general NPDES permit, or may issue a new individual NPDES permit consistent with the Federal and State storm water regulations. Interested parties may petition the State Water Board or appropriate Regional Water Board to issue individual or General NPDES Permits. General Permits may be issued for a particular industrial group or watershed area.
3. FACILITIES DETERMINED INELIGIBLE BY REGIONAL WATER BOARDS: Regional Water Boards may determine that discharges from a facility or groups of facilities, otherwise eligible for coverage under this General Permit, have potential water quality impacts that may not be appropriately addressed by

this General Permit. In such cases, a Regional Water Board may require such discharges to be covered by an individual or general NPDES permit. Interested persons may petition the appropriate Regional Water Board to issue individual NPDES permits. The applicability of this General Permit to such discharges will be terminated upon adoption of an individual NPDES permit or a different general NPDES permit.

4. FACILITIES WHICH DO NOT DISCHARGE STORM WATER TO WATERS OF THE UNITED STATES: The discharges from the following facilities are not required to be permitted:
 - a. FACILITIES THAT DISCHARGE STORM WATER TO MUNICIPAL SANITARY SEWER SYSTEMS: Facilities that discharge storm water to municipal sanitary sewer systems or combined sewer systems are not required by Federal regulations to be covered by an NPDES storm water permit or to submit an NOI to comply with this General Permit. (It should be noted that many municipalities have sewer use ordinances that prohibit storm drain connections to their sanitary sewers.)
 - b. FACILITIES THAT DO NOT DISCHARGE STORM WATER TO SURFACE WATERS OR SEPARATE STORM SEWERS: Storm water that is captured and treated and/or disposed of with the facility's NPDES permitted process wastewater and storm water that is disposed of to evaporation ponds, percolation ponds, or combined sewer systems are not required to obtain a storm water permit. To avoid liability, the facility operator should be certain that no discharge of storm water to surface waters would occur under any circumstances.
5. MOST SILVICULTURAL ACTIVITIES: Storm water discharges from most silvicultural activities such as thinning, harvesting operations, surface drainage, or road construction and maintenance are exempt from this permit. Log sorting or log storage facilities that fall within SIC 2411 are required to be permitted.
6. MINING AND OIL AND GAS FACILITIES: Oil and gas facilities that have not released storm water resulting in a discharge of a reportable quantity (RQ) for which notification is or was required pursuant to 40 CFR Parts 110, 117, and 302 at any time after November 19, 1987 are not required to be permitted unless the industrial storm water discharge contributed to a violation of a water quality standard. Mining facilities that discharge storm water that does not come into contact with any overburden, raw materials, intermediate product, finished product, by-product, or waste product located at the facility are not required to be permitted. These facilities must be permitted if they have a new release of storm water resulting in a discharge of an RQ.

7. FACILITIES ON INDIAN LANDS: the U.S. EPA will regulate Discharges from facilities on Indian lands.

NOTIFICATION REQUIREMENTS

Storm water discharges from facilities described in the section titled "Types of Storm Water Discharges Covered by This General Permit" must be covered by an NPDES permit. An NOI must be submitted by the facility operator for each individual facility to obtain coverage. Certification of the NOI signifies that the facility operator intends to comply with the provisions of the General Permit. Facility operators who have filed NOIs for the State Water Board Order No. 91-013-DWQ (as amended by Order No. 92-12-DWQ) or San Francisco Bay Regional Water Board Order No. 92-011 (as amended by Order No. 92-116) will be sent an abbreviated NOI soon after adopting this General Permit that must be completed and returned within 45 days of receipt. Where operations have discontinued and significant materials remain on site (such as at closed landfills), the landowner may be responsible for filing an NOI and complying with this General Permit. A landowner may also file an NOI for a facility if the landowner, rather than the facility operator(s), is responsible for compliance with this General Permit.

A facility operator that does not submit an NOI for a facility must submit an application for an individual NPDES permit. U.S. EPA's regulations [40 CFR 122.21 (a)] exclude facility operators covered by a general permit from requirements to submit an individual permit application unless required by the Regional Water Board. The NOI requirements of this General Permit are intended to establish a mechanism which can be used to establish a clear accounting of the number of facility operators complying with the General Permit, their identities, the nature of operations at the facilities, and location.

All facility operators filing an NOI after the adoption of this General Permit must comply with this General Permit. Existing facility operators who have filed NOIs prior to the adoption of this General Permit shall continue to complete the requirements of the previous General Permit through June 30, 1997 including submitting annual reports to the Regional Water Boards by July 1, 1997. Group Leaders are required to submit a 1996-97 Group Evaluation Report by August 1, 1997.

DESCRIPTION OF GENERAL PERMIT CONDITIONS

Prohibitions

This General Permit authorizes storm water and authorized non-storm water discharges from facilities that are required to be covered by a storm water permit. This General Permit prohibits discharges of material other than storm water (non-storm water discharges) that are not authorized by the General Permit and discharges containing hazardous substances in storm water in excess of reportable quantities established at 40 CFR 117.3 and 40 CFR 302.4. Authorized non-storm water discharges are addressed in the Special Conditions of the General Permit.

Effluent Limitations

NPDES Permits for storm water discharges must meet all applicable provisions of Sections 301 and 402 of the CWA. These provisions require control of pollutant discharges using best available technology economically achievable (BAT) and best conventional pollutant control technology (BCT) to prevent and reduce pollutants and any more stringent controls necessary to meet water quality standards.

U.S. EPA regulations (40 CFR Subchapter N) establish effluent limitation guidelines for storm water discharges from facilities in ten industrial categories. For these facilities, compliance with the effluent limitation guidelines constitutes compliance with BAT and BCT for the specified pollutants and must be met to comply with this General Permit.

For storm water discharges from facilities not among the ten industrial categories listed in 40 CFR Subchapter N, it is not feasible at this time to establish numeric effluent limitations. The reasons why establishment of numeric effluent limitations is not feasible are discussed in detail in State Water Board Orders No. WQ 91-03 and WQ 91-04. Therefore, this General Permit allows the facility operator to implement best management practices (BMPs) to comply with the requirements of this General Permit. This approach is consistent with the U.S. EPA's August 1, 1996 "Interim Permitting Approach for Water Quality Based Effluent Limitations in Storm Water Permits".

Receiving Water Limitations

Storm water discharges shall not cause or contribute to a violation of an applicable water quality standard. The General Permit requires facility operators to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges through the development and implementation of BMPs which constitutes compliance with BAT and BCT and, in most cases, compliance with water quality standards. If receiving water quality standards are exceeded, facility operators are required to submit a written report providing additional BMPs that will be implemented to achieve water quality standards.

Storm Water Pollution Prevention Plans (SWPPPs)

All facility operators must prepare, retain on site, and implement an SWPPP. The SWPPP has two major objectives: (1) to help identify the sources of pollution that affect the quality of industrial storm water discharges and authorized non-storm water discharges, and (2) to describe and ensure the implementation of BMPs to reduce or prevent pollutants in industrial storm water discharges and authorized non-storm water discharges.

This General Permit requires development and implementation of an SWPPP emphasizing BMPs. This approach provides the flexibility necessary to establish appropriate BMPs for different types of industrial activities and pollutant sources. As this General Permit covers vastly different types of facilities, the State Water Board recognizes that there is no single best way of developing or organizing an SWPPP. The SWPPP requirements contain the essential elements that all facility operators must consider and address in the SWPPP. This General Permit's SWPPP requirements are more detailed than the previous general permit's SWPPP requirements, and the suggested order of the SWPPP elements have been rearranged (1) to correspond more closely with other storm water permits in effect throughout the country, and (2) to generally follow a more logical path. Facility operators that have already developed and implemented SWPPPs under previous general permits are required to review the SWPPP's requirements contained in this General Permit and then review their existing SWPPP for adequacy. If the existing SWPPP adequately identifies and assesses all potential sources of pollutants and describes the appropriate BMPs necessary to reduce or prevent pollutants, the facility operator is not required to revise the existing SWPPP.

One of the major elements of the SWPPP is the elimination of unauthorized non-storm water discharges to the facility's storm drain system. Unauthorized non-storm water discharges can be generated from a wide variety of potential pollutant sources. They include waters from the rinsing or washing of vehicles, equipment, buildings, or pavement; materials that have been improperly disposed of or dumped, and spilled; or leaked materials. Unauthorized non-storm water discharges can contribute a significant pollutant load to receiving waters. Measures to control spills, leakage, and dumping can often be addressed through BMPs. Unauthorized non-storm water discharges may enter the storm drain system via conveyances such as floor drains. All conveyances should be evaluated to determine whether they convey unauthorized non-storm water discharges to the storm drain system. Unauthorized non-storm water discharges (even when commingled with storm water) shall be eliminated or covered by a separate NPDES Permit.

There are many non-storm water discharges that, under certain conditions, should not contain pollutants associated with

industrial activity (i.e., air conditioning condensate, potable water line testing, landscaping overflow, etc.). Item D, Special Conditions, provides the conditions where certain listed non-storm water discharges are authorized by this General Permit.

Monitoring Program

The General Permit requires development and implementation of a monitoring program. The objectives of the monitoring program are to (1) demonstrate compliance with the General Permit, (2) aid in the implementation of the SWPPP, and (3) measure the effectiveness of the BMPs in reducing or preventing pollutants in storm water discharges and authorized non-storm water discharges.

All facility operators (with the exception of inactive mining operations) are required to:

1. Perform visual observations of storm water discharges and authorized storm water discharges.
2. Collect and analyze samples of storm water discharges. Analysis must include pH, total suspended solids (TSS), total organic carbon (TOC), specific conductance, toxic chemicals, and other pollutants which are likely to be present in storm water discharges in significant quantities, and those parameters listed in Table D of this General Permit. The Table D parameters are those listed in the U.S. EPA Multi-Sector General Permit. Facility operators subject to Federal storm water effluent limitation guidelines in 40 CFR Subchapter N must also sample and analyze for any pollutant specified in the appropriate category of 40 CFR Subchapter N.

Facility operators are not required to collect samples or perform visual observations during adverse climatic conditions. Sample collection and visual observations are required only during scheduled facility operating hours. Visual observations are required only during daylight hours. Facility operators that are unable to collect any of the required samples or visual observations because of the above circumstances must provide documentation to the Regional Water Board in their annual report.

Facility operators may be exempt from performing sampling and analysis if they: (1) do not have areas of industrial activity exposed to storm water, (2) receive an exemption from a local agency which has jurisdiction over the storm sewer system, or (3) receive an exemption from the appropriate Regional Water Board. Facility operators must always perform sampling and analysis for any pollutant specified in storm water effluent limitation guidelines.

This General Permit contains a new procedure where facility operators, if they meet certain minimum conditions, may certify compliance with the General Permit and reduce the number of

sampling events required to be sampled for the remaining term of the General Permit. Each Regional Water Board may develop instructions, guidance, and checklists to assist facility operators to complete sampling reduction requests.

Local agencies that wish to provide sampling and analysis exemptions or reductions to facility operators within their jurisdiction shall develop a certification program that clearly indicates the certification procedures and criteria used by the local agency. At a minimum, these programs should include site inspections, a review of the facility operator's SWPPP, and a review of other records such as monitoring data, receiving water data, etc. The certification program shall be approved by the local Regional Water Board before implementation.

Alternative Monitoring

Facility operators are required to develop a facility-specific monitoring program that satisfies both the minimum monitoring program requirements and the objectives of the monitoring program. Some facility operators have indicated that cost-effective alternative monitoring programs can be developed that provide equivalent or more accurate indicators of pollutants and/or BMP performance than a monitoring program based upon the minimum monitoring program requirements. An example of such an alternative monitoring program would be one that identifies sample locations at or near pollutant sources rather than sampling an entire drainage area where the storm water discharge has been diluted with storm water from areas with little or no industrial activity.

The State Water Board does not want to preclude facility operators from developing better, and perhaps more cost-effective, monitoring programs. This General Permit allows facility operators to submit alternative monitoring programs for approval by the Regional Water Board. For individual facilities, these proposals must be facility specific and demonstrate how the alternative monitoring program will result in an equivalent or more accurate indicator of pollutants and/or BMP effectiveness. Facility operators with similar industrial activities may also propose alternative monitoring programs for approval by the Regional Water Boards. These proposals must demonstrate how the alternative monitoring program will result in an equivalent or more accurate indicator of pollutants and/or BMP effectiveness for all of the participating facilities.

Facility operators shall continue to comply with the existing monitoring program requirements until receiving approval by the Regional Water Board.

Group Monitoring

Each facility operator may either perform sampling and analysis individually or participate in a group monitoring program. A group monitoring program may be developed either by a group leader representing a group of similar facilities or by a local agency which holds a storm water permit for a municipal separate storm sewer system for industrial facilities within its jurisdiction. The group leader or local agency responsible for the group monitoring program must schedule all participating facilities to sample two storm events over the life of this General Permit. Facility operators subject to Federal effluent limitations guidelines in 40 CFR Subchapter N must individually sample and analyze for pollutants listed in the appropriate Federal regulations.

Participants within a group may be located within the jurisdiction of more than one Regional Water Board. Multi-Regional Water Board groups must receive the approval of the State Water Board Executive Director (with the concurrence of the appropriate Regional Water Boards).

Each group leader or local agency responsible for group sampling must: (1) provide guidance or training so that the monitoring is done correctly, (2) recommend appropriate BMPs to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges from group participants, (3) evaluate and report the monitoring data to the State Water Board and/or the appropriate Regional Water Board(s), and (4) conduct two on-site inspections at each facility over the five year term of this General Permit to evaluate facility compliance and recommend BMPs to achieve compliance with this General Permit. The group leader or local agency may designate, hire, or train inspectors to conduct these inspections that are or are not directly affiliated with the group leader or local agency. It is the group leader's or local agency's responsibility to select inspectors that are capable of evaluating each facility's compliance with the General Permit and can recommend appropriate BMPs. All group monitoring plans are subject to State Water Board and/or Regional Water Board(s) review. Consistent with the four-tier permitting strategy described in the Federal regulations, the Regional Water Board(s) may evaluate the data and results from group monitoring to establish future permitting decisions. As appropriate, the State Water Board and/or the Regional Water Board(s) may terminate or require substantial amendment to the group monitoring plans. The State Water Board and/or the Regional Water Board(s) may terminate a facility's participation in group monitoring or require additional monitoring activities.

Retention of Records

The facility operator is required to retain records of all monitoring information, copies of all reports required by this General Permit, and records of all data used to complete the NOI for a period of five years from the date of measurement, report, or monitoring activity. This period may be extended by the State and/or Regional Water Boards. All records are public documents and must be provided to the Regional Water Boards on request.

