C. Clemente

SAN DIEGO REGIONAL
WATER QUALITY
CONTROL BOARD

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In response to:
WDID 9 37S001942

March 19, 2012

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22ND DISTRICT AGRICULTURAL ASSOCIATION
State of California

James G. Smith
Assistant Executive Officer
California Regional Water Quality Control Board
San Diego Region

Subject: Revised Storm Water Management Plan (SWMP) Dated March 2012 Submitted Pursuant to General Permit No. CAS000004, Waste Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) by the 22nd District Agricultural Association (WDID No. 9 37S001942)

Dear Mr. Smith

In response to public comments received on October 18, 2011, please find enclosed our revised Del Mar Fairgrounds and Horse Park Storm Water Management Plan for the Del Mar Fairgrounds located at 2260 Jimmy Durante Boulevard and the Del Mar Horse Park located at 14550 El Camino Real in San Diego County. Please contact me at any time for questions or comments you may have.

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, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sincerely,

Gary Reist

Gary Reist
Chief Plant Operations
Del Mar Fairgrounds
22nd DISTRICT AGRICULTURAL ASSOCIATION
2260 Jimmy Durante Boulevard
Del Mar, California 92014-2216
O: (858) 792-4272
Fax: (858) 794-1032
greist@sdfair.com

March 19, 2012

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In response to:
CWSU: 219452:jcraft

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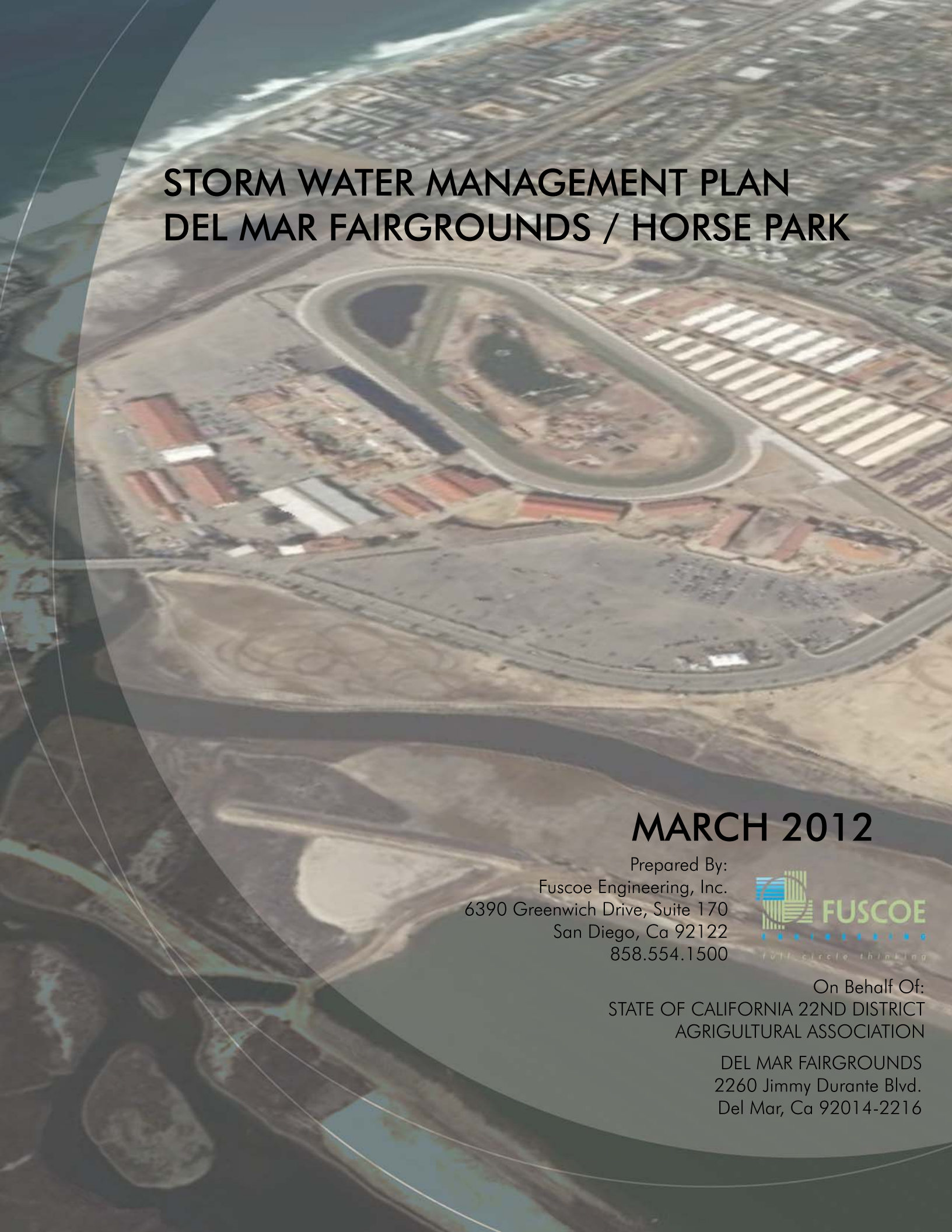

STORM WATER MANAGEMENT PLAN
DEL MAR FAIRGROUNDS / HORSE PARK

MARCH 2012

Prepared By:
Fuscoe Engineering, Inc.
6390 Greenwich Drive, Suite 170
San Diego, Ca 92122
858.554.1500

FUSCOE ENGINEERING
full circle thinking

On Behalf Of:
STATE OF CALIFORNIA 22ND DISTRICT
AGRIGULTURAL ASSOCIATION

DEL MAR FAIRGROUNDS
2260 Jimmy Durante Blvd.
Del Mar, Ca 92014-2216

DEL MAR FAIRGROUNDS
AND HORSE PARK

STORM WATER MANAGEMENT PLAN
March 2012

Prepared For:

SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD
7174 Sky Park Court, Suite 100
San Diego, CA 92123-4340
858.476.2952

CWSU:219452:jcraft

Prepared By:

FUSCOE ENGINEERING, INC.
6390 Greenwich Drive, Suite 170
San Diego, CA 92122
858.554.1500

On Behalf Of:

STATE OF CALIFORNIA 22ND DISTRICT AGRICULTURAL ASSOCIATION
DEL MAR FAIRGROUNDS
2260 Jimmy Durante Blvd.
Del Mar, CA 92014-2216

Date Prepared: March 15, 2012

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1.0 INTRODUCTION

Polluted storm water runoff is a major contributor to the degradation of our nation's waterways, which includes lakes, streams, rivers, and beaches. The means in which polluted runoff is transported to these receiving waters is primarily through municipal separate storm sewer systems (MS4s). Common pollutants include oil and metals from roadways, pesticides from lawns, sediment from construction sites, and carelessly discarded trash. When deposited into nearby waterways, these pollutants can impair beneficial uses, thereby discouraging human use of the resource, contaminating drinking water supplies, and interfering with habitat for fish and wildlife[1]. In response to this concern, the United States Environmental Protection Agency (US EPA) promulgated rules in 1990 establishing the regulatory framework to control storm water runoff pollution.

In 1999, the US EPA published the National Pollution Discharge Elimination System (NPDES) Phase II Final Rule. This rule requires the regulation of storm water discharges from Small Municipal Separate Storm Sewer Systems (MS4s)[2] and Non-Traditional Small MS4s[3], and is administered by the State Water Resources Control Board (SWRCB) and the San Diego Regional Water Quality Control Board (RWQCB). In 2003 the SWRCB Issued Order No. 2003-0005-DWQ, the General Waste Discharge Requirements (WDRs) which serve as the Phase II storm water permit for the State of California. A copy of this Permit is contained in Appendix A.

The Del Mar Fairgrounds, as a facility owned by the State of California, is listed as a non-traditional small MS4, in Attachment 3 of the Phase II WDRs (See Appendix A). In response, the 22nd District Agricultural Association (22nd DAA) has prepared this Storm Water Management Plan (SWMP), which is intended to address program components required of Phase II enrollees, as outlined in the WDRs. This SWMP describes a complete storm water management program with an ultimate purpose of identifying and reducing the total amount of potential pollutants discharged from the Del Mar Fairgrounds facility that may impact receiving waters downstream. This SWMP will be maintained, implemented and enforced by the 22nd District Agricultural Association, which is the State of California agency which operates the facility, as explained in Section 2.

Currently, the 22nd DAA is discharging storm water under the General Industrial Permit 97-03-DWQ. It had been advised by the San Diego Regional Water Quality Board that the nature of this permit is not representative of the site uses as a whole, and that it would be advisable for the 22nd DAA to begin to implement a Phase II storm water program. In addition, the existence of the Del Mar Fairgrounds as a State facility discharging directly to WOUS (Waters of the United States), lends itself to an applicable permitting scheme under 2003-0005-DWQ. This Phase II SWMP is, therefore, the more appropriate storm water management program to apply to the Del Mar Fairgrounds property. Portions of the site, such as Concentrated Animal Feeding Operations (CAFO) areas, however, will still be subject to the

[1] Storm Water Phase II Final Rule Fact Sheet 2.0 (USEPA Office of Water, EPA833-F-00-002, December 2005)

[2] A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man made channels, or storm drains) that are: (i) owned or operated by the United States, a State, city, town boroughs, 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 an approved management under Section 208 of the CWA that discharges to waters of the United states and (ii) not defined as a "large" or "medium" MS4.

[3] This term includes systems similar to separate sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings. (40 CFR § 122.6(b)(16))

requirements of the General Industrial Permit and will require the implementation of an Industrial SWPPP and monitoring program. CAFOs are identified as an industrial category subject to General Industrial Permit 97-03-DWQ. Pursuant to the definitions in 40 Code of Federal Regulations (CFR), the CAFO rule as it pertains to the Del Mar Fairgrounds, is described in further detail in section 1.1. This SWMP will assist in the implementation of a water quality program at the Del Mar Fairgrounds which will strive to protect the beneficial uses of downstream receiving waters.

1.1 SITE DESCRIPTION

The Del Mar Fairgrounds and Del Mar Horse Park are operated and managed by the 22nd District Agricultural Association (22nd DAA). The 22nd DAA is a State of California public agency located within the California Department of Food and Agriculture, Division of Fair and Expositions. The 22nd DAA is the operator and manager of all facilities on behalf of the people of the State of California.

Two distinct properties are included in this SWMP; they are the Del Mar Fairgrounds property and the Del Mar Horse Park property. The Del Mar Fairgrounds is a 356 acre site located approximately 20 miles north of downtown San Diego at 2260 Jimmy Durante Boulevard in the City of Del Mar, California. Portions of the Fairgrounds property are located east of Jimmy Durante Boulevard in the City of San Diego. The site is bordered on the west by Camino Del Mar, on the north by Via de la Valle, on the east by Interstate 5, and on the south by the San Dieguito Lagoon (See Exhibit 1 for Vicinity Map). The Del Mar Horse Park is an approximately 65 acre property located at 14550 El Camino Real, in San Diego, CA about one mile east of the Del Mar Fairgrounds property. The Del Mar Horse Park is bordered by El Camino Real on the east, Villa de la Valle on the north, undeveloped land on the west, and the San Dieguito River on the south.

The Del Mar Fairgrounds property is split into two main sections by Jimmy Durante Boulevard. The section north and west of Jimmy Durante Boulevard contains the majority of the traditional fairgrounds facilities (offices, stables, racetrack, exhibit halls, etc.). The section south and east of Jimmy Durante Boulevard contains a driving range, tennis courts, RV parking, and event overflow parking (See Exhibit 1, Vicinity Map). Jimmy Durante Boulevard is a public road owned by the City of Del Mar, it is not maintained by the 22nd DAA, and is not covered by this Phase II SWMP.

DEL MAR FAIRGROUNDS

The Del Mar Fairgrounds site facilities include structures which support the function of the events held at the facility, including administration and operations/maintenance. Major on-site facilities and their approximate areas are provided in Table 1 on the following page. The Del Mar Fairgrounds facilities are operated and maintained year-round by the 22nd DAA. They are utilized by onsite staff for administration purposes as well as for public and private events. The facilities vary in size and age with several of the larger exhibit hall buildings constructed decades ago. Facilities including the grandstand and larger barns are relatively new, fulfilling the current needs of the property. All the facilities onsite allow for the greater property to achieve a multi-use objective, serving the State in the most effective manner possible.

Table 1 – Del Mar Fairgrounds/Horse Park Facilities and Approximate Areas

NPDES PHASE II - FAIRGROUNDS FACILITIES	
FACILITY	AREA (SF)
Main Grandstand/Administration	530,570
Bing Crosby Hall	40,032
Pat O'Brien Pavilion	79,472
Mission Tower	18,846
Surfside Race Place	56,117
Harvest Hall	60,443
Don Diego Clock Tower	4,141
22nd DAA Maintenance Shops	36,930
Recycling Yard	31,905
Annex Office	5,776
22nd DAA Administration	20,050
Training Track - Infield	299,086
Training Track	134,970
Infield	835,889
Infield Ponds	246,073
Polytrack	1,088,811
Backstretch	2,224,233
Expo Center	42,266
Del Mar Arena	54,998
Live Stock Barn (Barn W)	22,101
Wyland Center	42,063
Activity Center	24,185
Area Surrounding Activity Center, Wyland Center, Barn W and Del Mar Arena	444,484
Main Parking Lot	920,737
East Parking Lot	898,810
South Dirt Lot	668,023
West Parking Lot	506,904
NPDES PHASE II - HORSE PARK FACILITIES	
FACILITY	AREA (SF)
Show Rings	91,245
Covered Show Arena	74,202
East Stables	81,200

Central Stables	38,500
West Stables	21,443
Outdoor Practice Areas	350,158
Eastern Dirt/Parking Areas	505,223

The Del Mar Fairgrounds property also includes areas which are predominately utilized for horse racing, and horse stabling operations. The location known as the "backstretch area", located in the northern portion of the Del Mar Fairgrounds, contains the majority of the stables and lodging for stable hands and grooms, as well as other associated uses. The backstretch area, along with adjacent areas (as depicted in Exhibit 2), are considered CAFO areas, under the regulatory jurisdiction of the San Diego Regional Water Quality Control Board (RWQCB), per the regulations cited below.