Watershed Management

The State and Regional Water Boards are undertaking a focussed effort in watershed management throughout the State. In reissuing this General Permit, the State Water Board recognizes both the evolving nature of watershed management and the long-term desirability of structuring monitoring programs to support the Watershed Management Initiative. Therefore, the amended monitoring and reporting provisions provide flexibility for individual facility operators or groups of facility operators to propose and participate in, subject to Regional Water Board approval, watershed monitoring programs in lieu of some or all of the monitoring requirements contained in this General Permit.

Facility Operator Compliance Responsibilities

This General Permit has been written to encourage individual facility operators to develop their own SWPPP and monitoring programs. Many facility operators, however, choose to obtain compliance assistance either by hiring a consultant on an individual basis or by participating in a group monitoring plan. Regardless of how a facility operator chooses to pursue compliance, it is the facility operator that is responsible for compliance with this General Permit.

The State Water Board recognizes that industrial activities and operating conditions at many facilities change over time. In addition, new and more effective BMPs are being developed by various facility operators and by industrial groups. The SWPPP and monitoring program requirements include various inspections, reviews, and observations all of which recognize, encourage, and mandate an iterative self-evaluation process that is necessary to consistently comply with this General Permit. In general, facility operators that develop and implement SWPPPs that comply with this General Permit should not be penalized when discovering minor violations through this iterative self-evaluation process. The General Permit provides facility operators up to 90 days to revise and implement the SWPPP to correct such violations.

**STATE WATER RESOURCES CONTROL BOARD (STATE WATER BOARD)
WATER QUALITY ORDER NO. 97-03-DWQ
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT NO. CAS000001 (GENERAL PERMIT)**

**WASTE DISCHARGE REQUIREMENTS (WDRS)
FOR
DISCHARGES OF STORM WATER ASSOCIATED WITH INDUSTRIAL ACTIVITIES
EXCLUDING CONSTRUCTION ACTIVITIES**

The State Water Board finds that:

1. Federal regulations for storm water discharges were issued by the U.S. Environmental Protection Agency (U.S. EPA) on November 16, 1990 (40 Code of Federal Regulations [CFR] Parts 122, 123, and 124). The regulations require operators of specific categories of facilities where discharges of storm water associated with industrial activity (storm water) occur to obtain an NPDES permit and to implement Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) to reduce or prevent pollutants associated with industrial activity in storm water discharges and authorized non-storm discharges.
2. This General Permit shall regulate storm water discharges and authorized non-storm water discharges from specific categories of industrial facilities identified in Attachment 1, storm water discharges and authorized non-storm water discharges from facilities as designated by the Regional Water Quality Control Boards (Regional Water Boards), and storm water discharges and authorized non-storm water discharges from other facilities seeking General Permit coverage. This General Permit may also regulate storm water discharges and authorized non-storm water discharges from facilities as required by U.S. EPA regulations. This General Permit shall regulate storm water discharges and authorized non-storm water discharges previously regulated by San Francisco Bay Regional Water Board Order, No.92-11 (as amended by Order No. 92-116). This General Permit excludes storm water discharges and non-storm water discharges that are regulated by other individual or general NPDES permits, storm water discharges and non-storm water discharges from construction activities, and storm water discharges and non-storm water discharges excluded by the Regional Water Boards for coverage by this General Permit. Attachment 2 contains the addresses and telephone numbers of each Regional Water Board office.
3. To obtain coverage for storm water discharges and authorized non-storm water discharges pursuant to this General Permit, operators of facilities (facility operators) must submit a Notice of Intent (NOI), in accordance with the Attachment 3

instructions, and appropriate annual fee to the State Water Board. This includes facility operators that have participated in U.S. EPA's group application process.

4. This General Permit does not preempt or supersede the authority of local agencies to prohibit, restrict, or control storm water discharges and authorized non-storm water discharges to storm drain systems or other water-courses within their jurisdictions as allowed by State and Federal law.
5. If an individual NPDES permit is issued to a facility operator otherwise subject to this General Permit or an alternative NPDES general permit is subsequently adopted which covers storm water discharges and/or authorized non-storm water discharges regulated by this General Permit, the applicability of this General Permit to such discharges is automatically terminated on the effective date of the individual NPDES permit or the date of approval for coverage under the subsequent NPDES general permit.
6. Effluent limitations and toxic and effluent standards established in Sections 208(b), 301, 302, 303(d), 304, 306, 307, and 403 of the Federal Clean Water Act (CWA), as amended, are applicable to storm water discharges and authorized non-storm water discharges regulated by this General Permit.
7. This action to adopt an NPDES general permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21100, et seq.) in accordance with Section 13389 of the California Water Code.
8. Federal regulations (40 CFR Subchapter N) establish effluent limitations guidelines for storm water discharges from some facilities in ten industrial categories.
9. For facilities which do not have established effluent limitation guidelines for storm water discharges in 40 CFR Subchapter N, it is not feasible at this time to establish numeric effluent limitations. This is due to the large number of discharges and the complex nature of storm water discharges. This is also consistent with the U.S. EPA's August 1, 1996 "Interim Permitting Approach for Water Quality Based Effluent Limitations in Storm Water Permits."
10. Facility operators are required to comply with the terms and conditions of this General Permit. Compliance with the terms and conditions of this General Permit constitutes compliance with BAT/BCT requirements and with requirements to achieve water quality standards. This includes the development and implementation of an effective Storm Water Pollution Prevention Plan (SWPPP) to reduce or prevent pollutants associated with industrial activity in storm water discharges and authorized non-storm water discharges.

11. Best Management Practices (BMPs) to reduce or prevent pollutants associated with industrial activity in storm water discharges and authorized non-storm water discharges are appropriate where numeric effluent limitations are infeasible, and the implementation of BMPs is adequate to achieve compliance with BAT/BCT and with water quality standards.
12. The State Water Board has adopted a Watershed Management Initiative that encourages watershed management throughout the State. This General Permit recognizes the Watershed Management Initiative by supporting the development of watershed monitoring programs authorized by the Regional Water Boards.
13. Following adoption of this General Permit, the Regional Water Boards shall enforce its provisions.
14. Following public notice in accordance with State and Federal laws and regulations, the State Water Board held a public hearing on November 12, 1996 and heard and considered all comments pertaining to this General Permit. A response to all significant comments has been prepared and is available for public review.
15. This Order is an NPDES General Permit in compliance with Section 402 of the CWA and shall take effect upon adoption by the State Water Board.
16. All terms that are defined in the CWA, U.S. EPA storm water regulations and the Porter-Cologne Water Quality Control Act will have the same definition in this General Permit unless otherwise stated.

IT IS HEREBY ORDERED that all facility operators required to be regulated by this General Permit shall comply with the following:

A. DISCHARGE PROHIBITIONS:

1. Except as allowed in Special Conditions (D.1.) of this General Permit, materials other than storm water (non-storm water discharges) that discharge either directly or indirectly to waters of the United States are prohibited. Prohibited non-storm water discharges must be either eliminated or permitted by a separate NPDES permit.
2. Storm water discharges and authorized non-storm water discharges shall not cause or threaten to cause pollution, contamination, or nuisance.

B. EFFLUENT LIMITATIONS:

1. Storm water discharges from facilities subject to storm water effluent limitation guidelines in Federal regulations (40 CFR

Subchapter N) shall not exceed the specified effluent limitations.

2. Storm water discharges and authorized non-storm water discharges regulated by this General Permit shall not contain a hazardous substance equal to or in excess of a reportable quantity listed in 40 CFR Part 117 and/or 40 CFR Part 302.
3. Facility operators covered by this General Permit must reduce or prevent pollutants associated with industrial activity in storm water discharges and authorized non-storm water discharges through implementation of BAT for toxic and non-conventional pollutants and BCT for conventional pollutants. Development and implementation of an SWPPP that complies with the requirements in Section A of the General Permit and that includes BMPs that achieve BAT/BCT constitutes compliance with this requirement.

C. RECEIVING WATER LIMITATIONS:

1. Storm water discharges and authorized non-storm water discharges to any surface or ground water shall not adversely impact human health or the environment.
2. Storm water discharges and authorized non-storm water discharges shall not cause or contribute to an exceedance of any applicable water quality standards contained in a Statewide Water Quality Control Plan or the applicable Regional Water Board's Basin Plan.
3. A facility operator will not be in violation of Receiving Water Limitation C.2. as long as the facility operator has implemented BMPs that achieve BAT/BCT and the following procedure is followed:
 - a. The facility operator shall submit a report to the appropriate Regional Water Board that describes the BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of water quality standards. The report shall include an implementation schedule. The Regional Water Board may require modifications to the report.
 - b. Following approval of the report described above by the Regional Water Board, the facility operator shall revise its SWPPP and monitoring program to incorporate the additional BMPs that have been and will be implemented, the implementation schedule, and any additional monitoring required.
4. A facility operator shall be in violation of this General Permit if he/she fails to do any of the following:

- a. Submit the report described above within 60 days after either the facility operator or the Regional Water Board determines that discharges are causing or contributing to an exceedance of an applicable water quality standard;
- b. Submit a report that is approved by the Regional Water Board; or
- c. Revise its SWPPP and monitoring program as required by the approved report.

D. SPECIAL CONDITIONS

1. Non-Storm Water Discharges

- a. The following non-storm water discharges are authorized by this General Permit provided that they satisfy the conditions specified in Paragraph b. below: fire hydrant flushing; potable water sources, including potable water related to the operation, maintenance, or testing of potable water systems; drinking fountain water; atmospheric condensates including refrigeration, air conditioning, and compressor condensate; irrigation drainage; landscape watering; springs; ground water; foundation or footing drainage; and sea water infiltration where the sea waters are discharged back into the sea water source.
- b. The non-storm water discharges as provided in Paragraph a. above are authorized by this General Permit if all the following conditions are met:
 - i. The non-storm water discharges are in compliance with Regional Water Board requirements.
 - ii. The non-storm water discharges are in compliance with local agency ordinances and/or requirements.
 - iii. BMPs are specifically included in the SWPPP to (1) prevent or reduce the contact of non-storm water discharges with significant materials or equipment and (2) minimize, to the extent practicable, the flow or volume of non-storm water discharges.
 - iv. The non-storm water discharges do not contain significant quantities of pollutants.
 - v. The monitoring program includes quarterly visual observations of each non-storm water discharge and its sources to ensure that BMPs are being implemented and are effective.

- vi. The non-storm water discharges are reported and described annually as part of the annual report.
- c. The Regional Water Board or its designee may establish additional monitoring programs and reporting requirements for any non-storm water discharge authorized by this General Permit.
- d. Discharges from firefighting activities are authorized by this General Permit and are not subject to the conditions of Paragraph b. above.

E. PROVISIONS

1. All facility operators seeking coverage by this General Permit must submit an NOI for each of the facilities they operate. Facility operators filing an NOI after the adoption of this General Permit shall use the NOI form and instructions (Attachment 3) attached to this General Permit. Existing facility operators who have filed an NOI pursuant to State Water Board Order No. 91-013-DWQ (as amended by Order No. 92-12-DWQ) or San Francisco Bay Regional Water Board Order No. 92-11 (as amended by Order No. 92-116) shall submit an abbreviated NOI form provided by the State Water Board. The abbreviated NOI form shall be submitted within 45 days of receipt.
2. Facility operators who have filed an NOI, pursuant to State Water Board Order No. 91-013-DWQ (as amended by Order No. 92-12-DWQ) or San Francisco Bay Regional Water Board Order No. 92-11 (as amended by Order No. 92-116), shall continue to implement their existing SWPPP and shall implement any necessary revisions to their SWPPP in accordance with Section A of this General Permit in a timely manner, but in no case later than August 1, 1997. Facility operators beginning industrial activities after adoption of this General Permit must develop and implement an SWPPP in accordance with Section A of this General Permit when the industrial activities begin.
3. Facility operators who have filed an NOI, pursuant to State Water Board Order No. 91-013-DWQ (as amended by Order No. 92-12-DWQ) or San Francisco Bay Regional Water Board Order No. 92-11 (as amended by Order No. 92-116), shall continue to implement their existing Monitoring Program and shall implement any necessary revisions to their Monitoring Program in accordance with Section B of the General Permit in a timely manner, but in no case later than August 1, 1997. Facility operators beginning industrial activities after adoption of this General Permit must develop and implement a Monitoring Program in

accordance with Section B of this General Permit when industrial activities begin.

4. Facility operators of feedlots as defined in 40 CFR Part 412 that are in full compliance with Section 2560 to Section 2565, Title 23, California Code of Regulations (Chapter 15) will be in compliance with all effluent limitations and prohibitions contained in this General Permit. Facility operators of feedlots that comply with Chapter 15, however, must perform monitoring in compliance with the requirements of Section B.4.d. and B.14. of this General Permit. Facility operators of feedlots must also comply with any Regional Water Board WDRs or NPDES general permit regulating their storm water discharges.
5. All facility operators must comply with lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding storm water discharges and non-storm water discharges entering storm drain systems or other watercourses under their jurisdiction, including applicable requirements in municipal storm water management programs developed to comply with NPDES permits issued by the Regional Water Boards to local agencies.
6. All facility operators must comply with the standard provisions and reporting requirements for each facility covered by this General Permit contained in Section C, Standard Provisions.
7. Facility operators that operate facilities with co-located industrial activities (facilities that have industrial activities that meet more than one of the descriptions in Attachment 1) that are contiguous to one another are authorized to file a single NOI to comply with the General Permit. Storm water discharges and authorized non-storm water discharges from the co-located industrial activities are authorized if the SWPPP and Monitoring Program addresses each co-located industrial activity.
8. Upon reissuance of a successor NPDES general permit by the State Water Board, the facility operators subject to this reissued General Permit may be required to file an NOI.
9. Facility operators may request to terminate their coverage under this General Permit by filing a Notice of Termination (NOT) with the Regional Water Board. The NOT shall provide all documentation requested by the Regional Water Board. The facility operator will be notified when the NOT has been approved. Should the NOT be denied, facility operators are responsible for continued compliance with the requirements of this General Permit.

10. Facility operators who have filed an NOI, pursuant to State Water Board Order No. 91-013-DWQ (as amended by Order No. 92-12) or San Francisco Bay Regional Water Board Order No. 92-11 (as amended by Order No. 92-116) shall:
 - a. Complete the 1996-97 activities required by those general permits. These include, but are not limited to, conducting any remaining visual observations, sample collection, annual site inspection, annual report submittal, and (for group monitoring leaders) Group Evaluation Reports; and
 - b. Comply with the requirements of this General Permit no later than August 1, 1997.
11. If the Regional Water Board determines that a discharge may be causing or contributing to an exceedance of any applicable water quality standards contained in a Statewide Water Quality Control Plan or the applicable Regional Water Board's Basin Plan, the Regional Water Board may order the facility operator to comply with the requirements described in Receiving Water Limitation C.3. The facility operator shall comply with the requirements within the time schedule established by the Regional Water Board.
12. If the facility operator determines that its storm water discharges or authorized non-storm water discharges are causing or contributing to an exceedance of any applicable water quality standards, the facility operator shall comply with the requirements described in Receiving Water Limitation C.3.
13. State Water Board Order No. 91-013-DWQ (as amended by Order No. 92-12-DWQ) and San Francisco Bay Regional Water Board Order No. 91-011 (as amended by Order No. 92-116) are hereby rescinded.

F. REGIONAL WATER BOARD AUTHORITIES

1. Following adoption of this General Permit, Regional Water Boards shall:
 - a. Implement the provisions of this General Permit, including, but not limited to, reviewing SWPPPs, reviewing annual reports, conducting compliance inspections, and taking enforcement actions.
 - b. Issue other NPDES general permits or individual NPDES storm water permits as they deem appropriate to individual facility operators, facility operators of specific categories of industrial activities, or facility operators in a watershed or geographic area. Upon issuance of such NPDES permits by a Regional Water Board, the affected facility operator shall no longer

be regulated by this General Permit. Any new NPDES permit issued by the Regional Water Board may contain different requirements than the requirements of this General Permit.

2. Regional Water Boards may provide guidance to facility operators on the SWPPP and the Monitoring Program and reporting implementation.
3. Regional Water Boards may require facility operators to conduct additional SWPPP and Monitoring Program and reporting activities necessary to achieve compliance with this General Permit.
4. Regional Water Boards may approve requests from facility operators whose facilities include co-located industrial activities that are not contiguous within the facilities (e.g., some military bases) to comply with this General Permit under a single NOI. Storm water discharges and authorized non-storm water discharges from the co-located industrial activities and from other sources within the facility that may generate significant quantities of pollutants are authorized provided the SWPPP and Monitoring Program addresses each co-located industrial activity and other sources that may generate significant quantities of pollutants.

CERTIFICATION

The undersigned, Administrative Assistant to the State Water Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on April 17, 1997.

AYE: John P. Caffrey
John W. Brown
James M. Stubchaer
Marc Del Piero
Mary Jane Forster

NO: None

ABSENT: None

ABSTAIN: None

Maureen Marché

-10-

Administrative Assistant to the Board

SECTION A: STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

1. Implementation Schedule

A storm water pollution prevention plan (SWPPP) shall be developed and implemented for each facility covered by this General Permit in accordance with the following schedule.

- a. Facility operators beginning industrial activities before October 1, 1992 shall develop and implement the SWPPP no later than October 1, 1992. Facility operators beginning industrial activities after October 1, 1992 shall develop and implement the SWPPP when industrial activities begin.
- b. Existing facility operators that submitted a Notice of Intent (NOI), pursuant to State Water Resources Control Board (State Water Board) Order No. 91-013-DWQ (as amended by Order No. 92-12) or San Francisco Bay Regional Water Quality Control Board (Regional Water Board) Order No. 92-11 (as amended by Order No. 92-116), shall continue to implement their existing SWPPP and shall implement any necessary revisions to their SWPPP in a timely manner, but in no case later than August 1, 1997.

2. Objectives

The SWPPP has two major objectives: (a) to identify and evaluate sources of pollutants associated with industrial activities that may affect the quality of storm water discharges and authorized non-storm water discharges from the facility; and (b) to identify and implement site-specific best management practices (BMPs) to reduce or prevent pollutants associated with industrial activities in storm water discharges and authorized non-storm water discharges. BMPs may include a variety of pollution prevention measures or other low-cost and pollution control measures. They are generally categorized as non-structural BMPs (activity schedules, prohibitions of practices, maintenance procedures, and other low-cost measures) and as structural BMPs (treatment measures, run-off controls, over-head coverage.) To achieve these objectives, facility operators should consider the five phase process for SWPPP development and implementation as shown in Table A.

The SWPPP requirements are designed to be sufficiently flexible to meet the needs of various facilities. SWPPP requirements that are not applicable to a facility should not be included in the SWPPP.

A facility's SWPPP is a written document that shall contain a compliance activity schedule, a description of industrial activities and pollutant sources, descriptions of BMPs, drawings, maps, and relevant copies or references of parts of other plans. The SWPPP shall be revised whenever appropriate and shall be readily available for review by facility employees or Regional Water Board inspectors.

3. Planning and Organization

a. *Pollution Prevention Team*

The SWPPP shall identify a specific individual or individuals and their positions within the facility organization as members of a storm water pollution prevention team responsible for developing the SWPPP, assisting the facility manager in SWPPP implementation and revision, and conducting all monitoring program activities required in Section B of this General Permit. The SWPPP shall clearly identify the General Permit related responsibilities, duties, and activities of each team member. For small facilities, storm water pollution prevention teams may consist of one individual where appropriate.

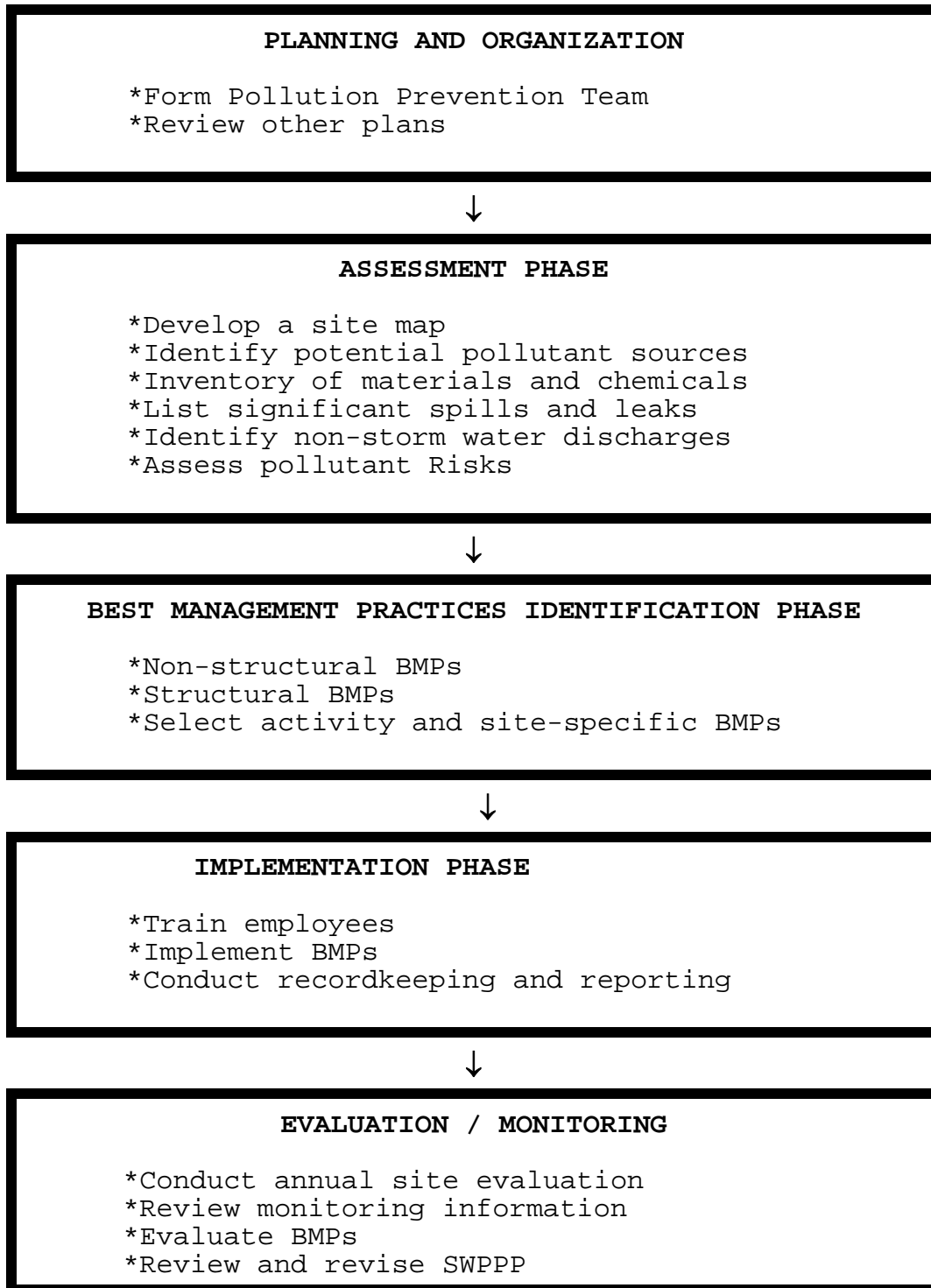
b. *Review Other Requirements and Existing Facility Plans*

The SWPPP may incorporate or reference the appropriate elements of other regulatory requirements. Facility operators should review all local, State, and Federal requirements that impact, complement, or are consistent with the requirements of this General Permit. Facility operators should identify any existing facility plans that contain storm water pollutant control measures or relate to the requirements of this General Permit. As examples, facility operators whose facilities are subject to Federal Spill Prevention Control and Countermeasures' requirements should already have instituted a plan to control spills of certain hazardous materials. Similarly, facility operators whose facilities are subject to air quality related permits and regulations may already have evaluated industrial activities that generate dust or particulates.

4. Site Map

The SWPPP shall include a site map. The site map shall be provided on an 8-½ x 11 inch or larger sheet and include notes, legends, and other data as appropriate to ensure that the site map is clear and understandable. If necessary, facility operators may provide the required information on multiple site maps.

TABLE A
FIVE PHASES FOR DEVELOPING AND IMPLEMENTING INDUSTRIAL
STORM WATER POLLUTION PREVENTION PLANS



The following information shall be included on the site map:

- a. The facility boundaries; the outline of all storm water drainage areas within the facility boundaries; portions of the drainage area impacted by run-on from surrounding areas; and direction of flow of each drainage area, on-site surface water bodies, and areas of soil erosion. The map shall also identify nearby water bodies (such as rivers, lakes, and ponds) and municipal storm drain inlets

where the facility's storm water discharges and authorized non-storm water discharges may be received.

- b. The location of the storm water collection and conveyance system, associated points of discharge, and direction of flow. Include any structural control measures that affect storm water discharges, authorized non-storm water discharges, and run-on. Examples of structural control measures are catch basins, berms, detention ponds, secondary containment, oil/water separators, diversion barriers, etc.
- c. An outline of all impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures.
- d. Locations where materials are directly exposed to precipitation and the locations where significant spills or leaks identified in Section A.6.a.iv. below have occurred.
- e. Areas of industrial activity. This shall include the locations of all storage areas and storage tanks, shipping and receiving areas, fueling areas, vehicle and equipment storage/maintenance areas, material handling and processing areas, waste treatment and disposal areas, dust or particulate generating areas, cleaning and rinsing areas, and other areas of industrial activity which are potential pollutant sources.

5. List of Significant Materials

The SWPPP shall include a list of significant materials handled and stored at the site. For each material on the list, describe the locations where the material is being stored, received, shipped, and handled, as well as the typical quantities and frequency. Materials shall include raw materials, intermediate products, final or finished products, recycled materials, and waste or disposed materials.

6. Description of Potential Pollutant Sources

- a. The SWPPP shall include a narrative description of the facility's industrial activities, as identified in Section A.4.e above, associated potential pollutant sources, and potential pollutants that could be discharged in storm water discharges or authorized non-storm water discharges. At a minimum, the following items related to a facility's industrial activities shall be considered:

i. Industrial Processes

Describe each industrial process, the type, characteristics, and quantity of significant materials used in or resulting from the process, and a description of the manufacturing, cleaning, rinsing, recycling, disposal, or other activities related to the process. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.

ii. Material Handling and Storage Areas

Describe each handling and storage area, type, characteristics, and quantity of significant materials handled or stored, description of the shipping, receiving, and loading procedures, and the spill or leak prevention and response procedures. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.

iii. Dust and Particulate Generating Activities

Describe all industrial activities that generate dust or particulates that may be deposited within the facility's boundaries and identify their discharge locations; the characteristics of dust and particulate pollutants; the approximate quantity of dust and particulate pollutants that may be deposited within the facility boundaries; and a description of the primary areas of the facility where dust and particulate pollutants would settle.

iv. Significant Spills and Leaks

Describe materials that have spilled or leaked in significant quantities in storm water discharges or non-storm water discharges since April 17, 1994. Include toxic chemicals (listed in 40 CFR, Part 302) that have been discharged to storm water as reported on U.S. Environmental Protection Agency (U.S. EPA) Form R, and oil and hazardous substances in excess of reportable quantities (see 40 Code of Federal Regulations [CFR], Parts 110, 117, and 302).

The description shall include the type, characteristics, and approximate quantity of the material spilled or leaked, the cleanup or remedial actions that have occurred or are planned, the approximate remaining quantity of materials that may be exposed to storm water or non-storm water

discharges, and the preventative measures taken to ensure spill or leaks do not reoccur. Such list shall be updated as appropriate during the term of this General Permit.

v. Non-Storm Water Discharges

Facility operators shall investigate the facility to identify all non-storm water discharges and their sources. As part of this investigation, all drains (inlets and outlets) shall be evaluated to identify whether they connect to the storm drain system.

All non-storm water discharges shall be described. This shall include the source, quantity, frequency, and characteristics of the non-storm water discharges and associated drainage area.

Non-storm water discharges that contain significant quantities of pollutants or that do not meet the conditions provided in Special Conditions D. are prohibited by this General Permit (Examples of prohibited non-storm water discharges are contact and non-contact cooling water, boiler blowdown, rinse water, wash water, etc.). Non-storm water discharges that meet the conditions provided in Special Condition D. are authorized by this General Permit. The SWPPP must include BMPs to prevent or reduce contact of non-storm water discharges with significant materials or equipment.

vi. Soil Erosion

Describe the facility locations where soil erosion may occur as a result of industrial activity, storm water discharges associated with industrial activity, or authorized non-storm water discharges.

- b. The SWPPP shall include a summary of all areas of industrial activities, potential pollutant sources, and potential pollutants. This information should be summarized similar to Table B. The last column of Table B, "Control Practices", should be completed in accordance with Section A.8. below.

7. Assessment of Potential Pollutant Sources

- a. The SWPPP shall include a narrative assessment of all industrial activities and potential pollutant sources as described in A.6. above to determine:
 - i. Which areas of the facility are likely sources of

pollutants in storm water discharges and authorized non-storm water discharges, and

- ii. Which pollutants are likely to be present in storm water discharges and authorized non-storm water discharges. Facility operators shall consider and evaluate various factors when performing this assessment such as current storm water BMPs; quantities of significant materials handled, produced, stored, or disposed of; likelihood of exposure to storm water or authorized non-storm water discharges; history of spill or leaks; and run-on from outside sources.
- b. Facility operators shall summarize the areas of the facility that are likely sources of pollutants and the corresponding pollutants that are likely to be present in storm water discharges and authorized non-storm water discharges.