Pursuant to the definitions in 40 Code of Federal Regulations (CFR) Part 122.23 (NPDES Permit Regulations) and Effluent Limitation Guidelines and Standards for CAFOs established in 40 CFR Part 412 (Subpart A- Horse and Sheep), and revised on February 12, 2003, portions of Del Mar Fairgrounds, in this case, an area known as the backstretch and other areas which house animals, are subject to the regulatory requirements for CAFOs. Portions of the property are also a confined animal facility pursuant to California Code of Regulations, Title 27, section 20164 because they confine horses that do not graze. Because the Del Mar Fairgrounds houses more than 499 horses for 45 days or more in a 12-month period, the Fairgrounds is considered a Large CAFO facility. In accordance with 40 CFR Section 142.2(h), "CAFO production area" refers to the areas of operations that includes the animal confinement areas, manure storage areas, raw materials storage areas and waste containment areas. The following areas have been identified as "CAFO production areas" at the Del Mar Fairgrounds:

- Animal confinement areas, including all permanent and temporary barns and stables. The term "stable" refers to the stable buildings, structures or barns and all facilities, including horse stalls, located under the roofs of such structures. These areas are the locations where animals are housed during the various animal related events on the property.
- Animal wash racks, including covered and uncovered wash racks.
- Temporary and permanent storage areas for manure, bedding and animal waste.

A Report of Waste Discharge (ROWD) was prepared to accompany the Waste Discharge Requirement application forms to comply with those requirements stated by the RWQCB as well as with 40 CFR 122.23, of which the regulations are based. In addition, A Nutrient Management Plan has been prepared in accordance with CAFO regulations. Under the direction of the San Diego RWQCB, it has been determined that Federal CAFO regulations will be permitted through the State's Phase II Permit and the Nutrient Management Plan will be incorporated as part of the Phase II program for the Del Mar Fairgrounds.

It should be noted that the CAFO designation does not apply to the Del Mar Horse Park, as it is not considered a Large CAFO facility and does not house over 499 horses for 45 days or longer per year. This distinction is important in the delineation of permitted areas subject to the General Industrial Storm Water Permit 97-03-DWQ, as this permit covers only specific areas with certain industrial classifications, such as CAFOs. See Exhibit 3 for delineation of permit coverage areas for the Horse Park.

1.2 STORM WATER REGULATIONS

1.2.1 Federal Regulations

In 1990, the United States Environmental Protection Agency developed Phase I of the NPDES Storm Water Program. Under Phase I, US EPA required NPDES permit coverage for storm water discharges from (1) Medium and Large MS4s located in unincorporated areas with populations of 100,000 or more, and (2) 11 categories of industrial activities, including construction activities disturbing 5 or more acres of land. Rather than setting numeric effluent limitations for these non-point sources[4], the regulations call for the implementation of best management practices (BMPs), via storm water management programs, to mitigate or abate storm water runoff pollution.

NPDES Phase II Final Rule was adopted in December 1999 and requires operations of Small and Non-traditional MS4s located in designated urbanized areas and in areas meeting certain regulatory criteria to develop and implement SWMPs. As with the Phase I program, operators of Small MS4s are required to design their storm water management programs to (1) reduce the discharge of pollutants from the MS4 to the "maximum extent practicable" (MEP)[5], (2) protect water quality, and (3) satisfy the appropriate water quality requirements of the Clean Water Act.

1.2.2 State Regulations

In the State of California, the State Water Resource Control Board (SWRCB) and local Regional Water Quality Control Boards (RWQCBs) have assumed the responsibility of implementing US EPA's NPDES program. Under the authority of the Porter-Cologne Water Quality Control Act (California Water Code Sections 16000 et seq.), the SWRCB issues joint federal NPDES permits and state Waste Discharge Requirements (WDRs) to operators of MS4s, industrial facilities, and construction sites to obtain coverage for the storm water discharges from these operations.

In accordance with the NPDES Phase II Final Rule, the SWRCB adopted Water Quality Order No. 2003-2005-DWQ, NPDES General Permit No. CAS000004, "Waste Discharge Requirement for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems" (Phase II Small MS4 General Permit). The State's Phase II Small MS4 General Permit was adopted on April 30, 2003 and currently designates all traditional Small MS4s to obtain permit coverage. Non-traditional Small MS4s are individually designated by the SWRCB and local RWQCBs. Not all Non-traditional MS4s in California identified by the SWRCB have been designated at this time (See attachment 3 of the Phase II Small MS4 General Permit).

Upon designation, the permittee must typically submit an application package within 180 days of designation to the appropriate RWQCB, which includes: (1) a Notice of Intent (NOI), (2) appropriate fee, and (3) a completed SWMP. Upon approval of the SWMP by

[4] Non-point sources refer to pollution that does not come from a single definable source.

[5] A technology-based standard for water quality established by Congress in CWA section 402(p) (3) (B) (iii). Technology-based standards establish the level of pollutant reductions that dischargers must achieve, utilizing BMPs. The MEP standard applies to all MS4 operators regulated under the NPDES program. The MEP approach is an ever evolving, flexible, and advancing concept, which considers technical and economic feasibility.

the RWQCB, the permittee must implement the SWMP to reduce the discharge of pollutants to the MEP. The permittee must also report annually of the progress of the SWMP implementation to the RWQCB.

A meeting was held on October 2, 2007 between the San Diego Regional Water Quality Control Board and the 22nd DAA. Representatives of the 22nd DAA stated interest in enrolling the Del Mar Fairgrounds and Horse Park under the General Permit for Small Municipal Separate Storm Water Systems (Phase II Permit). The San Diego Region of the California Regional Water Quality Control Board issued a letter on October 15, 2007 to provide further direction on actions that should be taken in order to enroll. This letter is located in Appendix B.

1.3 PROGRAM ADMINISTRATION

1.3.1 IMPLEMENTATION/COORDINATION

The 22nd District Agricultural Association, specifically persons within the Operations and Administration Departments, will be primarily responsible for implementation and coordination of this SWMP. More specifically, persons within the Operations and Administration Departments will implement and execute the MCMs and BMPs prescribed within this SWMP, when applicable. The person/persons responsibilities will include, but are not limited to:

- Providing administrative and technical support to departments and staff involved in SWMP MCMs and BMPs;
- Developing internal policies and procedures to guarantee enforceability of the SWMP;
- Developing reports and other materials required by the Phase II Small MS4 General Permit;
- Performing fiscal analyses for activities associated with development and implementation of the SWMP;
- Developing and evaluating BMPs implemented on the Del Mar Fairgrounds;
- Developing, coordinating, and implementing a Nutrient Management Plan for CAFO areas;
- Coordinating with other public agencies and participating in regional monitoring programs; and
- Ensuring consistency between departments in execution of MCMs and BMPs.

The matrix below specifies the responsible party for each program element of this SWMP.

MCM / PROGRAM ELEMENT	DEPARTMENT	CONTACT
MCM #1: Public Education & Outreach	22nd DAA Administration	Dustin Fuller Senior Environmental Planner dfuller@sdfair.com
MCM #2: Public Involvement / Participation Program	22nd DAA Administration	Dustin Fuller Senior Environmental Planner dfuller@sdfair.com
MCM #3: Illicit Discharge Detection & Elimination	22nd DAA Operations	Gary Reist Chief of Operations greist@sdfair.com
MCM #4: Construction Site Storm Water Runoff Control	22nd DAA Operations	Gary Reist Chief of Operations greist@sdfair.com
MCM #5: Post Construction Storm Water Management	22nd DAA Operations	Gary Reist Chief of Operations greist@sdfair.com
MCM #6: Pollution Prevention / Good Housekeeping for Onsite Operations	22nd DAA Operations	Gary Reist Chief of Operations greist@sdfair.com
Monitoring Program	22nd DAA Administration / Operations	Dustin Fuller Senior Environmental Planner dfuller@sdfair.com Gary Reist Chief of Operations greist@sdfair.com
Nutrient Management Plan	22nd DAA Operations	Dustin Fuller Senior Environmental Planner dfuller@sdfair.com
Annual Report / Program Effectiveness Assessment	22nd DAA Administration / Operations	Dustin Fuller Senior Environmental Planner dfuller@sdfair.com Gary Reist Chief of Operations greist@sdfair.com

Per Order No. 2003-0005-DWQ, the 22nd District Agricultural Association may rely on a Separate Implementing Entity[6] to satisfy one or more of the permit obligations under specific conditions; however the 22nd DAA declines to pursue this option.

[6] Separate Implementing Entity (SIE) is an entity, such as a municipality, agency or specialist district, other than the entity in question, that implements parts or all of a storm water program for a Permittee. The SIE may also be permitted under 40 CFR Part 122. Arrangements of one entity implementing a program for another entity is subjectto approval by the Regional Water Quality Control Board Officer. (Attachment 9 to WQO 2003-0003-DWQ)

This SWMP identifies existing BMPs the 22nd DAA is using to reduce pollutant levels in storm water and dry weather discharges. Any recommended BMPs included in this document will be implemented within 1-5 years as specified individually in Section 4 of this report.

LEASEE COORDINATION

Apart from the operations run by the 22nd DAA, two other operating parties lease land from the 22nd DAA; the Del Mar Thoroughbred Club and the Surf and Turf Recreation Center. These leasees conduct operations both independently and in conjunction with the 22nd DAA, and work to ensure proper storm water pollution prevention protocols are followed regarding their specific operations.

The Del Mar Thoroughbred Club

The land leased by the Del Mar Thoroughbred Club produces storm water runoff. The DMTC has implemented procedures in conjunction with the 22nd DAA, ensuring runoff from the property contains a minimum amount of pollutants and sediments. The DMTC Operations Department is responsible for implementing and overseeing storm water runoff pollution prevention measures. Under the proposed scheme, storm water discharge stemming from the Backstretch Area will be covered under this Phase II SWMP, through the implementation of a Nutrient Management Plan for designated CAFO areas. Furthermore, as a CAFO production area, this portion of the Del Mar Fairgrounds property is subject to the General Industrial Storm Water Permit 97-03-DWQ. The 22nd DAA will be responsible for implementing the Industrial SWPPP, which is not a part of this Phase II SWMP.

The Surf and Turf Recreation Center

The Surf and Turf Recreation Center is located and operated on the far eastern side of the site, east of Jimmy Durante Boulevard. The Surf and Turf Recreation Center follows guidelines enforced by the 22nd DAA, and protocols set forth by the current Industrial Storm Water Pollution Prevention Plan as mentioned in section 1.0. This area is to be included in under this Phase II SWMP, as shown in Exhibit 2, and excluded from General Industrial Storm Water Permit coverage.

1.3.2 BUDGETARY CONSIDERATIONS

The source of funding for the implementation of the SWMP will be from the operations and maintenance budget allocated for the Del Mar Fairgrounds by the 22nd DAA. This budget is funded by admission, parking, facility rental, and other associated streams of income for the facility.

This SWMP includes Minimum Control Measures (MCMs) with measurable goals that can be used to guide the Del Mar Fairgrounds in their results-based decision-making process during budget deliberations for the current fiscal and following years.

1.3.3 OTHER REGULATORY FEATURES CURRENTLY OR PREVIOUSLY EMPLOYED ON-SITE

I. State Industrial Storm Water Permit

Until the approval of this Phase II SWMP, storm water discharge stemming from the Del Mar Fairgrounds is permitted through the General Industrial Permit. The current Waste Discharge ID Number is 937I001942. An Industrial Storm Water Pollution Prevention Plan is currently used onsite. The Industrial SWPPP has two principal objectives: 1) to identify and evaluate sources of pollutants associated with industrial activities that may impact the quality of storm water discharges and authorized non-storm water discharges from the Fairgrounds; and 2) to identify and implement site specific BMPs to reduce or prevent pollutants associated with industrial activities in runoff discharges.

The Industrial SWPPP details BMPs which are to be used to reduce the amount of pollutants leaving the site via storm water runoff. These BMPs are currently in place onsite, and will be predominately carried over into the new Phase II MS4 storm water program. The permitting scheme under Industrial Permit 97-03-DWQ will be replaced by the permitting scheme under the Phase II Permit 2003-0005-DWQ. A notice of termination will be filed following the approval of the Phase II SWMP, and subsequent re-filing for Industrial Permit coverage for designated CAFO areas. According to the Industrial Permit, CAFO areas are considered facilities subject to stormwater effluent limit guidelines, new source performance standards, or toxic pollutant effluent standards (C.F.R. 40 C.F.R. Subchapter N) and, hence, require General Industrial Storm Water Permit coverage. Since it is a separate NPDES permit, the Fairground's compliance with the General Industrial Storm Water Permit is not covered in this SWMP.

II. CAFO

As mentioned above, the entire Del Mar Fairgrounds property is subject to Phase II MS4 Permit compliance. As a result, a significant portion of the Del Mar Fairgrounds will no longer be subject to the General Industrial Storm Water Permit (See Exhibit 2 for delineation of permit coverage areas). The areas that will remain under Industrial Permit coverage, however, consists of the backstretch areas and other adjacent areas containing features which have been designated CAFO production areas under the Confined Animal Feeding Operation regulations as outlined in section 1.2.2. In addition to storm water monitoring requirements for the General Industrial Storm Water Permit, a Nutrient Management Plan has been prepared for these areas containing and/or confining over 499 horses for 45 days or more, and will be a part of the Phase II MS4 storm water program. In summary, CAFO areas will be subject to the SWMP, NMP, and General Industrial Storm Water Permit requirements.

III. State General Discharge Requirements for Sanitary Sewer Systems - SSMP

General Waste Discharge Requirements (WDR) order No. 2006-0003-DWQ obligates all public entities in California managing over 1 mile of sanitary sewer to enroll under the jurisdiction of the State Water Resources Control Board, and

submit and implement a Sewer System Management Plan (SSMP). The primary goal of this SSMP is to provide a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer system and identify individual goals related SSMP implementation. In addition to this required goal, the 22nd DAA identified goals related to SSMP implementation which are unique to the facility.

This SWRCB permit requirement overlaps with the Phase II SWMP Permit's minimum control measures regarding Illicit Discharge Detection and Elimination, and Public Education concerning Storm Drain/Sanitary Sewer Systems.

IV. Sewer MOU

A Memorandum of Understanding (MOU) has been developed between the City of Del Mar and the 22nd DAA. Sanitary sewer from the portion of the Fairgrounds located west and north of Jimmy Durante Boulevard discharges to the sanitary sewer system operated by the City of Del Mar Public Works. Due to the capacity of the City's sewer infrastructure, the City has identified maximum peak hourly, daily and bi-monthly average daily limits to protect the existing functionality of the system. Due to these limits, and in order to begin to plan to accommodate future Del Mar Fairgrounds Master Plan Projects, the 22nd DAA has proposed changes to their operations that will lower the quantity of wastewater discharged into the City sewer system. This will be achieved mainly by eliminating opportunities for storm water to enter the sewer. The 22nd DAA is committed to working with the City of Del Mar in order to assist in the protection of city infrastructure and will conduct activities (as applicable) to ensure capacity is not compromised. The 22nd DAA will continue to work with the City of Del Mar to find solutions on a procedural and facility-specific basis.

V. Master Plan EIR

The 22nd DAA is in the process of preparing an Environmental Impact Report (EIR) for short and long-term Master Plan Projects on site. A Water Quality Technical Report (WQTR) has been produced as a technical appendix to the EIR. The WQTR discusses existing source and treatment control BMPs, as well as both construction period and post-construction period BMPs for the future Master Plan Projects. Additionally, the report specifies general standards which will be adhered to regarding the final design development of BMPs on short term Master Plan projects. MCMs for construction period and post-construction period BMPs are also discussed in this SWMP; as are source control BMPs for daily operation.

1.3.4 MEASURABLE GOALS

This SWMP identifies the measurable goals for each of the policies and BMPs that will be utilized for each MCM. These measurable goals include, when appropriate, the correlating months and years for scheduled actions (such as inspection, maintenance, effectiveness reviews, etc.) including interim milestones and the frequency of each action.

The measurable goals are discussed within the narrative for each MCM in Section 4 of this SWMP.

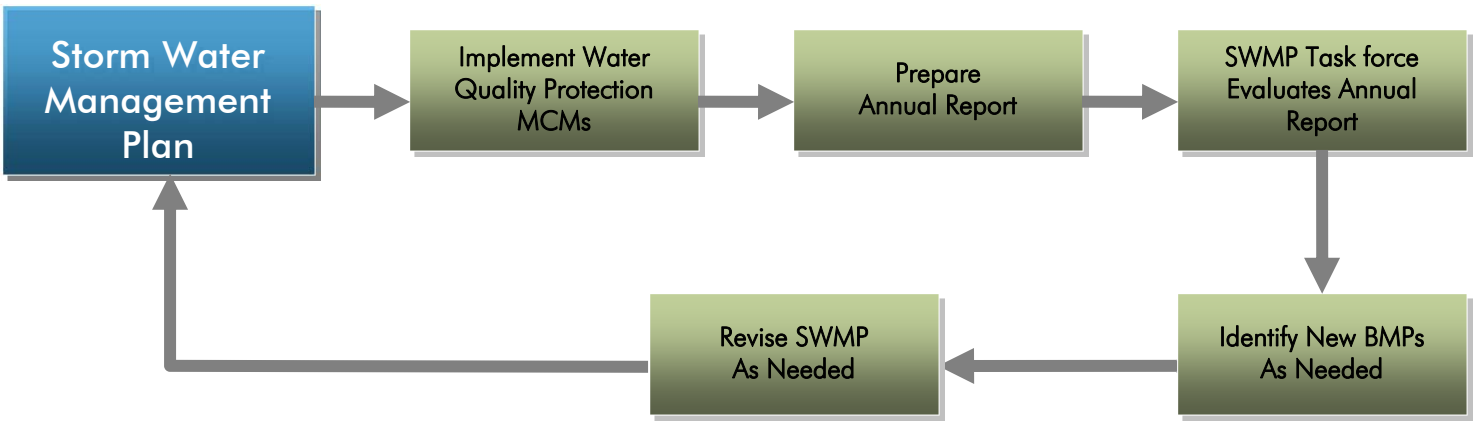
1.3.5 ITERATIVE PROCESS

This SWMP is intended to be a dynamic program where BMPs are periodically evaluated for their effectiveness in achieving water quality standards. Therefore, this SWMP involves the use of a strategic framework of water quality planning and BMP investigation. It is a systematic and iterative process of:

1) Assessing whether BMPs are correctly applied and are achieving water quality standards;
2) Implementing additional BMPs and revising current BMPs based upon site specific water quality problems, technical, institutional and economic feasibility, and the protection of beneficial uses of the receiving waters;
3) Evaluating other environmental programs implemented at the Fairgrounds and Horse Park to ensure consistency with the SWMP; and
4) Adjusting MCMs and/or BMPs if water quality standards are not being achieved.

The following diagram, Figure 1, outlines this process framework.

Figure 1
STORM WATER MANAGEMENT PLAN FRAMEWORK



1.3.6 SWMP REPORT ORGANIZATION

This report has been developed to serve as guidance document for the Del Mar Fairgrounds and Horse Park Phase II MS4 storm water program implementation. This SWMP describes the framework and work protocol for each MCM (including compliance schedule for each BMP and measurable goals), provides relevant information on the Del Mar Fairgrounds activities, and addresses SWMP program administration. It is not intended to be a static document at this stage in the Del Mar Fairgrounds' storm water program development. As the SWMP evolves through the iterative process and as specific program components are developed and implemented, this report will be revised, expanded, and/or updated.

1.3.7 RECORD KEEPING AND REPORTING

The 22nd DAA will be the primary source of management and record keeping for the SWMP. The 22nd DAA operations department will assign record keeping tasks. Guidelines for these tasks will be established; for example the location and frequency of each task being performed.

By design, the SWMP is intended to create an iterative process through the implementation of Minimum Control Measures, measurable goals, and program effectiveness assessments. The annual reporting process provides program results and gives program facilitators the information needed to determine if program revisions are necessary as part of the program effectiveness assessment. These features ensure that the SWMP is a living document and addresses accomplishments and deficiencies as they occur over time.

Section D of the Small MS4 General Permit outlines the revision process that may occur as a result of the annual reporting process. Section D states the following:

"The SWMP shall serve as the framework for identification, assignment, and implementation of control measures/BMPs. The Permittee shall implement the SWMP and shall subsequently demonstrate its effectiveness and provide for necessary and appropriate revisions, modifications, and improvements to reduce pollutants in storm water discharges to the MEP."

"The SWMP shall be revised to incorporate any new or modified BMPs or measurable goals developed through the Permittees annual reporting process. The Permittee shall incorporate changes required by or acceptable to the RWQCB Executive Officer into applicable annual revisions to the SWMP and adhere to its implementation."

The Permittee is required to submit an annual report to the San Diego RWQCB by September 15th of each year. The Annual Report will include the information requested in the Annual Report form (See Appendix C) and the Annual Report Guidance Document (See Appendix D). The report will summarize activities performed throughout the reporting year (July 1 – June 30) and must include:

- Permittee information;

- Updates to the Storm Drain Outfall Map;
- Updates to the SWMP;
- An Executive Summary;
- For each BMP of each of the six Minimum Control Measure categories, the Permittee must provide: a description of the BMP, its implementation status, a general summary, status of the measurable goal, appropriateness of the BMP, effectiveness and proposed modifications;
- Results of information collected and analyzed, if any, including monitoring data;
- A summary of proposed activities planned for the next reporting cycle, including an implementation schedule and
- A justification for activities selected if they differ from those originally proposed.

The Annual Report or Program Effectiveness Assessment will aid the San Diego RWQCB and the Del Mar Fairgrounds in determining if the SWMP is effective or in need of modifications. The 22nd DAA Maintenance Operations Department will be the primary party responsible for creating annual reports for this SWMP. All measurable goals outlined in the SWMP, including objectives and performance metrics will be documented and formatted for the annual report.

1.4 PHASE II PERMIT COVERAGE TERMINATION

In order to terminate coverage from the Phase II Permit, the permittee must submit a written request to the RWQCB. A Permittee may only terminate coverage if one of the following circumstances arises:

1. If a new operator has assumed responsibility for the MS4;
2. The permittee has ceased operation of the MS4; or
3. The permittee has eliminated discharges from the MS4.

2.0 SITE OPERATIONS

DEL MAR FAIRGROUNDS

The 22nd DAA produces five events each year: The San Diego County Fair, the Del Mar National Horse Show, Professional Bull Riding (PBR), The Scream Zone and Holiday of Lights. Del Mar Fairgrounds hosts approximately 350 events each year which are produced by others, including the Del Mar Thoroughbred Horse Racing season, music concerts, festivities and displays, trade shows, animal and garden shows, and other events. The two main events hosted annually at the facility are the San Diego County Fair and the Thoroughbred Horse Racing season. The Del Mar Thoroughbred Club is discussed more fully in section 1.2.1 and the San Diego County Fair is discussed more fully in section 1.2.2.

The Phase II Permit, in regards to the Del Mar Fairgrounds, covers the entire Fairgrounds property. These areas include the East and South Parking Lots located east and south of Jimmy Durante Boulevard, respectively, the Main Parking Lot, the Surfside Race Place, O'Brien Hall, Bing Crosby Hall, Exhibit Hall, Grandstands, the Main Track, Backstretch Area, the interior and area surrounding the Training Track, areas west of Jimmy Durante Boulevard including Tennis Courts, Mini Golf Course, Driving Range, West Parking Lot, RV Lot and the off-site Horse Park. These areas encompass approximately 356 acres of property and are described more fully in Tables 2 & 3. Additionally, approximately 97 acres of the 356-acre property are also designated as CAFO production areas, and are thereby subject to the General Industrial Storm Water Permit. See Table 3 for a narrative description of these areas.

DEL MAR HORSE PARK

The Del Mar Horse Park is an equestrian facility that provides full service accommodations for equestrian events including RV hook-ups, parking and boarding for horses. The site consists of two grass jumping stadiums which combined seat up to 1,320 people, a covered, lighted arena, four show rings, four hundred permanent show stalls for horses, four training rings and a dressage ring (Refer to Exhibit 3, Del Mar Horse Park). The Del Mar Horse Park will be included in the storm water program permitted under Phase II. The facility is not deemed applicable for inclusion under CAFO regulations due to the fact the site does not house over 499 horses for a period of 45 days or longer per year.

Del Mar Fairgrounds areas and facilities covered by Phase II permit are listed and described in Table 2. Del Mar Fairgrounds areas and facilities covered by CAFO permit are listed and described in Table 3.

Table 2 – Site Descriptions of Phase II MS4 Permit Only Areas

DEL MAR FAIRGROUNDS AREAS COVERED BY PHASE II MS4 PERMIT ONLY	
PARKING LOTS	
East Parking Lot	The East Parking Lot is a dirt lot located east of Jimmy Durante Boulevard and is used primarily for RV and overflow Parking. It is also used for inert material storage and Christmas tree and pumpkin sales. The Lot is not paved and has two entry/exit points. One entry/exit point is located on the west side of the lot via access from the Main Parking Lot. The second entry/exit on the southwest corner via the South Parking Lot.
South Parking Lot	The South Parking Lot is a dirt lot located south of Jimmy Durante Boulevard. It is used for overflow during peak Fair and Racing Seasons. This Lot has two entry/exit points. One entry/exit point is located on the north side of the lot via Jimmy Durante Boulevard. The second entry/exit on the northeast corner of the lot via the East Parking Lot.
Main Parking Lot	The Main Parking Lot is paved and has one main entrance located on Jimmy Durante Boulevard. Other entry/exits are located north and south of the main entrance.
West Parking Lot	The West Parking Lot is paved and is located on the west side of the Del Mar Fairgrounds, south of the Main Track and West of the Grandstands. San Diego County Fair event staging is conducted here.
EXHIBIT HALLS / GRAND STANDS / ADMINISTRATIVE	
Surfside Race Place	The Surfside Race Place is a satellite wagering facility. Including full-card thoroughbred racing from major racetracks around the country, and races from around the world.
O'Brien Hall	O'Brien Hall is a hall with a capacity of 6,800 people that is used for both private and public events.
Bing Crosby Hall	Bing Crosby Hall is a hall with a capacity of 3,500 people. It is used for both private and public events.
Exhibit Hall	The Exhibit Hall is a hall with a capacity of 5,500 people. It is used for both private and public events.
Grandstands	Seating, wagering, dining, and administration in context of the Thoroughbred Racing Season are held at this facility.
HORSE TRACKS	
Main Track (Infield)	The track infield is used for event staging during the San Diego County Fair as well as seating during racing events.
Training Track (Infield)	This area is primarily vacant and is occasionally used for staging, storage, and parking. Generally, animals are not permitted within the training track infield.