Facility operators are required to develop and implement additional BMPs as appropriate and necessary to prevent or reduce pollutants associated with each pollutant source. The BMPs will be narratively described in Section 8 below.

8. Storm Water Best Management Practices

The SWPPP shall include a narrative description of the storm water BMPs to be implemented at the facility for each potential pollutant and its source identified in the site assessment phase (Sections A.6. and 7. above). The BMPs shall be developed and implemented to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Each pollutant and its source may require one or more BMPs. Some BMPs may be implemented for multiple pollutants and their sources, while other BMPs will be implemented for a very specific pollutant and its source.

TABLE B
EXAMPLE
ASSESSMENT OF POTENTIAL POLLUTION SOURCES AND
CORRESPONDING BEST MANAGEMENT PRACTICES
SUMMARY

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Vehicle & Equipment Fueling	Fueling	Spills and leaks during delivery	fuel oil	<ul style="list-style-type: none"> - Use spill and overflow protection - Minimize run-on of storm water into the fueling area - Cover fueling area - Use dry cleanup methods rather than hosing down area - Implement proper spill prevention control program - Implement adequate preventative maintenance program to preventive tank and line leaks - Inspect fueling areas regularly to detect problems before they occur - Train employees on proper fueling, cleanup, and spill response techniques.
		Spills caused by topping off fuel tanks	fuel oil	
		Hosing or washing down fuel area	fuel oil	
		Leaking storage tanks	fuel oil	
		Rainfall running off fueling area, and rainfall running onto and off fueling area	fuel oil	

The description of the BMPs shall identify the BMPs as (1) existing BMPs, (2) existing BMPs to be revised and implemented, or (3) new BMPs to be implemented. The description shall also include a discussion on the effectiveness of each BMP to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. The SWPPP shall provide a summary of all BMPs implemented for each pollutant source. This information should be summarized similar to Table B.

Facility operators shall consider the following BMPs for implementation at the facility:

a. Non-Structural BMPs

Non-structural BMPs generally consist of processes, prohibitions, procedures, schedule of activities, etc., that prevent pollutants associated with industrial activity from contacting with storm water discharges and authorized non-storm water discharges. They are considered low technology, cost-effective measures. Facility operators should consider all possible non-structural BMPs options before considering additional structural BMPs (see Section A.8.b. below). Below is a list of non-structural BMPs that should be considered:

i. Good Housekeeping

Good housekeeping generally consist of practical procedures to maintain a clean and orderly facility.

ii. Preventive Maintenance

Preventive maintenance includes the regular inspection and maintenance of structural storm water controls (catch basins, oil/water separators, etc.) as well as other facility equipment and systems.

iii. Spill Response

This includes spill clean-up procedures and necessary clean-up equipment based upon the quantities and locations of significant materials that may spill or leak.

iv. Material Handling and Storage

This includes all procedures to minimize the potential for spills and leaks and to minimize exposure of significant materials to storm water and authorized non-storm water discharges.

v. Employee Training

This includes training of personnel who are responsible for (1) implementing activities identified in the SWPPP, (2) conducting inspections, sampling, and visual observations, and (3) managing storm water. Training should address topics such as spill response, good housekeeping, and material handling procedures, and actions necessary to implement all BMPs identified in the SWPPP. The SWPPP shall identify periodic dates for such training. Records shall be maintained of all training sessions held.

vi. Waste Handling/Recycling

This includes the procedures or processes to handle, store, or dispose of waste materials or recyclable materials.

vii. Recordkeeping and Internal Reporting

This includes the procedures to ensure that all records of inspections, spills, maintenance activities, corrective actions, visual observations, etc., are developed, retained, and provided, as necessary, to the appropriate facility personnel.

viii. Erosion Control and Site Stabilization

This includes a description of all sediment and erosion control activities. This may include the planting and maintenance of vegetation, diversion of run-on and runoff, placement of sandbags, silt screens, or other sediment control devices, etc.

ix. Inspections

This includes, in addition to the preventative maintenance inspections identified above, an inspection schedule of all potential pollutant sources. Tracking and follow-up procedures shall be described to ensure adequate corrective actions are taken and SWPPPs are made.

x. Quality Assurance

This includes the procedures to ensure that all elements of the SWPPP and Monitoring Program are adequately conducted.

b. Structural BMPs

Where non-structural BMPs as identified in Section A.8.a. above are not effective, structural BMPs shall be considered. Structural BMPs generally consist of structural devices that reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Below is a list of structural BMPs that should be considered:

i. Overhead Coverage

This includes structures that provide horizontal coverage of materials, chemicals, and pollutant sources from contact with storm water and authorized non-storm water discharges.

ii. Retention Ponds

This includes basins, ponds, surface impoundments, bermed areas, etc. that do not allow storm water to discharge from the facility.

iii. Control Devices

This includes berms or other devices that channel or route run-on and runoff away from pollutant sources.

iv. Secondary Containment Structures

This generally includes containment structures around storage tanks and other areas for the purpose of collecting any leaks or spills.

v. Treatment

This includes inlet controls, infiltration devices, oil/water separators, detention ponds, vegetative swales, etc. that reduce the pollutants in storm water discharges and authorized non-storm water discharges.

9. Annual Comprehensive Site Compliance Evaluation

The facility operator shall conduct one comprehensive site compliance evaluation (evaluation) in each reporting period (July 1-June 30). Evaluations shall be conducted within 8-16 months of each other. The SWPPP shall be revised, as appropriate, and the revisions implemented within 90 days of the evaluation. Evaluations shall include the following:

- a. A review of all visual observation records, inspection records, and sampling and analysis results.
- b. A visual inspection of all potential pollutant sources for evidence of, or the potential for, pollutants entering the drainage system.
- c. A review and evaluation of all BMPs (both structural and non-structural) to determine whether the BMPs are adequate, properly implemented and maintained, or whether additional BMPs are needed. A visual inspection of equipment needed to implement the SWPPP, such as spill response equipment, shall be included.
- d. An evaluation report that includes, (i) identification of personnel performing the evaluation, (ii) the date(s) of the evaluation, (iii) necessary SWPPP revisions, (iv) schedule, as required in Section A.10.e, for implementing SWPPP revisions, (v) any incidents of non-compliance and the corrective actions taken, and (vi) a certification that the facility operator is in compliance with this General Permit. If the above certification cannot be provided, explain in the evaluation report why the facility operator is not in compliance with this General Permit. The evaluation report shall be submitted as part of the annual report, retained for at least five years, and signed and certified in accordance with Standard Provisions 9. and 10. of Section C. of this General Permit.

10. SWPPP General Requirements

- a. The SWPPP shall be retained on site and made available upon request of a representative of the Regional Water Board and/or local storm water management agency (local agency) which receives the storm water discharges.
- b. The Regional Water Board and/or local agency may notify the facility operator when the SWPPP does not meet one or more of the minimum requirements of this Section. As requested by the Regional Water Board and/or local agency, the facility operator shall submit an SWPPP revision and implementation schedule that meets the minimum requirements of this section to the Regional Water Board and/or local agency that requested the SWPPP revisions. Within 14 days after implementing the required SWPPP revisions, the facility operator shall provide written certification to the Regional Water Board and/or local agency that the revisions have been implemented.

- c. The SWPPP shall be revised, as appropriate, and implemented prior to changes in industrial activities which (i) may significantly increase the quantities of pollutants in storm water discharge, (ii) cause a new area of industrial activity at the facility to be exposed to storm water, or (iii) begin an industrial activity which would introduce a new pollutant source at the facility.
- d. Other than as provided in Provisions B.11, B.12, and E.2 of the General Permit, the SWPPP shall be revised and implemented in a timely manner, but in no case more than 90 days after a facility operator determines that the SWPPP is in violation of any requirement(s) of this General Permit.
- e. When any part of the SWPPP is infeasible to implement by the deadlines specified in Provision E.2 or Sections A.1, A.9, A.10.c, and A.10.d of this General Permit due to proposed significant structural changes, the facility operator shall submit a report to the Regional Water Board prior to the applicable deadline that (i) describes the portion of the SWPPP that is infeasible to implement by the deadline, (ii) provides justification for a time extension, (iii) provides a schedule for completing and implementing that portion of the SWPPP, and (iv) describes the BMPs that will be implemented in the interim period to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Such reports are subject to Regional Water Board approval and/or modifications. Facility operators shall provide written notification to the Regional Water Board within 14 days after the SWPPP revisions are implemented.
- f. The SWPPP shall be provided, upon request, to the Regional Water Board. The SWPPP is considered a report that shall be available to the public by the Regional Water Board under Section 308(b) of the Clean Water Act.

SECTION B. MONITORING PROGRAM AND REPORTING REQUIREMENTS

1. Implementation Schedule

Each facility operator shall develop a written monitoring program for each facility covered by this General Permit in accordance with the following schedule:

- a. Facility operators beginning industrial activities before October 1, 1992 shall develop and implement a monitoring program no later than October 1, 1992. Facility operators beginning operations after October 1, 1992 shall develop and implement a monitoring program when the industrial activities begin.
- b. Facility operators that submitted a Notice Of Intent (NOI) pursuant to State Water Resources Control Board (State Water Board) Order No. 91-013-DWQ (as amended by Order No. 92-12) or San Francisco Bay Regional Water Quality Control Board (Regional Water Board) Order No. 92-11 (as amended by Order No. 92-116), shall continue to implement their existing monitoring program and implement any necessary revisions to their monitoring program in a timely manner, but in no case later than August 1, 1997. These facility operators may use the monitoring results conducted in accordance with those expired general permits to satisfy the pollutant/parameter reduction requirements in Section B.5.c., Sampling and Analysis Exemptions and Reduction certifications in Section B.12., and Group Monitoring Sampling credits in B.15.k. For facilities beginning industrial activities after the adoption of this General Permit, the monitoring program shall be developed and implemented when the facility begins the industrial activities.

2. Objectives

The objectives of the monitoring program are to:

- a. Ensure that storm water discharges are in compliance with the Discharge Prohibitions, Effluent Limitations, and Receiving Water Limitations specified in this General Permit.
- b. Ensure practices at the facility to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges are evaluated and revised to meet changing conditions.
- c. Aid in the implementation and revision of the SWPPP required by Section A of this General Permit.
- d. Measure the effectiveness of best management practices (BMPs) to prevent or reduce pollutants in storm water

discharges and authorized non-storm water discharges. Much of the information necessary to develop the monitoring program, such as discharge locations, drainage areas, pollutant sources, etc., should be found in the Storm Water Pollution Prevention Plan (SWPPP). The facility's monitoring program shall be a written, site-specific document that shall be revised whenever appropriate and be readily available for review by employees or Regional Water Board inspectors.

3. Non-storm Water Discharge Visual Observations

- a. Facility operators shall visually observe all drainage areas within their facilities for the presence of unauthorized non-storm water discharges;
- b. Facility operators shall visually observe the facility's authorized non-storm water discharges and their sources;
- c. The visual observations required above shall occur quarterly, during daylight hours, on days with no storm water discharges, and during scheduled facility operating hours¹. Quarterly visual observations shall be conducted in each of the following periods: January-March, April-June, July-September, and October-December. Facility operators shall conduct quarterly visual observations within 6-18 weeks of each other.
- d. Visual observations shall document the presence of any discolorations, stains, odors, floating materials, etc., as well as the source of any discharge. Records shall be maintained of the visual observation dates, locations observed, observations, and response taken to eliminate unauthorized non-storm water discharges and to reduce or prevent pollutants from contacting non-storm water discharges. The SWPPP shall be revised, as necessary, and implemented in accordance with Section A of this General Permit.

4. Storm Water Discharge Visual Observations

- a. With the exception of those facilities described in Section B.4.d. below, facility operators shall visually

¹ "Scheduled facility operating hours" are the time periods when the facility is staffed to conduct any function related to industrial activity, but excluding time periods where only routine maintenance, emergency response, security, and/or janitorial services are performed.

observe storm water discharges from one storm event per month during the wet season (October 1-May 30). These visual observations shall occur during the first hour of discharge and at all discharge locations. Visual observations of stored or contained storm water shall occur at the time of release.

- b. Visual observations are only required of storm water discharges that occur during daylight hours that are preceded by at least three (3) working days² without storm water discharges and that occur during scheduled facility operating hours.
- c. Visual observations shall document the presence of any floating and suspended material, oil and grease, discolorations, turbidity, odor, and source of any pollutants. Records shall be maintained of observation dates, locations observed, observations, and response taken to reduce or prevent pollutants in storm water discharges. The SWPPP shall be revised, as necessary, and implemented in accordance with Section A of this General Permit.
- d. Feedlots (subject to Federal effluent limitations guidelines in 40 Code of Federal Regulations [CFR] Part 412) that are in compliance with Sections 2560 to 2565, Article 6, Chapter 15, Title 23, California Code of Regulations, and facility operators with storm water containment facilities shall conduct monthly inspections of their containment areas to detect leaks and ensure maintenance of adequate freeboard. Records shall be maintained of the inspection dates, observations, and any response taken to eliminate leaks and to maintain adequate freeboard.

5. Sampling and Analysis

- a. Facility operators shall collect storm water samples during the first hour of discharge from (1) the first storm event of the wet season, and (2) at least one other storm event in the wet season. All storm water discharge locations shall be sampled. Sampling of stored or contained storm water shall occur at the time the stored or contained storm water is released. Facility operators that do not collect samples from the first storm event of the wet season are still required to collect samples from two other storm events of the wet season and shall explain in the Annual Report why the first storm event was not sampled.

² Three (3) working days may be separated by non-working days such as weekends and holidays provided that no storm water discharges occur during the three (3) working days and the non-working days.

- b. Sample collection is only required of storm water discharges that occur during scheduled facility operating hours and that are preceded by at least (3) three working days without storm water discharge.
- c. The samples shall be analyzed for:
 - i. Total suspended solids (TSS) pH, specific conductance, and total organic carbon (TOC). Oil and grease (O&G) may be substituted for TOC; and
 - ii. Toxic chemicals and other pollutants that are likely to be present in storm water discharges in significant quantities. If these pollutants are not detected in significant quantities after two consecutive sampling events, the facility operator may eliminate the pollutant from future sample analysis until the pollutant is likely to be present again; and
 - iii. Other analytical parameters as listed in Table D (located at the end of this Section). These parameters are dependent on the facility's standard industrial classification (SIC) code. Facility operators are not required to analyze a parameter listed in Table D when the parameter is not already required to be analyzed pursuant to Section B.5.c.i. and ii. or B.6 of this General Permit, and either of the two following conditions are met: (1) the parameter has not been detected in significant quantities from the last two consecutive sampling events, or (2) the parameter is not likely to be present in storm water discharges and authorized non-storm water discharges in significant quantities based upon the facility operator's evaluation of the facilities industrial activities, potential pollutant sources, and SWPPP. Facility operators that do not analyze for the applicable Table D parameters shall certify in the Annual Report that the above conditions have been satisfied.
 - iv. Other parameters as required by the Regional Water Board.