Table 2 – Site Descriptions of Phase II MS4 Permit Only Areas (Continued)

DEL MAR FAIRGROUND AREAS COVERED BY PHASE II MS4 PERMIT ONLY (CONTINUED)	
MULTI-USE FACILITIES	
Surf and Turf	This area is located east of Jimmy Durante Boulevard. It hosts a number of activities including Mini Golf, a Driving Range and an RV Park.
Horse Park	This area consists of horse facilities including horse barns, horse boarding, exercise areas, restrooms, grass show arena, covered arena and parking.
MAINTENANCE / STORAGE AREAS	
Maintenance Shops	The on-site maintenance shops are located at the south corner of the Del Mar Fairgrounds, just south of Bing Crosby Hall. These facilities provide upkeep for machinery, tools, and associated equipment which are used onsite. The Del Mar Fairgrounds is meant to be as self sufficient as possible, therefore machine shops are required onsite.
Recycling Center	The Del Mar Fairgrounds supports a recycling goal of "100% or close". The material is stored in the southern portion of the site, southeast of Bing Crosby Hall.

Table 3 – Site Descriptions of Phase II MS4 Areas Also Designated CAFO

DEL MAR FAIRGROUND PHASE II MS4 AREAS DESIGNATED CAFO	
WASH RACK FACILITIES (total approx 105)	
Backstretch	Within the backstretch area there are several concrete-pad wash racks located adjacent to several of the newer barns along the northern portion of the backstretch area. During the racing season temporary wash racks are utilized in the backstretch area. Within the backstretch area there is a total of approximately 74 wash rack facilities. During racing operations all wash water is collected by the storm drain and is diverted to the sanitary sewer via a pump station.
Other	There are 2 wash racks located adjacent to Barn "W", 16 wash racks at the Expo Center, 9 wash racks at the Wyland Center and 4 wash racks at the Activity Center.
STABLES AND BARNS	
Backstretch	The main stable area is located north and east of the main track. It is generally known as the backstretch area. Of the approximate 75 buildings, 39 are permanent barn structures. Temporary stables are also constructed during the summer racing season.
Other	Four additional buildings provide temporary stables and housing for animals during different events of the year. These buildings include Barn "W", the Expo Center, Wyland Center and the Activity Center. All these are located south to southeast of the backstretch area. See Exhibit 2 for specific locations.
HORSE TRACKS	
Main Track	The main race track is a 1-mile loop track enclosing a turf track. The 1-mile Polytrack surface is made of a material consisting of a combination of silica sand, granulated rubber and synthetic fibers, coated with a micro-crystalline wax. The track is used for horse racing during the horse racing season and is maintained year-round by DMTC and 22nd DAA staff.
Training Track	The training track is a dirt track used for horse training purposes located in the northwest portion of the site, maintained by DMTC and 22nd DAA staff.
Turf Track	The turf track is an all grass racing tack located to the inside of the main Polytrack. It is used during the horse racing season and in maintained year-round by DMTC and 22nd DAA staff.
STORAGE AREAS	
Storage Facilities	During the summer racing season, clean hay and bedding is stored in the east parking lot of the backstretch area. Other storage facilities are found within Barn "A" and Barn "W".

Table 3 – Site Descriptions of Phase II MS4 Areas Also Designated CAFO (Continued)

DEL MAR FAIRGROUND PHASE II MS4 AREAS DESIGNATED CAFO (CONTINUED)	
MULTI-USE FACILITIES	
Horse Arena	The existing horse arena, adjacent to the off-track betting facility (the Surfside Race Place) was designed as a multi-use facility for equestrian, sporting, and other entertainment events.
Walkways and Trails	All areas between the permanent walkways and barns in the backstretch area and connecting all other CAFO covered buildings and facilities.

2.1 DEL MAR THOROUGHBRED CLUB OPERATIONS

The Del Mar Thoroughbred Racing season consists of a 43 day event held from mid July to early September, annually, at the Del Mar Fairgrounds. The season consists of onsite thoroughbred horse racing which occurs 6 days a week, usually from early afternoon to early evening. Music events and food sales are held during the races, as are racing associated activities such as seat/box sales and wagering. The Del Mar Thoroughbred racing season has consistently drawn over 750,000 visitors in recent years, most of which enjoy the racing events as well as the facilities. While the 22nd District owns the entire Del Mar Fairgrounds property, including the racetrack and barns, the racing operations are managed by a leasee, the Del Mar Thoroughbred Club (DMTC). DMTC has operated the racing at the Del Mar Fairgrounds for decades, beginning with the commencement of horse racing at the site in 1937.

The Del Mar Thoroughbred Club operates entirely within the Del Mar Fairgrounds property, and is considered to be an entity which controls a significant portion of operations in the northernmost (backstretch) portion of property. In addition, DMTC has offices and other areas within the grandstand in which it operates on a year-round basis. As such, a portion of these areas, as mentioned in Section 1.1 and described in Table 3, are considered Confined Animal Feeding Operations (CAFO) areas. Therefore, the General Industrial Permit will also regulate storm water discharge from areas including but not limited to the backstretch barn areas, Barn W, the Expo Center, the Wyland Center, and the Activity Center. Those requirements are not covered herein this SWMP, and is documented separately in the property's Industrial SWPPP.

In addition to General Industrial Permit requirements, CAFO production areas within the subject property are also required to implement a Nutrient Management Plan (NMP) as part of the SWMP, as requested by the San Diego RWQCB. Through the 22nd DAA, DMTC will primarily be responsible for the implementation the NMP. The NMP is included as an attachment to this SWMP. The following discussion of DMTC operations is included as reference material regarding general onsite operations which are included in the Nutrient Management Plan for the Del Mar Fairgrounds Site:

"During the thoroughbred race meet, manure/waste removal and storage is conducted in an ongoing fashion. It is physically removed from stables (A-U) and (EE-TT) each day by Del Mar

Thoroughbred Club staff and piled at the end of the barn row for immediate hauling. Temporary stalls which are located in Barn W, the Expo Center, the Wyland Center, and the Activity Center, as shown in Exhibit 2, are cleaned out in a similar fashion. This material is loaded into a semi trailer and hauled off shortly after the material is stockpiled. The Del Mar Thoroughbred Club operates under strict guidelines in order to continuously ensure that operations do not impair the beneficial uses of the downstream receiving waters, and that protocols are followed concerning onsite water quality management."

All operations by DMTC within Phase II areas, as designated in Exhibit 2, do not include the housing of animals or fixed animal operations. These Phase II areas which are co-operated by DMTC and the 22nd DAA during the racing season include portions of the grandstand, infield, training track, and parking lots. Proper storm water management protocols for these areas are shown in Table 4:

Table 4 – Del Mar Thoroughbred Club – Storm Water Management Protocols

STORM WATER MANAGEMENT PROTOCOLS	
TRASH ENCLOSURES	Trash enclosures will be covered by closing lids or having a canopy cover, where possible. DAA staff will be instructed to close lids after use.
VEHICLE STORAGE	Large vehicles used as on-site equipment will be monitored by DAA staff to ensure leakage problems do not occur. If leaks occur, drip pans will be placed under equipment/vehicles. In addition, clarifiers exist in drainage areas (as specified in Section 2.4), which capture runoff from parking areas.
MATERIAL STORAGE	All material which may have potential to affect storm water quality will be stored indoors, under cover, or on pallets except during active operations. It is crucial that extra care is taken regarding material storage during the rainy seasons as improper material storage has the potential to significantly pollute storm water runoff causing negative affects on receiving waters.
CAR WASH	See Surface Sewer Connection Section 2.4
STORM DRAIN INLET CAPPING	See Section 2.4

2.2 SAN DIEGO COUNTY FAIR OPERATIONS

The 21-22 day long San Diego County Fair is held from June to early July, annually. The Fair operates the majority of days during the season, and is held onsite from mid morning until closing which varies between 10-11pm. The Fair has consistently drawn over 1.2 million visitors annually, showcasing rides, animal exhibits, food, concerts, and expositions. This event is operated by the 22nd DAA and includes the participation of hundreds of temporary employees hired by both the 22nd DAA and other independent organizations operating at the Fair.

The San Diego County Fair is operated by the 22nd DAA. Food processing and waste management BMP protocols are the primary pollution prevention strategies which are employed onsite to protect water quality during the Fair, as shown in Table 5 below. The Fair occurs during the summer; therefore the occurrence of a runoff producing storm event is very infrequent.

The animal housing areas including the backstretch barn areas, Barn W, the Expo Center, the Wyland Center, and the Activity Center are included in the CAFO applicable areas, and require Nutrient Management Plan implementation. As explained in the NMP, manure/waste removal and storage is conducted in an ongoing fashion with all waste and animal bedding disposed of each night and replaced with clean bedding the following morning.

Phase II areas operated by the 22nd DAA are designated in Exhibit 2. These areas specifically include O'Brien Hall, Bing Crosby Hall, Grandstands, Exhibit Hall and parking lots. Proper storm water management protocols for these areas are shown in Table 5.

Table 5 - San Diego County Fair – Storm Water Management Protocols

STORM WATER MANAGEMENT PROTOCOLS	
TRASH ENCLOSURES	Trash enclosures will be covered by closing lids or having a canopy cover, where possible. DAA staff will be instructed to close lids after use.
VEHICLE STORAGE	Large vehicles used as on-site equipment will be monitored by DAA staff to ensure leakage problems do not occur. If leaks occur, drip pans will be placed under equipment/vehicles. In addition, clarifiers exist in drainage areas (as specified in Section 2.4), which capture runoff from parking areas.
MATERIAL STORAGE	All material which may have potential to affect storm water quality will be stored indoors, under cover, or on pallets except during active operations. It is crucial that extra care is taken regarding material storage during the rainy seasons as improper material storage has the potential to significantly pollute storm water runoff causing negative affects on receiving waters.
STORM DRAIN INLET CAPPING/VALVING	See Section 2.4

2.3 DEL MAR ARENA OPERATIONS

The Del Mar Arena is a multipurpose facility, operated by the 22nd DAA; which is used to house events such as concerts, horse shows, bull riding, and other animal events. The floor of the arena is 47,250 SF, and is primarily the only area within the building which may contain animals. The arena is covered by a roof structure and, therefore, the area is not exposed to rainfall/storm water runoff. The interior of the Arena will be directly connected to the sewer system for any internal waters collected (i.e. wash waters for cleaning, spills, etc.). Roof drainage is connected to the storm drain system, and is treated via storm water treatment control BMPs located at the downspouts, as well as an underground media filtration device located further downstream of the facility within the Fairground's main parking lot.

The Del Mar Arena hosts sporting events, animal events, concerts and other special events. Animal events in the Del Mar Arena primarily consist of horse shows, with the prestigious Del Mar National Horse Show held in late April-early May, annually. This show consists of several horse events such as Western, Dressage, and Hunter/Jumper. This is the largest horse show event of the year at the Del Mar Fairgrounds, and can involve as many as 1000 horses. The majority of horse show events contain significantly fewer horses.

The Del Mar Arena is unique in respect to permit coverage. The Arena floor is considered part of the CAFO area of the Fairgrounds due to the horse show events and its use of the backstretch stables area for the stabling of horses during these events. The arena seating area and administrative building surrounding the arena floor are not. For this reason, the NMP applies to the Arena floor (see Attachment 1).

Del Mar Arena Phase II areas that are not designated CAFO include portions of the stands areas and areas surrounding but not including the floor of the arena. Proper storm water management protocols for these areas are shown in Table 6:

Table 6 - Del Mar Arena – Storm Water Management Protocols

STORM WATER MANAGEMENT PROTOCOLS	
TRASH ENCLOSURES	Trash enclosures will be covered by closing lids or having a canopy cover at all times and emptied on a regular basis.
VEHICLE STORAGE	Large vehicles used as on-site equipment will be stored utilizing a drip pan unless the storm drain inlet is blocked off and cleaned prior to cap removal to ensure no harmful matter such as oil has access to storm drain. All vehicles will be stored and parked in designated areas away from all storm drain inlets to ensure no runoff from vehicles or areas where vehicles are stored flows into storm drains, therefore avoiding the risk of negatively affecting receiving waters.
MATERIAL STORAGE	All material which may have potential to affect storm water quality will be stored indoors, under cover, or on pallets except during active operations. It is crucial that extra care is taken regarding material storage during the rainy seasons as improper material storage has the potential to significantly pollute storm water runoff causing negative effects on receiving waters.

Upon completion of the Del Mar Arena Roof Project, the area will no longer be subject to rainfall/storm water runoff. The interior of the Arena will be covered by the new roof, and will be directly connected to the sewer system for any internal waters collected (i.e. wash waters for cleaning, spills, etc.)

2.4 EXISING STRUCTURAL WATER QUALITY PROTECTIONS

At the Del Mar Fairgrounds, procedures are in place to protect nearby water resources from contamination due to manure handling and storage. A sanitary sewer diversion is in place which manually diverts all runoff from the backstretch area toward the force main sewer line on the western perimeter of the property. The storm water runoff from the backstretch area is conveyed west to a pump station located between the training track and Stevens Creek. During the dry season, runoff is diverted to the sewer system. During the wet season (October 1 through April 30), only first flush runoff (roughly equivalent to 0.2 inches) is manually diverted to the sewer, and the remaining flows are discharged to Stevens Creek at Discharge Point #1 (as seen in Exhibit 4). The required dry period between designated storm events is 72 hours.

This diversion is operated by both DMTC and 22nd District staff, and is outlined in detail in the Nutrient Management Plan for the facility. Existing Structural Storm Water Quality Protections at the fairgrounds include those provided in Table 7 below.

Table 7 – Existing Structural Water Quality Protection

STRUCTURAL WATER QUALITY PROTECTION	
INLET CAPPING/VALVING	Storm drain inlets are either locally capped or are blocked by a downstream valved gate in order to prohibit any unwanted elements such as trash, oil, grease, and other pollutants from getting into the storm drain. Storm Drain inlet capping/valving occurs in the West Parking Lot, and in the drive aisle area south of the Grandstand. It does not occur in all discharge areas onsite. Other structural BMPs such as Clarifiers exist as explained below. All storm drain inlets in the above mentioned areas are capped or valved downstream during the San Diego County Fair. This area hosts rides, and vendors who provide food to the public. During the rainy season when events are infrequent, the capping/valving may be opened to allow storm water to discharge from the project site.
SURFACE SEWER CONNECTION	Several surface sewer connections are located at the recycling center, the car wash area, and in the main drive aisle/hardscape area south of the grandstand. These surface sewer connections were implemented in order to direct storm water stemming from maintenance areas as well as from leaks and or spills toward the sanitary sewer. The availability of surface sewer connections is limited to areas where they are most necessary, as they often can lead to excessive storm water influx to the sanitary sewer if not properly managed.

STRUCTURAL WATER QUALITY PROTECTION (CONTINUED)	
WATER QUALITY CLARIFIERS	Four water quality clarifiers are currently in place. Two clarifiers are located in the asphalt area south of the Training Track in Basin 3, as shown in Exhibit 5. These clarifiers drain to discharge points #6 and #7. Two clarifiers are located at the southwestern corner of the Main Parking Lot in Basin 12, as shown on Exhibit 5. These clarifiers to discharge point #5. The clarifiers consist of baffle type units which capture large debris, sediment, as well as oil & grease. They require periodic maintenance which involves servicing with a Vactor truck. The 22nd DAA contracts this maintenance as needed, prior to and following the rainy season.
DOWNSPOUT FILTERS	Downspout filters have been installed at roof drains along the eastern half of the Arena building. The filters capture and treat Arena roof runoff from the east half of the building. Maintenance of these downspout filters occur on a monthly basis and after significant rain events.
MEDIA FILTRATION	One water quality media filtration unit has been installed downstream of the Arena, specifically for Basin 11, as shown on Exhibit 4. The media filter will serve as Treatment Control for the west portion of the Arena Roof and will feature perlite, zeolite, and granular activated carbon filtration inside a large vaulted box. The specific unit of media filter is the Up-Flo Filter, manufactured by Kristar. The filters will function to filter out sediment, metals, nutrients, trash & debris and oil & grease to a high level prior to discharge downstream. Servicing of the media is required approximately 2x per year, and will be conducted by the 22nd DAA or a designated contractor.

The Del Mar Fairgrounds is committed to consistently implementing effective protocols concerning collection and storage of waste that may in turn affect the quality of storm water runoff. Trash collection quantities are recorded each year to monitor waste generation and disposal. The 22nd DAA recognizes the necessity of these practices, particularly during large events such as the Del Mar Thoroughbred Races and the San Diego County Fair.

2.5 SITE DRAINAGE

Under existing conditions, the entire site is comprised of 16 drainage sub-basins. These basins are described below and can be seen in Exhibit 4 – Drainage Basin Map. The entirety of the site drains to two downstream water bodies, Stevens Creek and the San Dieguito Lagoon. Storm

water runoff from the west side of the site drains into Stevens Creek either by sheet flow or via storm drains at 5 Discharge Points, DP#1, DP#2, DP#3, DP#6 and DP#7. Storm water runoff from the remainder of the Del Mar Fairgrounds drains via two drainage points, DP#4 and DP#5, to the San Dieguito Lagoon which later discharges to the Pacific Ocean less than one mile west. Table 8 on the following page describes specific drainage of each sub-basin.

Table 8 – Basin Description

BASIN 1	Consists of runoff from adjacent slopes and surface runoff from areas north and west of the training track, along with the parking area west of the main track. Flows from Basin 1 are not conveyed onto the portions of the site used by the fairgrounds, but instead flows directly to Stevens Creek without traveling through any portion of the existing storm drain system.
BASIN 2	Consists primarily of runoff from the training track, located in the northwest corner of the site. Runoff is not conveyed by the existing storm drain system and is instead conveyed via surface flow to Stevens Creek.
BASIN 3	Consists of flow from the small parking area located west of the main track, south of the training track, and east of Stevens Creek. There are two low points with grate inlets in the parking lot collecting runoff from Basin 3. Runoff is discharged to the existing storm drain system, eventually discharging directly to Stevens Creek at two separate discharge points, Discharge Point 6 and Discharge Point 7. For the purposes of this study, it is estimated that flow from Basin 3 is divided equally between the two discharge points in the existing condition.
BASIN 4	Consists of flow from a small parking area near the southwest corner of the main track. Flow is collected in a grate inlet within Basin 4 and discharged to the project storm drain system and is conveyed to Stevens Creek at Discharge Point #2.
BASIN 5	Is located to the north of the stables and south of Via de la Valle and primarily consists of slopes between the roadway and a portion of Stevens Creek. Runoff from Basin 5 does not come into contact with the project; instead it discharges via surface flow to Stevens Creek.
BASIN 6	Consists of the stables to the north of the main track backstretch. Low flow and first flush runoff from Basin 6 is presently connected to the fairgrounds sewer system with rainy season flows conveyed to Stevens Creek at Discharge Point #1.
BASIN 7	Is comprised of the main track and infield area. With the recently complete Polytrack project, a perforated sub-drain was constructed within Basin 7. Low-flows from Basin 7 are directed to the infield lakes and high flows discharge to Stevens Creek at Discharge Point #2.
BASIN 8	Is located at the southwest portion of the site, to the west of the grandstand area and east of Stevens Creek and primarily consists of paved parking areas. Flow from Basin 8 is collected within the storm drain system and discharged to Stevens Creek at Discharge Point #3.

BASIN 9	Consists of the grandstand, exhibit halls, offices and paddock areas. A storm drain system of inlets and pipes conveys flow from Basin 9 to the south and discharges runoff to the San Dieguito Lagoon at Discharge Point #4.
BASIN 10	Consists primarily of paved parking, office, and exhibit hall areas. Flow from Basin 10 collects in the storm drain system and is discharged to the San Dieguito Lagoon at Discharge Point #4.
BASIN 11	Consists of the Outdoor Arena area east of the main track. Flow from Basin 11 is collected in the storm drain system and is conveyed to the San Dieguito Lagoon at Discharge Point #5.
BASIN 12	Consists of the main paved parking area north and west of Jimmy Durante Boulevard as well as a portion of Jimmy Durante Boulevard. Flow from Basin 12 is generally directed to the west and conveyed to the San Dieguito Lagoon at Discharge Point #5 via the storm drain system.
BASIN 13	Consists of flow from the northeasterly portion of Jimmy Durante Boulevard. Flow from Basin 13 is concentrated at a low point in the road south of Via de la Valle and collected in existing curb inlets. From review of available plans, it is determined that flow from Basin 13 is conveyed to Stevens Creek at Discharge Point #1.
BASIN 14	Is located within Jimmy Durante Boulevard at the southerly portion of the project. Flow from Basin 14 is collected in curb inlets at a low point in the roadway and conveyed to the San Dieguito Lagoon at Discharge Point #5.
BASIN 15	Is located to the south of the fairgrounds parking lot, between Jimmy Durante Boulevard and the San Dieguito Lagoon. Basin 15 is presently an unpaved portion of the site. Runoff from this area sheet flows to the southwest and is directed toward the lagoon at Discharge Point #5.
BASIN 16	Basin 16 consists of the Fairgrounds property located east of Jimmy Durante Boulevard within the limits of the City of San Diego. Basin 16 consists of both paved and unpaved parking, driving range, recreational vehicle (RV) lot and tennis courts. There is a berm located along the southern boundary of the parking lot long the San Dieguito Lagoon. As a result, runoff collects in a local depression area in the southeast area of the basin. An existing 12-inch riser pipe located in the center of the basin likely drains excess flows from this area to the Lagoon.[7]

[7] REC Consultants, Inc. CEQA – Hydrology/Drainage Study. Del Mar Fairgrounds Surf and Turf Sports Complex and East Parking Lot. May 2008.

2.6 WATERSHED DESCRIPTION AND LOCAL CLIMATE

The Del Mar Fairgrounds and Horse Park are located within the Rancho Santa Fe Hydrologic Sub Area, within the Solana Beach Hydra Area, within the San Dieguito Hydraulic Unit. The corresponding number designation is 905.11. The San Dieguito Hydraulic Unit drains approximately 346 square miles in central San Diego County, including portions of the Cities of Del Mar, Escondido, Poway, San Diego and Solana Beach, as well as portions of unincorporated San Diego County. The majority of the watershed consists of undeveloped land (54%) and/or parks and open space (29%). Approximately half of the undeveloped land is zoned for future residential development[8]. See Exhibits 5 and 6 for San Dieguito Watershed and Subwatershed Maps.

The San Dieguito River is the primary drainage course of the San Dieguito Hydraulic Unit. The River headwaters begin in the Santa Ysabel/Santa Maria Valley area, meandering to the west until reaching Lake Hodges. Downstream of the Lake Hodges Dam, the River traverses Rancho Santa Fe before crossing under Interstate 5 and entering the San Dieguito Lagoon. The River forms the southerly boundary of the Horse Park and then continues west and empties into the Pacific Ocean immediately southwest of the Del Mar Fairgrounds property.

Based on a Preliminary Hydrology Study prepared by Fuscoe Engineering in February 2008, the Fairgrounds, in total, contributes approximately 320.2 cfs to the San Dieguito Lagoon. The total 2 year flows on the Lagoon at the Fairgrounds discharge point is approximately 16,000 cfs. The total percentage of flows stemming from the Fairgrounds property is approximately 0.2% of the total flow. In addition, runoff from the Fairgrounds is also subject to tidal influences and high flood waters, thereby controlling its influence on the river geomorphology.

Stevens Creek, a tributary to the San Dieguito Lagoon, comprises the western and northern property boundary of the Fairgrounds. Stevens Creek exists as an emergency flood control channel immediately north of the Fairgrounds property, draining approximately 75% of the City of Solana Beach. Stevens Creek converges with the San Dieguito Lagoon southwest of the Del Mar Fairgrounds site.

The local climate has Mediterranean characteristics consisting of dry summers and cool winters. The average annual rainfall is 10.37 inches, 95% of which falls during the rainy season, which occurs between October 1 and April 30. On average, the wettest month is January. The average high temperatures range from 47 degrees Fahrenheit (F) in winter to 77 degrees F in the summer. Temperature extremes have been recorded at 29 degrees F in the winter and 111 degrees F in the summer.

2.7 BENEFICIAL USES AND IMPAIRMENTS

This Phase II SWMP was designed to reduce the discharge of pollutants from the Del Mar Fairgrounds and the Horse Park to the Maximum Extent Practicable and to protect water quality. The water quality needs to be protected to ensure the beneficial uses are not threatened or

[8] County of San Diego. Project Clean Water Website: http://projectcleanwater.org/html/ws_san_dieguito.himl

deteriorated in any way. Surface waters receiving runoff from the Del Mar Fairgrounds include the San Dieguito River, San Dieguito Lagoon, and the Pacific Ocean Shoreline at the San Dieguito Hydrologic Unit.

Currently each receiving water has between six and nine beneficial uses acknowledged and documented in the Water Quality Control Plan published by the San Diego Regional Water Quality Board. The beneficial uses for the receiving waters are included in Table 9 on the following page. The information in these tables have been extracted from the "Water Quality Control Plan for the San Diego Basin (9)" dated April 25, 2007.

- MUN- Municipal and Domestic Supply: Includes uses of water for community, military, or individual water supply systems including, but not limited to, drinking water supply.
- AGR- Agricultural Supply: Includes uses of water for farming, horticulture, or ranching including, but not limited to, irrigation, stock watering, or support of vegetation for range grazing.
- PROC- Includes uses of water for industrial activities that depend primarily on water quality.
- WARM-– Warm Freshwater Habitat: Includes uses of water that support warm water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish or wildlife, including invertebrates.
- BIOL- Includes uses of water that support designated areas or habitats, such as refuges, parks, sanctuaries, ecological reserves, or Areas of Special Biological Significance (ASBS) where the preservation or enhancement of natural resources requires special protection.
- EST- Includes uses of water that support estuarine ecosystems, including but not limited to, preservation or enhancement of estuarine habitats, vegetation, fish, shellfish, or wildlife (e.g. estuarine mammals, waterfowl, or shorebirds.)
- RARE- Includes uses of water that support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species, established under state or federal law as rare, threatened or endangered.
- MIGR- Includes uses of water that support habitats necessary for migration, acclimatization between fresh and salt water, or other temporary activities by aquatic organisms such as anadromous fish.
- MAR- Includes uses of water that support marine ecosystems including, but not limited to, preservation or enhancement of marine habitats, vegetation such as kelp, fish, shellfish, or wildlife (e.g. marine mammals, shorebirds.)
- IND – Includes uses of water for industrial activities that do not depend primarily on water quality including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, or oil well re-pressurization.
- REC1 – Contact Recreation: Includes uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and SCUBA diving, surfing, white water activities, fishing, or use of natural hot springs.
- REC2 – Non-Contact Recreation: Includes the uses of water for recreation involving proximity to water, but not normally involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, camping, boating, tide pool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.

- **WILD** – Wildlife Habitat: Includes uses of water that support terrestrial ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats, vegetation, wildlife, (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.
- **COLD** – Includes uses of water that support cold water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish or wildlife, including invertebrates.