6. Facilities Subject to Federal Storm Water Effluent Limitation Guidelines

Facility operators with facilities subject to Federal storm water effluent limitation guidelines, in addition to the requirements in Section B.5. above, must complete the following:

- a. Collect and analyze two samples for any pollutant specified in the appropriate category of 40 CFR Subchapter N. The sampling and analysis exemptions and reductions described in Section B.12. of this General Permit do not apply to these pollutants.
- b. Estimate or calculate the volume of storm water discharges from each drainage area;
- c. Estimate or calculate the mass of each regulated pollutant as defined in the appropriate category of 40 CFR Subchapter N; and
- d. Identify the individual(s) performing the estimates or calculations in accordance with Subsections b. and c. above.

7. Sample Storm Water Discharge Locations

- a. Facility operators shall visually observe and collect samples of storm water discharges from all drainage areas that represent the quality and quantity of the facility's storm water discharges from the storm event.
- b. If the facility's storm water discharges are commingled with run-on from surrounding areas, the facility operator should identify other visual observation and sample collection locations that have not been commingled by run-on and that represent the quality and quantity of the facility's storm water discharges from the storm event.
- c. If visual observation and sample collection locations are difficult to observe or sample (e.g., sheet flow, submerged outfalls), facility operators shall identify and collect samples from other locations that represent the quality and quantity of the facility's storm water discharges from the storm event.
- d. Facility operators that determine that the industrial activities and BMPs within two or more drainage areas are substantially identical may either (i) collect samples from a reduced number of substantially identical drainage areas, or (ii) collect samples from each substantially identical drainage area and analyze a combined sample from each substantially identical drainage area. Facility operators must document such a determination in the annual report.

8. Visual Observation and Sample Collection Exceptions

Facility operators are required to be prepared to collect samples and conduct visual observations at the beginning of the wet season (October 1) and throughout the wet season

until the minimum requirements of Sections B.4. and B.5. are completed with the following exceptions:

- a. A facility operator is not required to collect a sample and conduct visual observations in accordance with Section B.4 and Section B.5 due to dangerous weather conditions, such as flooding, electrical storm, etc., when storm water discharges begin after scheduled facility operating hours or when storm water discharges are not preceded by three working days without discharge. Visual observations are only required during daylight hours. Facility operators that do not collect the required samples or visual observations during a wet season due to these exceptions shall include an explanation in the Annual Report why the sampling or visual observations could not be conducted.
- b. A facility operator may conduct visual observations and sample collection more than one hour after discharge begins if the facility operator determines that the objectives of this Section will be better satisfied. The facility operator shall include an explanation in the Annual Report why the visual observations and sample collection should be conducted after the first hour of discharge.

9. Alternative Monitoring Procedures

Facility operators may propose an alternative monitoring program that meets Section B.2 monitoring program objectives for approval by the Regional Water Board. Facility operators shall continue to comply with the monitoring requirements of this Section and may not implement an alternative monitoring plan until the alternative monitoring plan is approved by the Regional Water Board. Alternative monitoring plans are subject to modification by the Regional Water Boards.

10. Monitoring Methods

- a. Facility operators shall explain how the facility's monitoring program will satisfy the monitoring program objectives of Section B.2. This shall include:
 - i. Rationale and description of the visual observation methods, location, and frequency.
 - ii. Rationale and description of the sampling methods, location, and frequency; and

- iii. Identification of the analytical methods and corresponding method detection limits used to detect pollutants in storm water discharges. This shall include justification that the method detection limits are adequate to satisfy the objectives of the monitoring program.
- b. All sampling and sample preservation shall be in accordance with the current edition of "Standard Methods for the Examination of Water and Wastewater" (American Public Health Association). All monitoring instruments and equipment (including a facility operator's own field instruments for measuring pH and Electro Conductivity) shall be calibrated and maintained in accordance with manufacturers' specifications to ensure accurate measurements. All laboratory analyses must be conducted according to test procedures under 40 CFR Part 136, unless other test procedures have been specified in this General Permit or by the Regional Water Board. All metals shall be reported as total metals. With the exception of analysis conducted by facility operators, all laboratory analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. Facility operators may conduct their own sample analyses if the facility operator has sufficient capability (qualified employees, laboratory equipment, etc.) to adequately perform the test procedures.

11. Inactive Mining Operations

Inactive mining operations are defined in Attachment 1 of this General Permit. Where comprehensive site compliance evaluations, non-storm water discharge visual observations, storm water discharge visual observations, and storm water sampling are impracticable, facility operators of inactive mining operations may instead obtain certification once every three years by a Registered Professional Engineer that an SWPPP has been prepared for the facility and is being implemented in accordance with the requirements of this General Permit. By means of these certifications, the Registered Professional Engineer having examined the facility and being familiar with the provisions of this General Permit shall attest that the SWPPP has been prepared in accordance with good engineering practices. Facility operators of mining operations who cannot obtain a certification because of noncompliance must notify the appropriate Regional Water Board and, upon request, the local agency which receives the storm water discharge.

12. Sampling and Analysis Exemptions and Reductions

A facility operator who qualifies for sampling and analysis exemptions, as described below in Section B.12.a.i., or who qualifies for reduced sampling and analysis, as described below in Section B.12.b., must submit the appropriate certifications and required documentation to the Regional Water Boards prior to the wet season (October 1) and recertify as part of the Annual Report submittal. A facility operator that qualifies for either the Regional Water Board or local agency certification programs, as described below in Section B.12.a.ii. and iii., shall submit certification and documentation in accordance with the requirements of those programs. Facility operators who provide certifications in accordance with this Section are still required to comply with all other monitoring program and reporting requirements. Facility operators shall prepare and submit their certifications using forms and instructions provided by the State Water Board, Regional Water Board, or local agency or shall submit their information on a form that contains equivalent information. Facility operators whose facility no longer meets the certification conditions must notify the Regional Water Boards (and local agency) within 30 days and immediately comply with the Section B.5. sampling and analysis requirements. Should a Regional Water Board (or local agency) determine that a certification does not meet the conditions set forth below, facility operators must immediately comply with the Section B.5. sampling and analysis requirements.

a. Sampling and Analysis Exemptions

A facility operator is not required to collect and analyze samples in accordance with Section B.5. if the facility operator meets all of the conditions of one of the following certification programs:

i. No Exposure Certification (NEC)

This exemption is designed primarily for those facilities where all industrial activities are conducted inside buildings and where all materials stored and handled are not exposed to storm water. To qualify for this exemption, facility operators must certify that their facilities meet all of the following conditions:

- (1) All prohibited non-storm water discharges have been eliminated or otherwise permitted.
- (2) All authorized non-storm water discharges have been identified and addressed in the SWPPP.
- (3) All areas of past exposure have been inspected and cleaned, as appropriate.
- (4) All significant materials related to industrial activity (including waste materials) are not exposed to storm water or authorized non-storm water discharges.
- (5) All industrial activities and industrial equipment are not exposed to storm water or authorized non-storm water discharges.
- (6) There is no exposure of storm water to significant materials associated with industrial activity through other direct or indirect pathways such as from industrial activities that generate dust and particulates.
- (7) There is periodic re-evaluation of the facility to ensure conditions (1), (2), (4), (5), and (6) above are continuously met. At a minimum, re-evaluation shall be conducted once a year.

ii. Regional Water Board Certification Programs

The Regional Water Board may grant an exemption to the Section B.5. Sampling and Analysis Requirements if it determines a facility operator has met the conditions set forth in a Regional Water Board certification program. Regional Water Board certification programs may include conditions to (1) exempt facility operators whose facilities infrequently discharge storm water to waters of the United States, and (2) exempt facility operators

that demonstrate compliance with the terms and conditions of this General Permit.

iii. Local Agency Certifications

A local agency may develop a local agency certification program. Such programs must be approved by the Regional Water Board. An approved local agency program may either grant an exemption

from the Section B.5. Sampling and Analysis Requirements or reduce the frequency of sampling if it determines that a facility operator has demonstrated compliance with the terms and conditions of this General Permit.

b. Sampling and Analysis Reduction

i. A facility operator may reduce the number of sampling events required to be sampled for the remaining term of this General Permit if the facility operator provides certification that the following conditions have been met:

- (1) The facility operator has collected and analyzed samples from a minimum of six storm events from all required drainage areas;
- (2) All prohibited non-storm water discharges have been eliminated or otherwise permitted;
- (3) The facility operator demonstrates compliance with the terms and conditions of the General Permit for the previous two years (i.e., completed Annual Reports, performed visual observations, implemented appropriate BMPs, etc.);
- (4) The facility operator demonstrates that the facility's storm water discharges and authorized non-storm water discharges do not contain significant quantities of pollutants; and
- (5) Conditions (2), (3), and (4) above are expected to remain in effect for a minimum of one year after filing the certification.

ii. Unless otherwise instructed by the Regional Water Board, facility operators shall collect and analyze samples from two additional storm events (or one additional storm event when certification filed for the wet season beginning October 1, 2001) during the remaining term of this General Permit in accordance with Table C below. Facility operators shall collect samples of the first

storm event of the wet season. Facility operators that do not collect samples from the first storm event of the wet season shall collect samples from another storm event during the same wet season. Facility operators that do not collect a sample in a required wet season shall collect the sample from another storm event in the next wet season. Facility operators shall explain in the Annual Report why the first storm event of a wet season was not sampled or a sample was not taken from any storm event in accordance with the Table C schedule.

Table C
REDUCED MONITORING SAMPLING SCHEDULE

Facility Operator Filing Sampling Reduction Certification By	Samples Shall be Collected and Analyzed in These Wet Seasons	
	Sample 1	Sample 2
Oct. 1, 1997	Oct. 1, 1997-May 31, 1998	Oct. 1, 1999-May 31, 2000
Oct. 1, 1998	Oct. 1, 1998-May 31, 1999	Oct. 1, 2000-May 31, 2001
Oct. 1, 1999	Oct. 1, 1999-May 31, 2000	Oct. 1, 2001-May 31, 2002
Oct. 1, 2000	Oct. 1, 2000-May 31, 2001	Oct. 1, 2001-May 31, 2002
Oct. 1, 2001	Oct. 1, 2001-May 31, 2002	-

13. Records

Records of all storm water monitoring information and copies of all reports (including the Annual Reports) required by this General Permit shall be retained for a period of at least five years. These records shall include:

- The date, place, and time of site inspections, sampling, visual observations, and/or measurements;
- The individual(s) who performed the site inspections, sampling, visual observations, and or measurements;
- Flow measurements or estimates (if required by Section B.6);
- The date and approximate time of analyses;
- The individual(s) who performed the analyses;
- Analytical results, method detection limits, and the analytical techniques or methods used;
- Quality assurance/quality control records and results;

- h. Non-storm water discharge inspections and visual observations and storm water discharge visual observation records (see Sections B.3. and 4.);
- i. Visual observation and sample collection exception records (see Section B.5.a, 7.d, 8, and 12.b.ii.);
- j. All calibration and maintenance records of on-site instruments used;
- k. All Sampling and Analysis Exemption and Reduction certifications and supporting documentation (see Section B.12);
- l. The records of any corrective actions and follow-up activities that resulted from the visual observations.

14. Annual Report

All facility operators shall submit an Annual Report by July 1 of each year to the Executive Officer of the Regional Water Board responsible for the area in which the facility is located and to the local agency (if requested).

The report shall include a summary of visual observations and sampling results, an evaluation of the visual observation and sampling and analysis results, laboratory reports, the Annual Comprehensive Site Compliance Evaluation Report required in Section A.9., an explanation of why a facility did not implement any activities required by the General Permit (if not already included in the Evaluation Report), and records specified in Section B.13.i. The method detection limit of each analytical parameter shall be included. Analytical results that are less than the method detection limit shall be reported as "less than the method detection limit." The Annual Report shall be signed and certified in accordance with Standard Provisions 9. and 10. of Section C of this General Permit. Facility operators shall prepare and submit their Annual Reports using the annual report forms provided by the State Water Board or Regional Water Board or shall submit their information on a form that contains equivalent information.

15. Group Monitoring

Facility operators may participate in group monitoring as described below. A facility operator that participates in group monitoring shall develop and implement a written site-specific SWPPP and monitoring program in accordance with the General Permit and must satisfy any group monitoring requirements. Group monitoring shall be subject to the following requirements:

- a. A group monitoring plan (GMP) shall be developed and implemented by a group leader representing a group of

similar facility operators regulated by this General Permit or by a local agency which holds an NPDES permit (local agency permittee) for a municipal separate storm sewer system. GMPs with participants that discharge storm water within the boundaries of a single Regional Water Board shall be approved by that Regional Water Board. GMPs with participants that discharge storm water within the boundaries of multiple Regional Water Boards shall be approved by the State Water Board. The State Water Board and/or Regional Water Board(s) may disapprove a facility's participation in a GMP or require a GMP participant to conduct additional monitoring activities.