Table 9 – Beneficial Uses

RECEIVING WATERS:	SAN DIEGUITO LAGOON	PACIFIC OCEAN SHORELINE SAN DIEGUITO HU	SAN DIEGUITO RIVER
HYDROLOGIC UNIT BASIN NUMBER:	5.11	5.11	5.21
MUN		+	x
AGR		o	x
IND		o	x
PROC			x
REC1	x	x	o
REC2	x	x	x
MAR	x		
EST	x		
WARM		x	x
WILD	x	x	x
RARE	x		x
COLD		x	
BIOL	x		
MIGR	x		

o - Potential Beneficial Use
x - Existing Beneficial Use
+ - Excepted from MUN

According to the California 2006 303d list published by the State Water Resources Control Board (SWRCB), The Pacific Ocean Shoreline at the San Dieguito Hydrologic Unit, California Watershed 905.11, is a 303(d) impaired water body due to Indicator Bacteria. The impairment location is at the San Dieguito Lagoon Mouth in Solana Beach, CA.

The point of discharge into the Pacific Ocean Shoreline, San Dieguito Hydrologic Unit is approximately .35 miles downstream of the project site.

Table 10 – 303(d) Listed Segments

303(d) LISTED WATER QUALITY SEGMENTS			
RECEIVING WATER	HYDROLOGIC UNIT CODE	303(d) IMPAIRMENT(S)	DIST. FROM PROJECT (miles)
Pacific Ocean Shoreline San Dieguito HU	905.11	Indicator Bacteria	.35

Once a water body has been listed as impaired on the 303(d) list, a Total Maximum Daily Load (TMDL) for the constituent of concern (pollutant) must be developed for that water body by the San Diego Regional Water Quality Control Board, per requirements. A TMDL is an estimate of the daily load of pollutants that a water body may receive from point sources, non-point sources, and natural background conditions (including an appropriate margin of safety), without exceeding its water quality standard. Those facilities and activities that are discharging into the water body, collectively, must not exceed the TMDL.

On December 12, 2007, the San Diego RWQCB approved Resolution No. R9-2007-0044, adopting the Basin Plan amendment to incorporate the TMDLs developed under the Bacteria-Impaired Waters TMDL Project I for Beaches and Creeks (see Table 10). This project includes the development of a regional watershed-based model study to determine existing bacteria loads and assign TMDLs for roughly 24 miles of coastal shoreline and creeks within the San Diego Region.[9] Under this study, the San Dieguito River Hydrologic Unit has been identified as a Priority I watershed subject to the TMDL, since the Pacific Ocean Shoreline at the San Dieguito River Outlet was previously listed as impaired for bacteria indicators under the 2006 303(d) list.

According to the 2006 303(d) list, the cause of water quality problems for the Pacific Ocean Shoreline San Diego Hydrologic Unit is Non-Point/Point Source.

[9] San Diego Regional Water Quality Control Board (RWQCB). Bacteria-Impaired Waters TMDL Project I for Beaches and Creeks in the San Diego Region. Final Technical Report, December 12, 2007.

3.0 PHASE II – GENERAL REQUIREMENTS

The NPDES Phase II program requirements state the necessity to describe BMPs and measurable goals associated with the Minimum Control Measures (MCMs) listed and described below.

3.1 PUBLIC EDUCATION AND OUTREACH CONCERNING STORM WATER IMPACTS

"The 22nd District Agricultural Association must implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants in storm water runoff. For non-traditional Permittees, the employee/user population may serve as "the public" to target for outreach and involvement". Options concerning preliminary public education and outreach are provided in Section 2, Minimum Control Measures, Public Education and Outreach.

In addition, "Non-traditional Small MS4s that discharge into medium and large MS4s may integrate public education and outreach programs with the existing MS4 public education and outreach programs."

3.2 PUBLIC INVOLVEMENT/PARTICIPATION

"The Permittee must at a minimum comply with State and local public notice requirements when implementing a public involvement/participation program."

3.3 ILLICIT DISCHARGE DETECTION AND ELIMINATION

The 22nd District Agricultural Association is required to:

a) Develop, implement and enforce a program to detect and eliminate illicit discharges

b) Develop a storm sewer system map showing the locations of all outfalls and names and locations of all waters of the U.S. that receive discharges from those outfalls

c) Through ordinance or other regulatory mechanism, must prohibit non-storm water discharges. Enforcement procedures and actions must be implemented.

d) Develop and implement a plan to detect and address non-storm water discharges, including illegal dumping.

e) Inform staff of the hazards that are generally associated with illegal discharges and improper disposal of waste.

f) Address the following categories of non-storm water discharges or flows only where they are identified as significant contributors of pollutants to receiving waters.

- water line flushing;
- landscape irrigation;
- diverted stream flows;

- rising ground waters;
- uncontaminated ground water infiltration to separate storm sewers;
- uncontaminated pumped ground water;
- discharges from potable water sources;
- foundation drains;
- air conditioning condensation;
- irrigation water;
- springs;
- water from crawl space pumps;
- footing drains;
- lawn watering;
- individual residential car washing;
- flows from riparian habitats and wetlands; and
- de-chlorinated swimming pool discharges.

3.4 CONSTRUCTION SITE STORM WATER RUNOFF CONTROL

The 22nd District Agricultural Association "must develop, implement, and enforce a program to reduce pollutants in any storm water runoff" to the site" from construction activities that result in land disturbance of greater than or equal to one acre". Construction activities that disturb less than one acre but are a part of a larger common plan must be included in the program. Minimum program requirements include the following:

1. An ordinance or other regulatory mechanism to require erosion and sediment controls as well as sanctions or other effective mechanisms to ensure compliance;
2. Requirements for construction site operators to implement appropriate erosion and sediment control BMPs;
3. Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;
4. Procedures for site plan review which incorporate consideration of potential water quality impacts;
5. Procedures for receipt and consideration of information submitted by the public; and
6. Procedures for site inspection and enforcement of control measures.

3.5 POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT & REDEVELOPMENT

The 22nd District Agricultural Association is required to:

1. Develop, implement and enforce a program to address storm water runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects that are less than one acre that are part of a larger common plan of development or sale, that discharge into receiving waters the by ensuring that controls are in place that would prevent or minimize water quality impacts;
2. Develop and implement strategies, which include a combination of structural and/or non-structural BMPs appropriate for the facility.
3. Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under State or local law. For those Small MS4s described in the Supplemental Provision E, the requirements must at least include the design standards contained in Attachment 4 of the General Permit or a functionally equivalent program that is acceptable to the appropriate RWQCB; and
4. Ensure adequate long-term operation and maintenance of BMPs.

3.6 POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

The 22nd District Agricultural Association is required to:

1. Develop, implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations; and

2. Using training materials that are available from U.S. EPA, the State, or other organizations, the program must include employee training to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet building maintenance, new construction and land disturbances, and storm water system maintenance.

3.7 MONITORING PROGRAM

Pursuant to the requirements of the Phase II MS4 Permit, WQO No. 2003-0005 – DWQ, Section F.2., the RWQCB may impose additional monitoring requirements as part of a Phase II permittee's MS4 program. The San Diego RWQCB has required the 22nd District Agricultural Association to include a monitoring program as part of their SWMP. Furthermore, it was recommended that the Fairgrounds become involved in San Diego County's Phase I MS4 Regional Monitoring Program, which is a component of Project Clean Water (www.projectcleanwater.org).

The purpose of the monitoring program is to correlate improvements in water quality with the implementation of MCMs. It also provides an iterative process with which the SWMP can be evaluated, on an annual basis, to determine whether BMPs are providing local or regional

benefits to receiving waters. In other words, monitoring programs can help evaluate whether the SWMP is achieving desired outcomes, such as reducing loads from sources, improving runoff quality, and/or protecting receiving water quality.

3.8 NUTRIENT MANAGEMENT PLAN

The 22nd District Agricultural Association is required to implement a Nutrient Management Plan as part of its SWMP. Pursuant to 40 Code of Federal Regulations (CFR) Part 122, Appendix B, Part 122.23, and Part 412 (Subpart A – Horse and Sheep), portions of Del Mar Fairgrounds meets the definition of a Large CAFO facility and may be subject to regulatory requirements for CAFO. This is because portions of the Fairgrounds houses more than 500 horses for 45 days or more in a 12-month period.

It should be noted, however, that the Fairgrounds does not house more than 500 horses continually throughout the year. Horses and other animals are only confined when events are held at the Fairgrounds. This includes the 43-day racing meet, where on average, more than 2,000 horses are confined during the racing season. The Fairgrounds also hosts several equestrian-related events throughout the year, in which approximately 500 to 700 horses are confined for periods of 5 to 7 days. In addition, livestock animals are confined at the Fairgrounds during the 21-day San Diego Fair, held annually from June to July. During the remaining portions of the year when no events are held, few to no animals are confined on-site. Therefore, CAFO activities are present on certain portions of the Fairgrounds property and only during portions of the year where animals are present. Due to this condition, the San Diego RWQCB has required the 22nd District Agricultural Association to implement a Nutrient Management Plan as part of the MCMs associated with the SWMP, in lieu of applying for a Federal CAFO Permit. The Nutrient Management Plan can be found in Attachment 1 of this SWMP.

4.0 MINIMUM CONTROL MEASURES

4.1 PUBLIC EDUCATION AND OUTREACH

The 22nd District Agricultural Association is in a position to make a positive impact on storm water pollution through onsite educational outreach at events which take place onsite every year. NPDES Phase II Small MS4 Permit regulations require the operators of regulated facilities to implement a public education program or conduct equivalent outreach activities concerning the impacts of storm water discharges on surface waters. In addition, the program is to outline the steps that the public can take to reduce pollutants in storm water runoff.

The public education and outreach program for the Del Mar Fairgrounds and Horse Park will consist of BMPs and measurable goals which will satisfy these requirements, as well as provide an invaluable opportunity to educate and impact visitors concerning storm water pollution.

4.1.1 Educational Materials Dissemination

a) The 22nd DAA will create and distribute a quarterly or bi-yearly email in the form of an e-newsletter. This newsletter will be sent to all staff, promoters, vendors and tenants. It will consist of all pertinent and new information regarding environmental/storm water issues on the Fairgrounds property, as well as creative ways in which the local environment can be preserved. This informational email will also include links to storm water related sites such as Project Clean Water and San Diego Coast Keeper. This will serve as a way to keep staff informed on any overall changes which they would not normally receive. A printed copy of this information will be included in new-hire information packet when new staff is hired.

b) Think Blue is a campaign run by the City of San Diego that promotes public knowledge of storm water quality and storm drain pollution prevention by providing pollution prevention programs, outreach literature, program reports, resources and links to the public. Think Blue annually hosts a booth at the San Diego County Fair which serves to inform the general public about ways in which they can protect local water bodies. The 22nd DAA will provide support concerning storm water protection; and further awareness of the difference between the MS4 and Sanitary Sewer system will be conveyed. Handouts including pencils and stickers may be obtained, and the number of impressions made will be recorded.

c) The utilization of any current and future "Reader Boards" shall be used to display periodic storm water education to the passing public. The 22nd DAA will communicate with local storm water advisory committees and other committees (such as CalTrans) to get additional input/information on what will be displayed for the public.

4.1.2 Activity Related Education

The 22nd DAA will provide written information included with promoter and vendor contracts regarding event functions. This written information will be in the form of a flyer and will include pertinent information regarding the impacts of storm water discharge on local water bodies, such as the San Dieguito River and the Pacific Ocean, as well as methods the vendors and promoters can take to reduce pollutants in storm water runoff.

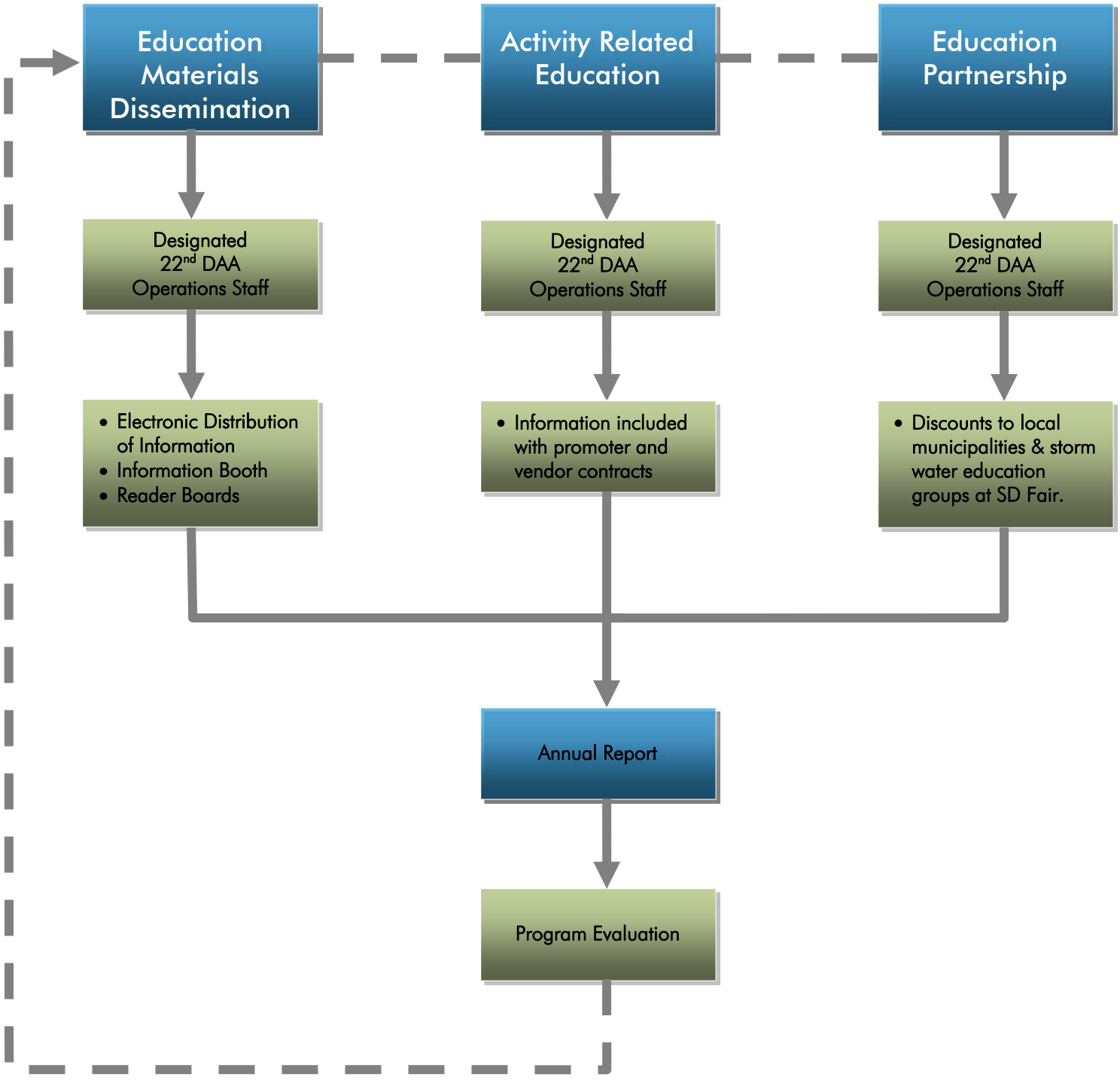
4.1.3 Education Partnership

The 22nd District Agricultural Association may provide space at a reduced rate to local municipalities and storm water education groups for information booths during public functions, such as the San Diego County Fair. This will give local municipalities and storm water education groups direct access to the public to distribute educational materials regarding the impacts storm water discharge has on local water bodies and methods that the public can take to reduce pollutants in storm water runoff.

A designated representative of the 22nd District Agricultural Association shall maintain a record of the implementation of the above proposed BMPs. This collected information will be reviewed and evaluated to determine the efficiency and effectiveness of these BMPs. Alterations, additions, and modifications may be made to further the cause of preventing pollution of local water bodies by way of storm water discharge. Materials, such as maintenance records, newsletters, flyers, and "Reader Board" displays will be submitted annually to the RWQCB as part of the annual report.

This MCM will be developed and implemented by Year 4 (or prior) of the Del Mar Fairgrounds/Horse Park Phase II MS4 storm water program. The desired outcome is to raise awareness of storm water runoff pollution prevention among Fairgrounds employees and visitors. Figure 2 and the MCM #1 matrix, below, summarizes the program framework for Public Education and Outreach.

Figure 2
PUBLIC EDUCATION AND OUTREACH ON STORM WATER IMPACTS



Minimum Control Measure #1: Public Education and Outreach								
Objective: To implement an education program to the public or conduct equivalent outreach activities concerning the impacts of storm water discharges on water bodies, and the steps that the public can take to reduce pollutants in storm water runoff.								
Best Management Practices	Task	Measurable Goals	BMP Implementation Timeline (Permit Year)					Staff Responsible for Implementation
			1	2	3	4	5	
<u>Educational Materials Dissemination</u>								
Option a) Electronic Distribution of Information								
Distribute an quarterly or bi-yearly electronic newsletter in the form of an e-newsletter	Create a quarterly or bi-yearly newsletter published by the Del Mar Fairgrounds with the intention of promoting environmental awareness. It will consist of all pertinent and new information regarding environmental and storm water issues on the Fairgrounds site as well as creative ways for local environment to be conserved. Email to all staff, promoters, vendors and tenants.	Create email contact list including all staff, vendors, promoters and tenants.	x	x	x	x	x	22nd DAA Operations Dept.
		Verify annually that this contact database is up to date with new/updated contact information.	x	x	x	x	x	22nd DAA Operations Dept.
		Verify annually that the electronic newsletter was distributed successfully.		x	x	x	x	22nd DAA Operations Dept.
Maintain a storm water link on the Del Mar Fairgrounds Website within the current Environmental Advocacy link. The link will take viewers to current storm water information related to the Del Mar Fairgrounds including spill prevention, spill reporting and updates on current events.	Create storm water link that makes pertinent information accessible and use a counter to track the number of impressions made.	Increase the number of impressions made between year 2 and 5.		x	x	x	x	22nd DAA Operations Dept.

Minimum Control Measure #1: Public Education and Outreach (Continued)								
Best Management Practices	Task	Measurable Goals	BMP Implementation Timeline (Permit Year)					Staff Responsible for Implementation
			1	2	3	4	5	
Educational Materials Dissemination								
Option b) Informational Booth								
The 22nd DAA may assist, the City of San Diego's campaign for clean storm water, by providing support, or materials at the San Diego County Fair. Information about storm water protection and further awareness of the difference between the MS4 and Sanitary Sewer System will be conveyed.	Appoint staff to organize booth information.	Appoint staff.		x	x	x	x	22nd DAA Operations Dept.
	During San Diego County Fair, assist Think Blue with the intent of educating the public about actions they can take in regards to storm water protection and clarify the difference between the MS4 and a Sanitary Sewer System.	Present information at Think Blue booth during the San Diego County Fair. Participate in at least 2 outreach events per year.		x	x	x	x	22nd DAA Operations Dept.
Handouts including any combination of the following; pencils, stickers, fliers printed on recycled paper, will be distributed.	Distribute pencils, stickers, fliers on recycled paper to bring attention to efforts the 22nd DAA is taking regarding impacts of storm water discharges on water bodies and steps the community can take to reduce pollutants in storm water runoff.	Increase the number of impressions made between year 2 and 5		x	x	x	x	22nd DAA Operations Dept.

Minimum Control Measure #1: Public Education and Outreach (Continued)								
Best Management Practices	Task	Measurable Goals	BMP Implementation Timeline (Permit Year)					Staff Responsible for Implementation
			1	2	3	4	5	
<u>Educational Materials Dissemination</u>								
Option c) Reader Boards								
Utilize any current and future "Reader Boards" to display periodic storm water educational information to the passing public.	Appoint staff to collect, verify and organize information regarding current storm water education, current storm water threats, and steps that the community can take to reduce pollutants in storm water runoff.	Display collected educational information to the public using any available current and future "Reader Boards" at the beginning and end of every rainy season.			x	x	x	22nd DAA Operations Dept.
Communicate with local storm water advisory committees.	Communicate with local storm water advisory committees. Collect, verify and organize information regarding local storm water education.	Display collected educational information to the public using any available current and future "Reader Boards" at the beginning and end of every rainy season.			x	x	x	22nd DAA Operations Dept.
		Verify annually that this educational information was displayed to the passing public utilizing any available current and future "Reader Boards".			x	x	x	22nd DAA Operations Dept.

Minimum Control Measure #1: Public Education and Outreach (Continued)								
Best Management Practices	Task	Measurable Goals	BMP Implementation Timeline (Permit Year)					Staff Responsible for Implementation
			1	2	3	4	5	
<u>Activity Related Education</u>								
Include written information regarding the impacts of storm water discharge on local water bodies with promoter and vendor contracts regarding event functions.	Create an informational sheet in the form of a flyer. Include all new and pertinent information regarding the impacts of storm water discharge on local water bodies such as the San Dieguito River and the Pacific Ocean as well as methods the vendors and promoters can take to reduce pollutants in storm water runoff.	Create informational sheet in the form of a flyer/insert.	x					22nd DAA Operations Dept.
		Verify annually that this information is up-to-date and includes all pertinent information regarding impacts of storm water discharge on local water bodies as well as steps promoters and vendors can take to reduce pollutants in storm water runoff.		x	x	x	x	22nd DAA Operations Dept.
		Verify annually that this information is included in all vendor contracts regarding event functions.		x	x	x	x	22nd DAA Operations Dept.
<u>Education Partnership</u>								
Provide space for information booths during public functions, such as the San Diego County Fair, to local municipalities and storm water education groups at a reduced rate (or similar).	Designate public functions at which this reduced price will be honored (or similar).	Designate public functions at which this reduced price will be honored (or similar).	x	x	x	x	x	22nd DAA Operations Dept.
	Contact and inform local municipalities and storm water education groups regarding reduced price for booth at public function (or similar).	Create and update list of potential municipalities and storm water education groups (vendors) eligible for reduced price booth(s). (or similar).		x	x	x	x	22nd DAA Operations Dept.

4.2 PUBLIC INVOLVEMENT/PARTICIPATION PROGRAM

Public outreach is an integral requirement of the SWMP. Developing programs to solicit public involvement can be an effective method for storm water runoff pollution prevention. Participation in outreach activities engages individuals to become more aware of the issue of storm water pollution. When a community has a clear idea where the pollution comes from, how it can affect them and what they can do to prevent those affects, it will be more willing to support and participate in SWMP program implementation.

It is the responsibility of the 22nd District Agricultural Association to address the importance of public involvement with respect to the protection of receiving waters. When implementing a public involvement/participation program, the 22nd District Agricultural Association must at a minimum comply with local and State public notice requirements. For the purposes of this SWMP the 'public' refers to the Del Mar Fairgrounds and Horse Park employee/user population.

The 22nd DAA will work with employees and vendors to raise awareness, participation and involvement in the reduction of pollution in storm water runoff discharge into local water bodies. In addition, the 22nd DAA will also look for cooperative effort opportunities with local citizen's groups to promote environmental awareness and involvement. These include, but are not limited to the San Dieguito River Valley Conservancy, the Friends of the San Dieguito River Valley, the San Dieguito Lagoon Preservation Committee, San Dieguito River Valley Park, and San Diego Coast Keeper. Cooperative opportunities may consist of promoting citizen's group education programs, environmental cleanup and restoration programs, and volunteer programs. The following sections may be used as BMPs to adhere to the requirements set forth by the Phase II General Permit regarding MCMs, in this case, public participation and involvement.

4.2.1 Public Education

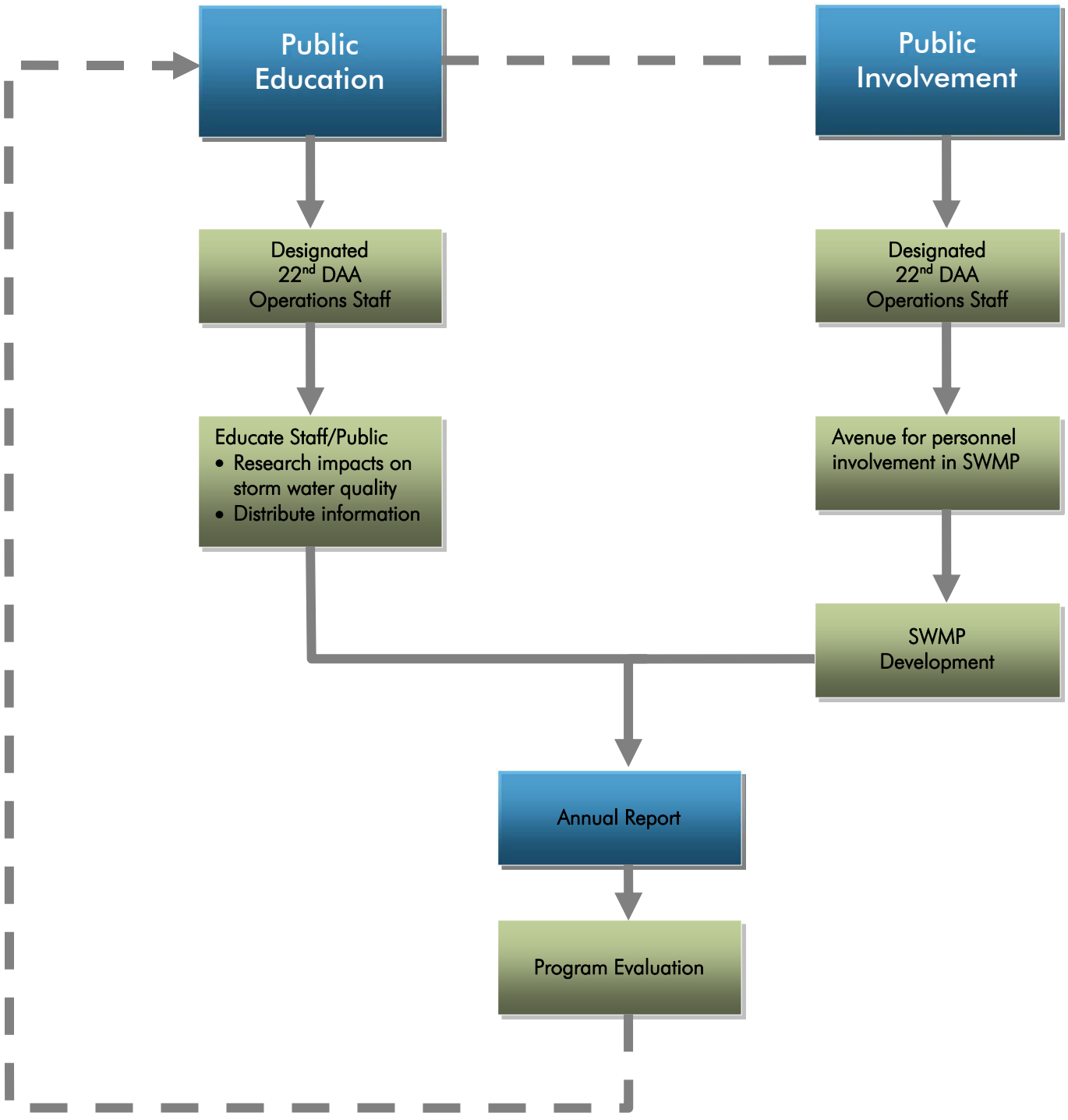
In compliance with State and local public notice requirements, the 22nd DAA will prepare an informational packet in the form of a fact sheet or an email that will be distributed to staff and vendors. These packets will be printed and readily available at general public functions that attract outside business or company. These informational packets/emails will educate the public of the impacts of their activities on storm water quality, and include a list of opportunities for the public to become involved as well as resource links to local storm water quality related resources. Possible opportunities may include local volunteering organizations, environmental organizations, or on-site clean-up opportunities that will aid in the reduction of pollution leaving the site or within the local watershed.