- b. Each GMP participant shall collect and analyze samples from at least two storm events in accordance with Section B.5. over the five-year period of this General Permit. The two storm event minimum applies to new and existing members. The group leader or local agency permittee shall schedule sampling to meet the following conditions: (i) to evenly distribute the sample collection over the five-year term of this General Permit, and (ii) to collect samples from the two storm events at each participant's facility in different and non-consecutive wet seasons. New participants who join in Years 4 and 5 of this General Permit are not subject to Condition (ii) above. Group leaders shall explain in the annual Group Evaluation Report why any scheduled samples were not collected and reschedule the sampling so that all required samples are collected during the term of this General Permit.
- c. The group leader or local agency permittee must have the appropriate resources to develop and implement the GMP. The group leader or local agency permittee must also have the authority to terminate any participant who is not complying with this General Permit and the GMP.
- d. The group leader or local agency permittee is responsible for:
 - i. Developing, implementing, and revising the GMP;
 - ii. Developing and submitting an annual Group Evaluation Report to the State Water Board and/or Regional Water Board by August 1 of each year that includes:
 - (1) An evaluation and summary of all group monitoring data,
 - (2) An evaluation of the overall performance of the GMP participants in complying with this General Permit and the GMP,

- (3) Recommended baseline and site-specific BMPs that should be considered by each participant based upon Items (1) and (2) above, and
 - (4) A copy of each evaluation report and recommended BMPs as required in Section B.15.d.v. below.
 - iii. Recommending appropriate BMPs to reduce or prevent pollutants associated with industrial activities in storm water discharges and authorized non-storm water discharges;
 - iv. Assisting each participant in completing their Annual Comprehensive Site Compliance Evaluation and Annual Report;
 - v. Conducting a minimum of two on-site inspections of each participant's facility (it is recommended that these inspections be scheduled during the Annual Comprehensive Site Compliance Evaluation) during the term of this General Permit to evaluate the participant's compliance with this General Permit and the GMP, and to recommend any additional BMPs necessary to achieve compliance with this General Permit. Participants that join in Years 4 and 5 shall be scheduled for one evaluation. A copy of the evaluation and recommended BMPs shall be provided to the participants;
 - vi. Submitting a GMP (or revisions, as necessary), to the appropriate Regional Water Board(s) and State Water Board no later than September 1, 1997 (or August 1 in subsequent years). Once approved, a group leader or local agency permittee shall submit a letter of intent by August 1 of each year to continue the approved GMP. The letter of intent must include a roster of participants, participant's Waste Discharge Identification number (WDID#), updated sampling schedules, and any other revisions to the GMP;
 - vii. Revising the GMP as instructed by the Regional Water Board or the State Water Board; and
 - viii. Providing the State Water Board and/or Regional Water Board with quarterly updates of any new or deleted participants and corresponding changes in the sampling and inspection schedule.
- e. The GMP shall:

- i. Identify the participants of the GMP by name, location, and WDID number;
 - ii. Include a narrative description summarizing the industrial activities of participants of the GMP and explain why the participants, as a whole, have sufficiently similar industrial activities and BMPs to be covered by a group monitoring plan;
 - iii. Include a list of typical potential pollutant sources associated with the group participant's facilities and recommended baseline BMPs to prevent or reduce pollutants associated with industrial activity in the storm water discharges and authorized non-storm water discharges;
 - iv. Provide a five-year sampling and inspection schedule in accordance with Subsections b. and d.v. above.
 - v. Identify the pollutants associated with industrial activity that shall be analyzed at each participant's facility in accordance with Section B.5. The selection of these pollutants shall be based upon an assessment of each facility's potential pollutant sources and likelihood that pollutants associated with industrial activity will be present in storm water discharges and authorized non-storm water discharges in significant quantities.
- f. Sampling and analysis shall be conducted in accordance with the applicable requirements of this Section.
- g. Unless otherwise instructed by the Regional Water Board or the State Water Board Executive Director, the GMPs shall be implemented at the beginning of the wet season (October 1).
- h. All participants in an approved GMP that have not been selected to sample in a particular wet season are required to comply with all other monitoring program and reporting requirements of this Section including the submittal of an Annual Report by July 1 of each year to the appropriate Regional Water Board.
- i. GMP participants subject to Federal storm water effluent limitation guidelines must perform the monitoring described in Section B.6. and submit the results of the monitoring to the appropriate Regional Water Board within the facility operator's Annual Report.

- j. GMPs and Group Evaluation Reports should be prepared in accordance with State Water Board (or Regional Water Board) guidance.
- k. GMP participants may receive Sampling and Analysis Reduction sampling credit in accordance with the following conditions:
 - i. Current or prior participants (group participants) of approved GMPs, who have not collected and analyzed samples from six storm events as required in Section B.7.b.i.(1), may substitute credit earned through participation in a GMP for up to four of the six required storm events. Credits for GMP participation shall be calculated as follows:
 - (1) Credit may only be earned in years of participation where the GMP participant was not scheduled to sample and the GMP was approved.
 - (2) One credit will be earned for each year of valid GMP participation.
 - (3) One additional credit may be earned for each year the overall GMP sample collection performance is greater than 75 percent.
 - ii. GMP participants substituting credit as calculated above shall provide proof of GMP participation and certification that all the conditions in Section B.12.b.i. have been met. GMP participants substituting credit in accordance with Section B.15.k.i.(3) shall also provide GMP sample collection performance documentation.
 - iii. GMP participants that qualify for Sampling and Analysis Reduction and have already sampled a storm event after October 1, 1997 shall only be required to sample one additional storm event during the remainder of this General Permit in accordance with the "Sample 2" schedule (or "Sample 1" schedule when certification filed for the wet season beginning October 1, 2001) in Table C of this Section.
- n. Group leaders shall furnish, within 60 days of receiving a request from the State Water Board or Regional Water Board, any GMP information and documentation necessary to verify the Section B.15.k. sampling credits. Group leaders may also provide this information and documentation to the group participants.

16. Watershed Monitoring Option

Regional Water Boards may approve proposals to substitute watershed monitoring for some or all of the requirements of this Section if the Regional Water Board finds that the watershed monitoring will provide substantially similar monitoring information in evaluating facility operator compliance with the requirements of this General Permit.

TABLE D
ADDITIONAL ANALYTICAL PARAMETERS

<u>Subsector</u>	<u>SIC</u>	<u>Activity Represented</u>	<u>Parameters</u>
SECTOR A. TIMBER PRODUCTS			
A1	2421	General Sawmills and Planing Mills	COD;TSS;Zn
A2	2491	Wood Preserving	As;Cu
A3	2411	Log Storage and Handling.....	TSS
A4	2426	Hardwood Dimension and Flooring Mills.....	COD;TSS
A4	2429	Special Product Sawmills, Not Elsewhere Classified.....	COD;TSS
A4	243X	Millwork, Veneer, Plywood, and Structural Wood	COD;TSS
A4	(except 2434--Wood Kitchen Cabinet Manufacturers)		
A4	244X	Wood Containers	COD;TSS
A4	245X	Wood Buildings and Mobile Homes	COD;TSS
A4	2493	Reconstituted Wood Products	COD;TSS
A4	2499	Wood Products, Not Elsewhere Classified	
SECTOR B. PAPER AND ALLIED PRODUCTS MANUFACTURING			
B1	261X	Pulp Mills	
B2	262X	Paper Mills	
B3	263X	Paperboard Mills	COD
B4	265X	Paperboard Containers and Boxes.....	
B5	267X	Converted Paper and Paperboard Products, Except Containers and Boxes	
SECTOR C. CHEMICAL AND ALLIED PRODUCTS MANUFACTURING			
C1	281X	Industrial Inorganic Chemicals.....	Al;Fe;N+N
C2	282X	Plastics Materials and Synthetic Resins, Synthetic Rubber, Cellulosic, and Other Manmade Fibers Except Glass	Zn
C3	283X	Drugs	
C4	284X	Soaps, Detergents, and Cleaning Preparations; Perfumes, Cosmetics, and Other Toilet Preparations	N+N;Zn
C5	285X	Paints, Varnishes, Lacquers, Enamels, and Allied Products	
C6	286X	Industrial Organic Chemicals	
C7	287X	Nitrogenous and Phosphatic Basic Fertilizers, Mixed Fertilizer, Pesticides, and Other Agricultural Chemicals	Fe;N+N;Pb;Zn;P
C8	289X	Miscellaneous Chemical Products.....	
	3952	Inks and Paints, Including China Painting Enamels, India Ink, (limited to list) Drawing Ink, Platinum Paints for Burnt Wood or Leather Work, Paints for China Painting, Artist's Paints, and Artist's Watercolors	
SECTOR D. ASPHALT PAVING/ROOFING MATERIALS MANUFACTURERS AND LUBRICANT MANUFACTURERS			
D1	295X	Asphalt Paving and Roofing Materials	TSS
D2	2992	Lubricating Oils and Greases.....	
<div> <div>Al - Aluminum</div> <div>As - Arsenic</div> <div>NH₃- Ammonia</div> <div>Zn - Zinc</div> </div> <div> <div>Cd - Cadmium</div> <div>CN - Cyanide</div> <div>Hg - Mercury</div> <div>TSS -Total Suspended Solids</div> </div> <div> <div>Cu - Copper</div> <div>Fe - Iron</div> <div>P - Phosphorus</div> <div>COD - Chemical Oxygen Demand</div> </div> <div> <div>Parameter Names</div> <div>Mg - Magnesium</div> <div>Ag - Silver</div> <div>Se - Selenium</div> </div> <div> <div>BOD - Biochemical Oxygen Demand</div> <div>N + N - Nitrate & Nitrite Nitrogen</div> <div>Pb - Lead</div> </div>			
<u>Subsector</u>	<u>SIC</u>	<u>Activity Represented</u>	<u>Parameters</u>

SECTOR E. GLASS, CLAY, CEMENT, CONCRETE, AND GYPSUM PRODUCT MANUFACTURING

E1	3211	Flat Glass	
E1	322X	Glass and Glassware, Pressed or Blown	
E1	323X	Glass Products Made of Purchased Glass	
E2	3241	Hydraulic Cement	
E3	325X	Structural Clay Products	Al
E3	326X	Pottery and Related Products	Al
E3	3297	Non-Clay Refractories	Al
E4	327X	Concrete, Gypsum, and Plaster Products (Except Lime).....	TSS;Fe (except 3274).
E4	3295	Minerals and Earths, Ground, or Otherwise Treated	TSS;Fe

SECTOR F. PRIMARY METALS

F1	331X	Steel Works, Blast Furnaces, Rolling & Finishing Mill.....	Al;Zn
F2	332X	Iron and Steel Foundries.....	Al;TSS;Cu;Fe;Zn
F3	333X	Primary Smelting and Refining of Nonferrous Metals	
F4	334X	Secondary Smelting and Refining of Nonferrous Metals	
F5	335X	Rolling, Drawing, and Extruding of Nonferrous Metals	Cu;Zn
F6	336X	Nonferrous Foundries (Castings).....	Cu;Zn
F7	339X	Miscellaneous Primary Metal Products	

SECTOR G. METAL MINING (ORE MINING AND DRESSING) EXCEPT INACTIVE METAL MINING ACTIVITIES ON FEDERAL LANDS WHERE AN OPERATOR CANNOT BE IDENTIFIED

G1	101X	Iron Ores	
G2	102X	Copper Ores.....	TSS;COD;N+N
G3	103X	Lead and Zinc Ores.....	
G4	104X	Gold and Silver Ores	
G5	106X	Ferroalloy Ores, Except Vanadium	
G6	108X	Metal Mining Services.....	
G7	109X	Miscellaneous Metal Ores	

SECTOR H. COAL MINES AND COAL MINING-RELATED FACILITIES

NA	12XX	Coal Mines and Coal Mining-Related Facilities.....	TSS;Al;Fe
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SECTOR I. COAL MINES AND COAL MINING-RELATED FACILITIES

I1	131X	Crude Petroleum and Natural Gas	
I2	132X	Natural Gas Liquids	
I3	138X	Oil and Gas Field Services	

SECTOR J. MINERAL MINING AND DRESSING EXCEPT INACTIVE MINERAL MINING ACTIVITIES OCCURRING ON FEDERAL LANDS WHERE AN OPERATOR CANNOT BE IDENTIFIED

J1	141X	Dimension Stone	TSS
J1	142X	Crushed and Broken Stone, Including Rip Rap.....	TSS
J1	148X	Nonmetallic Minerals, Except Fuels.....	TSS
J2	144X	Sand and Gravel	TSS;N+N
J3	145X	Clay, Ceramic, and Refractory Materials	
J4	147X	Chemical and Fertilizer Mineral Mining	
J4	149X	Miscellaneous Nonmetallic Minerals, Except Fuels.....	

<u>Subsector</u>	<u>SIC</u>	<u>Activity Represented</u>	<u>Parameters</u>
SECTOR K. HAZARDOUS WASTE TREATMENT STORAGE OR DISPOSAL FACILITIES			
NA	4953	Hazardous Waste Treatment Storage or Disposal	NH ₃ ;Mg;COD;As Cd;CN;Pb Hg;Se;Ag
SECTOR L. LANDFILLS AND LAND APPLICATION SITES			
NA	4953	Landfills and Land Application Sites That Receive or..... Have Received Industrial Wastes, Except Inactive Landfills or Land Applications Sites Occurring on Federal Lands Where an Operator Cannot be Identified	TSS;Fe
SECTOR M. AUTOMOBILE SALVAGE YARDS			
NA	5015	Facilities Engaged in Dismantling or Wrecking Used Motor Vehicles for Parts Recycling or Resale and for Scrap	TSS;Fe;Pb;Al
SECTOR N. SCRAP RECYCLING FACILITIES			
NA	5093	Processing, Reclaiming, and Wholesale Distribution of Scrap and Waste Materials.....	TSS;Fe;Pb Al;Cu;Zn;COD
SECTOR O. STEAM ELECTRIC GENERATING FACILITIES			
NA	4911	Steam Electric Power Generating Facilities	Fe
SECTOR P. LAND TRANSPORTATION FACILITIES THAT HAVE VEHICLE AND EQUIPMENT MAINTENANCE SHOPS AND/OR EQUIPMENT CLEANING OPERATIONS			
P1	40XX	Railroad Transportation.....	
P2	41XX	Local and Highway Passenger Transportation	
P3	42XX	Motor Freight Transportation and Warehousing	
P4	43XX	United States Postal Service	
P5	5171	Petroleum Bulk Stations and Terminals.....	
SECTOR Q. WATER TRANSPORTATION FACILITIES THAT HAVE VEHICLE (VESSEL) & EQUIPMENT MAINTENANCE SHOPS AND/OR EQUIPMENT CLEANING OPERATIONS			
NA	44XX	Water Transportation.....	Al;Fe;Pb;Zn
SECTOR R. SHIP AND BOAT BUILDING OR REPAIRING YARDS			
NA	373X	Ship and Boat Building or Repairing Yards.....	
SECTOR S. AIR TRANSPORTATION FACILITIES			
NA	45XX	Air Transportation Facilities That Have Vehicle..... Maintenance Ships, Material Handling Facilities, Equipment Cleaning Operations, or Airport and/or Aircraft Deicing/Anti-icing Operations	BOD;COD;NH ₃ ;pH

<u>Subsector</u>	<u>SIC</u>	<u>Activity Represented</u>	<u>Parameters</u>
SECTOR T. TREATMENT WORKS			
NA	4952	Treatment Works Treating Domestic Sewage or Any Other Sewage Sludge or Wastewater Treatment Device or System Used in the Storage, treatment, recycling, or Reclamation of Municipal or Domestic Sewage with a Design Flow of 1.0 MGD or More or Required to Have an Approved Pretreatment Program.....	
SECTOR U. FOOD AND KINDRED PRODUCTS			
U1	201X	Meat Products	
U2	202X	Dairy Products.....	
U3	203X	Canned, Frozen and Preserved Fruits, Vegetables and Food Specialties	
U4	204X	Grain Mill Products.....	TSS
U5	205X	Bakery Products	
U6	206X	Sugar and Confectionery Products	
U7	207X	Fats and Oils.....	BOD;COD;TSS;N+N
U8	208X	Beverages	
U9	209X	Miscellaneous Food Preparations and Kindred Products.....	
NA	21XX	Tobacco Products	
SECTOR V. TEXTILE MILLS, APPAREL, AND OTHER FABRIC PRODUCT MANUFACTURING			
V1	22XX	Textile Mill Products.....	
V2	23XX	Apparel and Other Finished Products Made From Fabrics and Similar Materials.....	
SECTOR W. FURNITURE AND FIXTURES			
NA	25XX	Furniture and Fixtures	
NA	2434	Wood Kitchen Cabinets	
SECTOR X. PRINTING AND PUBLISHING			
NA	2732	Book Printing	
NA	2752	Commercial Printing, Lithographic	
NA	2754	Commercial Printing, Gravure	
NA	2759	Commercial Printing, Nor Elsewhere Classified	
NA	2796	Platemaking and Related Services	
SECTOR Y. RUBBER, MISCELLANEOUS PLASTIC PRODUCTS, AND MISC. MANUFACTURING INDUSTRIES			
Y1	301X	Tires and Inner Tubes	Zn
Y1	302X	Rubber and Plastics Footwear.....	Zn
Y1	305X	Gaskets, Packing, and Sealing Devices and Rubber and Plastics Hose and Belting	Zn
Y1	306X	Fabricated Rubber Products, Not Elsewhere Classified.....	Zn
Y2	308X	Miscellaneous Plastics Products	

<u>Subsector</u>	<u>SIC</u>	<u>Activity Represented</u>	<u>Parameters</u>
Y2	393X	Musical Instruments	
Y2	394X	Dolls, Toys, Games, and Sporting and Athletic Goods	
Y2	395X	Pens, Pencils, and Other Artists' Materials	
Y2	396X	Costume Jewelry, Costume Novelties, Buttons, and Miscellaneous Notions, Except Precious Metal.....	
Y2	399X	Miscellaneous Manufacturing Industries	

SECTOR Z. LEATHER TANNING AND FINISHING

NA	311X	Leather Tanning and Finishing	
NA	NA	Facilities that Make Fertilizer Solely From Leather Scraps and Leather Dust.....	

SECTOR AA. FABRICATED METAL PRODUCTS

AA1	3429	Hardware, Not Elsewhere Classified	Zn;N+N;Fe;Al
AA1	3441	Fabricated Structural Metal.....	Zn;N+N;Fe;Al
AA1	3442	Metal Doors, Sash, Frames, Molding, and Trim.....	Zn;N+N;Fe;Al
AA1	3443	Fabricated Plate Work (Boiler Shops)	Zn;N+N;Fe;Al
AA1	3444	Sheet Metal Work	Zn;N+N;Fe;Al
AA1	3451	Screw Machine Products.....	Zn;N+N;Fe;Al
AA1	3452	Bolts, Nuts, Screws, Rivets, and Washers	Zn;N+N;Fe;Al
AA1	3462	Iron and Steel Forgings.....	Zn;N+N;Fe;Al
AA1	3471	Electroplating, Plating, Polishing, Anodizing, and Coloring.....	Zn;N+N;Fe;Al
AA1	3494	Valves and Pipe Fittings, Not Elsewhere Classified.....	Zn;N+N;Fe;Al
AA1	3496	Miscellaneous Fabricated Wire Products.....	Zn;N+N;Fe;Al
AA1	3499	Fabricated Metal Products, Not Elsewhere Classified	Zn;N+N;Fe;Al
AA1	391X	Jewelry, Silverware, and Plated Ware.....	Zn;N+N;Fe;Al
AA2	3479	Coating, Engraving, and Allied Services	Zn;N+N

SECTOR AB. TRANSPORTATION EQUIPMENT, INDUSTRIAL OR COMMERCIAL MACHINERY

NA	35XX	Industrial and Commercial Machinery (except 357X Computer and Office Equipment)	
NA	37XX	Transportation Equipment (except 373X Ship and Boat Building and Repairing.....	

SECTOR AC. ELECTRONIC, ELECTRICAL, PHOTOGRAPHIC, AND OPTICAL GOODS

NA	36XX	Electronic and Other Electrical Equipment and Components, Except Computer Equipment	
NA	38XX	Measuring, Analyzing, and Controlling Instruments; Photographic, Medical, and Optical Goods; Watches and Clocks.....	
NA	357X	Computer and Office Equipment.....	

Section C: STANDARD PROVISIONS

1. Duty to Comply

The facility operator must comply with all of the conditions of this General Permit. Any General Permit noncompliance constitutes a violation of the Clean Water Act (CWA) and the Porter-Cologne Water Quality Control Act and is grounds for (a) enforcement action for (b) General Permit termination, revocation and reissuance, or modification or (c) denial of a General Permit renewal application.

The facility operator shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this General Permit has not yet been modified to incorporate the requirement.

2. General Permit Actions

This General Permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the facility operator for a General Permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any General Permit condition.

If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the CWA for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this General Permit, this General Permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition, and the facility operator so notified.

3. Need to Halt or Reduce Activity not a Defense

It shall not be a defense for a facility operator in an enforcement action that it would have been necessary to halt or reduce the general permitted activity in order to maintain compliance with the conditions of this General Permit.

4. Duty to Mitigate

The facility operator shall take all responsible steps to minimize or prevent any discharge in violation of this General Permit which has a reasonable likelihood of adversely affecting human health or the environment.

5. Proper Operation and Maintenance

The facility operator at all times shall properly operate and maintain any facilities and systems of treatment and control (and related appurtenances) which are installed or used by the facility operator to achieve compliance with the conditions of this General Permit and with the requirements of storm water pollution prevention plans (SWPPPs). Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance may require the operation of backup or auxiliary facilities or similar systems installed by a facility operator when necessary to achieve compliance with the conditions of this General Permit.

6. Property Rights

This General Permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations.

7. Duty to Provide Information

The facility operator shall furnish the Regional Water Quality Control Board (Regional Water Board), State Water Resources Control Board (State Water Board), U.S. Environmental Protection Agency (U.S. EPA), or local storm water management agency, within a reasonable time specified by the agencies, any requested information to determine compliance with this General Permit. The facility operator shall also furnish, upon request, copies of records required to be kept by this General Permit.

8. Inspection and Entry

The facility operator shall allow the Regional Water Board, State Water Board, U.S. EPA, and local storm water management agency, upon the presentation of credentials and other documents as may be required by law, to:

- a. Enter upon the facility operator's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this General Permit;
- b. Have access to and copy at reasonable times any records that must be kept under the conditions of this General Permit;

- c. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment) that are related to or may impact storm water discharge or authorized non-storm water discharge; and
- d. Conduct monitoring activities at reasonable times for the purpose of ensuring General Permit compliance.

9. Signatory Requirements

- a. All Notices of Intent (NOIs) submitted to the State Water Board shall be signed as follows:
 - (1) For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (a) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or (b) the manager of the facility if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
 - (2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
 - (3) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official. The principal executive officer of a Federal agency includes the chief executive officer of the agency or the senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA).
- b. All reports, certifications, or other information required by the General Permit or requested by the Regional Water Board, State Water Board, U.S. EPA, or local storm water management agency shall be signed by a person described above or by a duly authorized representative. A person is a duly authorized representative only if:
 - (1) The authorization is made in writing by a person described above and retained as part of the SWPPP.

- (2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, operator, superintendent, or position of equivalent responsibility or an individual or position having overall responsibility for named position.)
- (3) If an authorization is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization must be attached to the SWPPP prior to submittal of any reports, certifications, or information signed by the authorized representative.

10. Certification

Any person signing documents under Provision 9. above shall make the following certification:

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

11. Reporting Requirements

- a. Planned changes: The facility operator shall give advance notice to the Regional Water Board and local storm water management agency of any planned physical alteration or additions to the general permitted facility. Notice is required under this provision only when the alteration or addition could significantly change the nature or increase the quantity of pollutants discharged.
- b. Anticipated noncompliance: The facility operator will give advance notice to the Regional Water Board and local storm water management agency of any planned changes at the permitted facility which may result in noncompliance with General Permit requirements.

- c. Compliance schedules: Reports of compliance or noncompliance with or any progress reports on interim and final requirements contained in any compliance schedule of this General Permit shall be submitted no later than 14 days following each scheduled date.
- d. Noncompliance reporting: The facility operator shall report any noncompliance at the time monitoring reports are submitted. The written submission shall contain (1) a description of the noncompliance and its cause; (2) the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and (3) steps taken or planned to reduce and prevent recurrence of the noncompliance.

12. Oil and Hazardous Substance Liability

Nothing in this General Permit shall be construed to preclude the institution of any legal action or relieve the facility operator from any responsibilities, liabilities, or penalties to which the facility operator is or may be subject under Section 311 of the CWA.

13. Severability

The provisions of this General Permit are severable; and if any provision of this General Permit or the application of any provision of this General Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this General Permit shall not be affected thereby.

14. Reopener Clause

This General Permit may be modified, revoked, and reissued, or terminated for cause due to promulgation of amended regulations, receipt of U.S. EPA guidance concerning regulated activities, judicial decision, or in accordance with 40 CFR 122.62, 122.63, 122.64, and 124.5. This General Permit may be reopened to modify the provisions regarding authorized non-storm water discharges specified in Section D. Special Conditions.

15. Penalties for Violations of General Permit Conditions.

- a. Section 309 of the CWA provides significant penalties for any person who violates a General Permit condition

implementing Sections 301, 302, 306, 307 308, 318, or 405 of the CWA, or any General Permit condition or limitation implementing any such section in a General Permit issued under Section 402. Any person who violates any General Permit condition of this General Permit is subject to a civil penalty not to exceed \$25,000 per day of such violation, as well as any other appropriate sanction provided by Section 309 of the CWA.

- b. The Porter-Cologne Water Quality Control Act also provides for civil and criminal penalties in some cases greater than those under the CWA.

16. Availability

A copy of this General Permit shall be maintained at the facility and be available at all times to the appropriate facility personnel and to Regional Water Board and local agency inspectors.

17. Transfers

This General Permit is not transferable from one facility operator to another facility operator nor may it be transferred from one location to another location. A new facility operator of an existing facility must submit an NOI in accordance with the requirements of this General Permit to be authorized to discharge under this General Permit.

18. Continuation of Expired General Permit

This General Permit continues in force and effect until a new general permit is issued or the State Water Board rescinds the General Permit. Facility operators authorized to discharge under the expiring general permit are required to file an NOI to be covered by the reissued General Permit.

19. Penalties for Falsification of Reports

Section 309(c)(4) of the CWA provides that any person who knowingly makes any false material statement, representation, or certification in any record or other document submitted or required to be maintained under this General Permit, including reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$10,000 or by imprisonment for not more than two years, or by both.

FACILITIES COVERED BY THIS GENERAL PERMIT

Industrial facilities include Federal, State, municipally owned, and private facilities from the following categories:

1. FACILITIES SUBJECT TO STORM WATER EFFLUENT LIMITATIONS GUIDELINES, NEW SOURCE PERFORMANCE STANDARDS, OR TOXIC POLLUTANT EFFLUENT STANDARDS (40 Code of Federal Regulations (CFR) SUBCHAPTER N). Currently, categories of facilities subject to storm water effluent limitations guidelines are Cement Manufacturing (40 CFR Part 411), Feedlots (40 CFR Part 412), Fertilizer Manufacturing (40 CFR Part 418), Petroleum Refining (40 CFR Part 419), Phosphate Manufacturing (40 CFR Part 422), Steam Electric (40 CFR Part 423), Coal Mining (40 CFR Part 434), Mineral Mining and Processing (40 CFR Part 436), Ore Mining and Dressing (40 CFR Part 440), and Asphalt Emulsion (40 CFR Part 443).
2. MANUFACTURING FACILITIES: Standard Industrial Classifications (SICs) 24 (except 2434), 26 (except 265 and 267), 28 (except 283 and 285) 29, 311, 32 (except 323), 33, 3441, and 373.
3. OIL AND GAS/MINING FACILITIES: SICs 10 through 14 including active or inactive mining operations (except for areas of coal mining operations meeting the definition of a reclamation area under 40 CFR 434.11(l) because of performance bond issued to the facility by the appropriate Surface Mining Control and Reclamation Act (SMCRA) authority has been released, or except for area of non-coal mining operations which have been released from applicable State or Federal reclamation requirements after December 17, 1990); oil and gas exploration, production, processing, or treatment operations; or transmission facilities that discharge storm water contaminated by contact with or that has come into contact with any overburden, raw material, intermediate products, finished products, by-products, or waste products located on the site of such operations. Inactive mining operations are mined sites that are not being actively mined but which have an identifiable facility operator. Inactive mining sites do not include sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined material; or sites where minimal activities are undertaken for the sole purpose of maintaining a mining claim.
4. HAZARDOUS WASTE TREATMENT, STORAGE, OR DISPOSAL FACILITIES: Includes those operating under interim status or a general permit under Subtitle C of the Federal Resource, Conservation, and Recovery Act (RCRA).
5. LANDFILLS, LAND APPLICATION SITES, AND OPEN DUMPS: Sites that receive or have received industrial waste from any of

the facilities covered by this General Permit, sites subject to regulation under Subtitle D of RCRA, and sites that have accepted wastes from construction activities (construction activities include any clearing, grading, or excavation that results in disturbance of five acres or more).

6. RECYCLING FACILITIES: SICs 5015 and 5093. These codes include metal scrapyards, battery reclaimers, salvage yards, motor vehicle dismantlers and wreckers, and recycling facilities that are engaged in assembling, breaking up, sorting, and wholesale distribution of scrap and waste material such as bottles, wastepaper, textile wastes, oil waste, etc.
7. STEAM ELECTRIC POWER GENERATING FACILITIES: Includes any facility that generates steam for electric power through the combustion of coal, oil, wood, etc.
8. TRANSPORTATION FACILITIES: SICs 40, 41, 42 (except 4221-25), 43, 44, 45, and 5171 which have vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. Only those portions of the facility involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication) or other operations identified herein that are associated with industrial activity.
9. SEWAGE OR WASTEWATER TREATMENT WORKS: Facilities used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are located within the confines of the facility with a design flow of one million gallons per day or more or required to have an approved pretreatment program under 40 CFR Part 403. Not included are farm lands, domestic gardens, or lands used for sludge management where sludge is beneficially reused and which are not physically located in the confines of the facility, or areas that are in compliance with Section 405 of the Clean Water Act.
10. MANUFACTURING FACILITIES WHERE INDUSTRIAL MATERIALS, EQUIPMENT, OR ACTIVITIES ARE EXPOSED TO STORM WATER: SICs 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 285, 30, 31 (except 311), 323, 34 (except 3441), 35, 36, 37 (except 373), 38, 39, and 4221-4225.

STORM WATER CONTACTS FOR
THE STATE AND REGIONAL WATER BOARDS

See Storm Water Contacts at:
<http://www.swrcb.ca.gov/stormwtr/contact.html>

NOTICE OF INTENT (NOI) INSTRUCTIONS

**TO COMPLY WITH STATE WATER RESOURCES CONTROL BOARD
WATER QUALITY ORDER NO. 97-03-DWQ
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT NO. CAS000001**

Who Must Submit

The facility operator must submit an NOI for each industrial facility that is required by U.S. Environmental Protection Agency (U.S.EPA) regulations to obtain a storm water permit. The required industrial facilities are listed in Attachment 1 of the General Permit and are also listed in 40 Code of Federal Regulations Section 122.26(b)(14).

The facility operator is typically the owner of the business or operation where the industrial activities requiring a storm water permit occur. The facility operator is responsible for all permit related activities at the facility.

Where operations have discontinued and significant materials remain on site (such as at closed landfills), the landowner may be responsible for filing an NOI and complying with this General Permit. Landowners may also file an NOI for a facility if the landowner, rather than the facility operator, is responsible for compliance with this General Permit.

How and Where to Apply

The completed NOI form, a site map, and appropriate fee must be mailed to the State Water Resources Control Board (State Water Board) at the following address:

State Water Resources Control Board
Division of Water Quality
P.O. Box 1977
Sacramento, CA 95812-1977
Attn: Storm Water Permitting Unit

Please Note: Do not send the original or copies of the NOI submittal to the Regional Water Quality Control Board (Regional Water Board). The original NOI will be forwarded to the Regional Water Board after processing.

Do not send a copy of your Storm Water Pollution Prevention Plan (SWPPP) with your NOI submittal. Your SWPPP is to be kept on site and made available for review upon request.

When to Apply

Facility operators of existing facilities must file an NOI in accordance with these instructions by March 30, 1992. Facility

operators of new facilities (those beginning operations after March 30, 1992) must file an NOI in accordance with these instructions at least 14 days prior to the beginning of operations.

Once the completed NOI, site map, and appropriate fee have been submitted to the State Water Board, your NOI will be processed and you will be issued a receipt letter with a Waste Discharge Identification (WDID) Number. Please refer to this number when you contact either the State or Regional Water Boards.

Fees

The annual fee is \$700. Feedlots pay a one time fee of \$2,000 fee. Checks should be made payable to: SWRCB

Change of Information

If the information provided on the NOI or site map changes, you should report the changes to the State Water Board using an NOI form. Section I of the line-by-line instructions includes information regarding changes to the NOI.

Questions

If you have any questions completing the NOI, please call the appropriate Regional Water Board (Attachment 2) or the State Water Board at (916) 341-5538.

NOI LINE-BY-LINE INSTRUCTIONS

Please type or print your responses on the NOI. Please complete the NOI form in its entirety and sign the certification.

Section I--NOI STATUS

Check box "A" if this is a new NOI registration.

Check box "B" if you are reporting changes to the NOI (e.g., new contact person, phone number, mailing address). Include the facility WDID #. Highlight all the information that has been changed.

Please note that a change of information **does not** apply to a change of facility operator or a change in the location of the facility. These changes require a Notice of Termination (NOT) and submittal of a new NOI and annual fee. Contact the State Water Board or Regional Water Boards for more information on the NOT Form and instructions.

Regardless of whether you are submitting a new or revised NOI, you must complete the NOI in its entirety and the NOI must be signed.

Section II--Facility Operator Information

Part A: The facility operator is the legal entity that is responsible for all permit related compliance activities at the facility. In most cases, the facility operator is the owner of the business or operation where the industrial activity occurs. Give the legal name and the address of the person, firm, public organization, or any other entity that is responsible for complying with the General Permit.

Part B: Check the box that indicates the type of operation.

Section III--Facility Site Information

Part A: Enter the facility's official or legal name and provide the address. Facilities that do not have a street address must provide cross-streets or parcel numbers. Do not include a P.O. Box address in Part A.

Part B: Enter the mailing address of the facility if different than Part A. This address may be a P.O. Box.

The contact person should be the plant or site manager who is familiar with the facility and responsible for overseeing compliance of the General Permit requirements.

Part C: Enter the total size of the facility in either acres or square feet. Also include the percentage of the site that is impervious (areas that water cannot soak into the ground, such as concrete, asphalt, and rooftops).

Part D: Determine the Standard Industrial Classification (SIC) code which best identifies the industrial activity that is taking place at the facility. This information can be obtained by referring to the Standard Industrial Classification Manual prepared by the Federal Office of Management and Budget which is available at public libraries. The code you determine should identify the industrial activity that requires you to submit the NOI. (For example, if the business is high school education and the activity is school bus maintenance, the code you choose would be bus maintenance, not education.) Most facilities have only one code; however, additional spaces are provided for those facilities that have more than one activity.

Part E: Identify the title of the industrial activity that requires you to submit the NOI (e.g., the title of SIC Code 2421 is Sawmills and Planing Mills, General). If you cannot identify the title, provide a description of the regulated activity(s).

Section IV--Address for Correspondence

Correspondence relative to the permit will be mailed occasionally.

Check the box which indicates where you would like such correspondence delivered. If you want correspondence sent to another contact person or address different than indicated in Section II or Section III then include the information on an extra sheet of paper.

Section V--Billing Address Information

To continue coverage under the General Permit, the annual fee must be paid. Use this section to indicate where the annual fee invoices should be mailed. Enter the billing address if different than the address given in Sections II or III.

Section VI--Receiving Water Information

Provide the name of the receiving water where storm water discharge flows from your facility. A description of each option is included below.

1. Directly to waters of the United States: Storm water discharges directly from the facility to a river, creek, lake, ocean, etc. Enter the name of the receiving water (e.g., Boulder Creek).
2. Indirectly to waters of the United States: Storm water discharges over adjacent properties or right-of-ways prior to discharging to waters of the United States. Enter the name of the closest receiving water (e.g., Clear Creek).

Section VII--Implementation of Permit Requirements

Parts A and B: Check the boxes that best describe the status of the Storm Water Pollution Prevention Plan (SWPPP) and the Monitoring Program.

Part C: Check yes or no to questions 1 through 4. If you answer no to any question, you need to assign a person to these tasks immediately.

As a permit holder you are required to have an SWPPP and Monitoring Program in place prior to the beginning of facility operations. Failure to do so is in direct violation of the General Permit. Do not send a copy of your SWPPP with your NOI submittal.

Please refer to Sections A and B of the General Permit for additional information regarding the SWPPP and Monitoring Program.

Section VIII--Regulatory Status

In some instances, the facility may be covered under another permit from the State Water Board. If there is a current NPDES or WDR permit for the facility, list the permit number in the space provided (e.g., NPDES Permit CA0000123, WDR No. 96-960). You will not be required to pay the annual fee for the General Permit if you

are already paying a fee for an NPDES or WDR permit. If the facility is not covered under a State Water Board permit, then skip to Section IX.

Section IX--Site Map

Provide a "to scale" drawing of the facility and its immediate surroundings. Include as much detail about the site as possible. At a minimum, indicate buildings, material handling and storage areas, roads, names of adjacent streets, storm water discharge points, sample collection points, and a north arrow. Whenever possible limit the map to a standard size sheet of paper (8.5" x 11" or 11" x 17"). **Do not send blueprints** unless you are sending one page and it meets the size limits as defined above.

A location map may also be included, especially in cases where the facility is difficult to find, but are not to be submitted as a substitute for the site map. The location map can be created from local street maps and U.S. Geological Survey (USGS) quadrangle maps, etc.

A revised site map must be submitted whenever there is a significant change in the facility layout (e.g., new building, change in storage locations, boundary change, etc.).

Section X--Certification

This section should be read by the facility operator. The certification provides assurances that the NOI and site map were completed by the facility operator in an accurate and complete fashion and with the knowledge that penalties exist for providing false information. It also requires the Responsible Party to certify that the provisions in the General Permit will be complied with.

The NOI must be signed by:

For a Corporation: a responsible corporate officer (or authorized individual).

For a Partnership or Sole Proprietorship: a general partner or the proprietor, respectively.

For a Municipality, State, or other non-Federal Public Agency: either a principal executive officer or ranking elected official.

For a Federal Agency: either the chief or senior executive officer of the agency.

<input type="checkbox"/> Facility Operator Mailing Address (Section II)	<input type="checkbox"/> Facility Mailing Address (Section III, B.)	<input type="checkbox"/> Both
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SEND BILL TO:		<input type="checkbox"/> Facility Operator Mailing Address (Section II)										<input type="checkbox"/> Facility Mailing Address (Section III, B.)										<input type="checkbox"/> Other (<i>enter information below</i>)															
Name:		<input type="text"/>																				Phone:		<input type="text"/>													
Mailing Address:		<input type="text"/>																																			
City:		<input type="text"/>																				State:		<input type="text"/>		Zip Code:		<input type="text"/>									
Contact Person:		<input type="text"/>																																			

Your facility's storm water discharges flow: (check one) ☐ Directly OR ☐ Indirectly to waters of the United States.

Name of receiving water: _____
(river, lake, stream, ocean, etc.)

<p>A. STORM WATER POLLUTION PREVENTION PLAN (SWPPP) (check one)</p> <p><input type="checkbox"/> A SWPPP has been prepared for this facility and is available for review.</p> <p><input type="checkbox"/> A SWPPP will be prepared and ready for review by (enter date): ____/____/____.</p>													
<p>B. MONITORING PROGRAM (check one)</p> <p><input type="checkbox"/> A Monitoring Program has been prepared for this facility and is available for review.</p> <p><input type="checkbox"/> A Monitoring Program will be prepared and ready for review by (enter date): ____/____/____.</p>													
<p>C. PERMIT COMPLIANCE RESPONSIBILITY</p> <p>Has a person been assigned responsibility for:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">1. Inspecting the facility throughout the year to identify any potential pollution problems?</td> <td style="width: 10%; text-align: center;">YES</td> <td style="width: 10%; text-align: center;">NO</td> </tr> <tr> <td>2. Collecting storm water samples and having them analyzed?</td> <td style="text-align: center;">YES</td> <td style="text-align: center;">NO</td> </tr> <tr> <td>3. Preparing and submitting an annual report by July 1 of each year?</td> <td style="text-align: center;">YES</td> <td style="text-align: center;">NO</td> </tr> <tr> <td>4. Eliminating discharges other than storm water (such as equipment or vehicle wash-water) into the storm drain?</td> <td style="text-align: center;">YES</td> <td style="text-align: center;">NO</td> </tr> </table>		1. Inspecting the facility throughout the year to identify any potential pollution problems?	YES	NO	2. Collecting storm water samples and having them analyzed?	YES	NO	3. Preparing and submitting an annual report by July 1 of each year?	YES	NO	4. Eliminating discharges other than storm water (such as equipment or vehicle wash-water) into the storm drain?	YES	NO
1. Inspecting the facility throughout the year to identify any potential pollution problems?	YES	NO											
2. Collecting storm water samples and having them analyzed?	YES	NO											
3. Preparing and submitting an annual report by July 1 of each year?	YES	NO											
4. Eliminating discharges other than storm water (such as equipment or vehicle wash-water) into the storm drain?	YES	NO											

A. WASTE DISCHARGE REQUIREMENT ORDER NUMBER: | | | | | B. NPDES PERMIT CA | | | | |

I HAVE ENCLOSED A SITE MAP	YES[]	A new NOI submitted without a site map will be rejected.
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"I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. In addition, I certify that the provisions of the permit, including the development and implementation of a Storm Water Pollution Prevention Plan and a Monitoring Program Plan, will be complied with."

Printed Name: _____

Signature: _____ Date _____

Title: _____

DEFINITIONS

1. "Best Management Practices" ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment measures, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may include any type of pollution prevention and pollution control measure necessary to achieve compliance with this General Permit.
2. Clean Water Act (CWA) means the Federal Water Pollution Control Act enacted by Public Law 92-500 as amended by Public Laws 95-217, 95-576, 96-483, and 97-117; 33 USC. 1251 et seq.
3. "Facility" is a collection of industrial processes discharging storm water associated with industrial activity within the property boundary or operational unit.
4. "Non-Storm Water Discharge" means any discharge to storm sewer systems that is not composed entirely of storm water.
5. "Significant Materials" includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under Section 101(14) of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); any chemical the facility is required to report pursuant to Section 313 of Title III of Superfund Amendments and Reauthorization Act (SARA); fertilizers; pesticides; and waste products such as ashes, slag, and sludge that have the potential to be released with storm water discharges.
6. "Significant Quantities" is the volume, concentrations, or mass of a pollutant that can cause or threaten to cause pollution, contamination, or nuisance; adversely impact human health or the environment; and/or cause or contribute to a violation of any applicable water quality standards for the receiving water.
7. "Significant Spills" includes, but is not limited to: releases of oil or hazardous substances in excess of reportable quantities under Section 311 of the CWA (see 40 CFR 110.10 and 117.21) or Section 102 of CERCLA (see 40 CFR 302.4).
8. "Storm water" means storm water runoff, snow melt runoff, and storm water surface runoff and drainage. It excludes infiltration and runoff from agricultural land.

9. "Storm Water Associated with Industrial Activity" means the discharge from any conveyance which is used for collecting and conveying storm water and which is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the NPDES program. For the facilities identified in Categories 1 through 9 of Attachment 1 of this General Permit, the term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials; manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process wastewaters (as defined at 40 CFR Part 401); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and finished products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water.

For the facilities identified in Category 10 of Attachment 1 of this General Permit, the term only includes storm water discharges from all areas listed in the previous sentence where material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery are exposed to storm water.

Material handling activities include the: storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, finished product, by-product, or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas. Industrial facilities (including industrial facilities that are federally, State, or municipally owned or operated that meet the description of the facilities listed in this paragraph) include those facilities designated under 40 CFR 122.26(a)(1)(v).

ACRONYM LIST

BAT	Best Available Technology Economically Achievable
BCT	Best Conventional Pollutant Control Technology
BMPs	Best Management Practices
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (Federal Superfund)
CFR	Code of Federal Regulations
CWA	Clean Water Act
General Permit	General Industrial Activities Storm Water Permit
GMP	Group Monitoring Plan
NEC	No Exposure Certification
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
O&G	Oil and Grease
RCRA	Resource, Conservation, and Recovery Act
Regional Water Board	Regional Water Quality Control Board
RQ	Reportable Quantity
SARA	Superfund Amendments and Reauthorization Act of 1986
SIC	Standard Industrial Classification
SMCRA	Surface Mining Control and Reclamation Act
SPCC	Spill Prevention Control and Countermeasures
State Water Board	State Water Resources Control Board
SWPPP	Storm Water Pollution Prevention Plan
TOC	Total Organic Carbon
TSS	Total Suspended Solids
U.S. EPA	U.S. Environmental Protection Agency
WDID	Waste Discharger Identification
WDRs	Waste Discharge Requirements

Appendix I – General Industrial Permit