4.2.2 Public Involvement

The 22nd DAA will properly inform all onsite staff, vendors, and facility operators of the details of the SWMP, opportunities for public participation concerning their own operations, and other ways to assist in getting involved. The idea will be conveyed to all users of the Del Mar Fairgrounds and Horse Park facilities that storm water pollution protection is everybody's responsibility. In addition, possible outreach media for this purpose include the 22nd DAA's website, e-mail, newspaper, and postings.

The designated representative of the 22nd District Agricultural Association will maintain a record of the implementation of the above proposed BMPs. This collected information will be reviewed and evaluated to determine the efficiency and effectiveness of these BMPs. Alterations, additions, and modifications may be made to further the cause of preventing pollution of local water bodies by way of storm water discharge. The maintenance records will be submitted annually to the RWQCB in an annual report. Figure 3 and the MCM #2 matrix, below, summarizes the program framework for Public Involvement/Participation. The desired outcome is to stimulate behavior change amongst Fairgrounds employees/users to implement BMPs in their operations and maintenance of the property.

Figure 3
PUBLIC INVOLVEMENT/PARTICIPATION PROGRAM



Minimum Control Measure #2: Public Involvement / Participation								
Objective: To comply with all State and local public notice requirements when implementing a public involvement/participation program.								
Best Management Practices	Task	Measurable Goals	BMP Implementation Timeline (Permit Year)					Staff Responsible for Implementation
			1	2	3	4	5	
Prepare and distribute informational packets to educate public of their impacts on storm water quality.	Research and prepare an informational packet in the form of a fact sheet or an email that will be distributed to staff and vendors.	Prepare informational packet stating the impacts the public has on storm water quality. Include a list of opportunities for the public to become involved.	x	x	x	x	x	22nd DAA Operations Dept.
	Distribute prepared informational packet to all staff and vendors via mail or email.	Verify annually that staff and vendor contact database is up to date with new/updated contact information.		x	x	x	x	22nd DAA Operations Dept.
		Verify annually that the electronic newsletter was distributed successfully.		x	x	x	x	22nd DAA Operations Dept.
	Have printed materials readily available at general public functions that attract outside business or company. Distribute information and track the number of impressions made.	Increase the number of impressions made between year 2 and 5. (Until 100% involvement/participation is reached.)		x	x	x	x	22nd DAA Operations Dept.
Implement a 'public' notification process for the SWMP.	Notify pertinent Del Mar Fairgrounds onsite staff, and vendors involved in site operations about the SWMP adoption and subsequent updates	Provide avenue for personnel involvement in development of SWMP.	x	x	x	x	x	22nd DAA Operations Dept.

4.3 ILLICIT DISCHARGE DETECTION AND ELIMINATION

Since illegal discharges and illicit connections can be a significant source of pollutants from the Del Mar Fairgrounds storm drain system, this SWMP includes a comprehensive program for detecting, responding to, investigating and eliminating these types of discharges/connections in an efficient and timely manner.

4.3.1 Policy for Illicit Discharge Detection and Elimination

Requirements for the Phase II SWMP state that the 22nd DAA must develop, implement, and enforce a program to detect and eliminate illicit discharges. The 22nd DAA has a process in place and plumbers on staff. These on-staff plumbers are employed by the 22nd DAA and are tasked to detect and eliminate illicit discharges from the site. The 22nd DAA will comply directly with these MCM requirements by developing a more detailed inspection program designed with more criteria to detect Illicit Discharge from the site. This program will also have detailed implementation and enforcement protocol to ensure that if illicit discharge is found, it is handled properly and consistent with Phase II SWMP requirements. All investigations of illicit discharge incidences will be documented and all such investigations will be summarized in the Annual Reports.

4.3.2 Storm Sewer System Map

The 22nd DAA has inventoried and created an electronic Storm Sewer System Map of the Del Mar Fairgrounds and Horse Park Properties. This map is a valuable tool for illicit discharge and connection source investigations and spill response/containment. This Storm Sewer System Map has been included in this Phase II SWMP. This map shows the location of all known outfalls and the names and locations of all Waters of the U.S. that receive discharges from those outfalls. The map will be periodically updated by the 22nd DAA Operations Department with the aid of on-site plumbing staff, to reflect current conditions, as needed. "As needed" refers to any time there is any change or alteration of any kind. This Storm Sewer System Map is listed in this document as Exhibit 7.

4.3.3 Non-Storm Water Discharge Prevention

An ordinance or regulatory mechanism is not applicable onsite, due to the ownership of the site by the 22nd DAA. The 22nd DAA will continue to implement appropriate enforcement procedures and actions with the purpose of preventing non-storm water discharge to the MEP. It will be enforced by the 22nd DAA Operations Department. Annual training will be provided to pertinent personnel and staff regarding illicit discharge prevention and prohibition. The training will cover (1) specific actions to take when encountering a non-storm water discharge and (2) a discussion of the sensitivity of the environment surrounding the Fairground and Horse Park properties. In addition, 22nd DAA security staff monitors the site continuously for illegal behavior. If they see anyone dumping or illegally washing, action will be taken.

4.3.4 Policy for Non-Storm Water Discharge Detection

The 22nd DAA policy regarding non-storm water discharge is addressed in the section above. Staff and security will halt any discharge as soon as it is noticed.

4.3.5 Public Education

The 22nd District Agricultural Association will inform staff, promoters, vendors and tenants of the hazards that are generally associated with illegal discharges and improper disposal of waste in at least one form of information dispersion below:

a) The 22nd DAA will create and distribute a quarterly or bi-yearly email in the form of an e-newsletter. This newsletter will be sent to all staff, promoters, vendors and tenants. It will consist of all pertinent information regarding the hazards that are generally associated with illegal discharges and improper disposal of waste. This will serve as a way to keep staff informed on any overall changes which they would not normally receive. This information may be sent at the same time in the same e-newsletter mentioned above in section 2.1.1(a).

b) The 22nd DAA will provide support to the City of San Diego's Think Blue Organization in the organization of a booth at the San Diego County Fair which will serve to inform the general public regarding the hazards that are generally associated with illegal discharges and improper disposal of waste. This information may be dispersed with and in the same form as the information/education outreach described in section 2.1.1(b). Handouts including pencils and stickers may be obtained, and the number of impressions made will be recorded.

c) The utilization of any current and future "Reader Boards" shall be used to display periodic information regarding the effects and hazards that are generally associated with illegal discharges and improper disposal of waste. The 22nd DAA will communicate with local organizations or municipalities to get additional input/information on what will be displayed for the public.

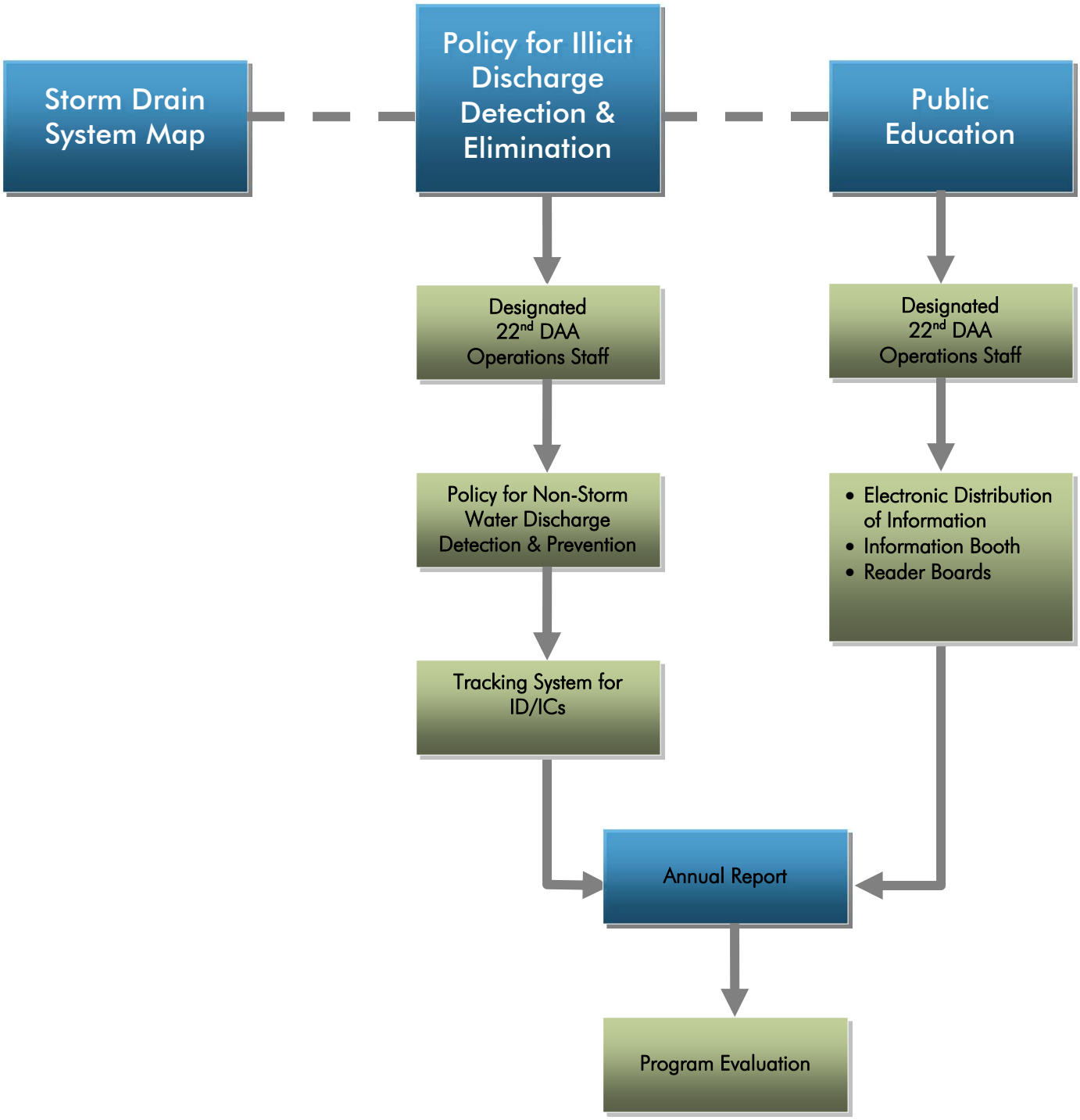
4.3.6 Non-Storm Water Discharges or Flows

The San Diego RWQCB Executive Officer prohibits discharges from landscape irrigation, irrigation water, and lawn watering into waters of the U.S. Irrigation runoff is considered non-storm water discharges or flows that the RWQCB considers a significant source of urban runoff pollution. As a result, this SWMP addresses these discharges through the implementation of efficient irrigation systems.

It is in the best interests of the 22nd DAA to properly inspect their facilities, develop, implement and enforce programs that detect and eliminate illicit discharges in order to stay within compliance of the regulations set forth by the Phase II SWMP. These programs, regulatory mechanisms and practices will ensure that the 22nd DAA is practicing Illicit Discharge Detection and Elimination to the maximum extent practicable.

This program component will be developed and implemented by Year 1 of the Del Mar Fairgrounds/Horse Park Phase II MS4 storm water program. It is intended to achieve a targeted outcome of reducing pollutant loads from sources within the Fairgrounds property. Figure 4 and the MCM #3 matrix below, illustrates this MCM's program framework.

Figure 4
ILLICIT DISCHARGE DETECTION AND ELIMINATION



Minimum Control Measure #3: Illicit Discharge Detection and Elimination								
Objective: 1) Develop, Implement, and enforce a program to detect and eliminate illicit discharges 2) Develop a storm drain map, showing the location of all outfalls and the names and locations of all waters of the U.S. that receive discharges from those outfalls 3) Effectively prohibit non-storm water discharges and implement appropriate enforcement procedures and actions 4) Develop and implement a plan to detect and address non-storm water discharges, including illegal dumping 5) Inform the Del Mar Fairgrounds and Horse Park community of the hazards that are generally associated with illegal discharges and improper disposal waste; and 6) Address the following categories of non-storm water discharges of flows only where they are identified as significant contributors of pollutants to the Small MS4: water line flushing, landscape irrigation, diverted stream flows, rising grounds waters, uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, and de-chlorinated swimming pool discharges.								
Best Management Practices	Task	Measurable Goals	BMP Implementation Timeline (Permit Year)					Staff Responsible for Implementation
			1	2	3	4	5	
<u>Policy for Illicit Discharge Detection and Elimination</u>								
Continue to refine protocols designed to detect illicit discharge from the site.	Enforce protocols to ensure that if an Illicit Discharge is found that it is handled properly and consistent with Phase II SWMP Requirements.	Develop more detailed inspection protocol designed to detect Illicit Discharge from the Del Mar Fairgrounds and Horse Park. Revise as needed.	x	x	x	x	x	
		Implement program.	x	x	x	x	x	
		Enforce program.	x	x	x	x	x	
<u>Storm Sewer Map</u>								
Create a better understanding of the storm water conveyance system at the Del Mar Fairgrounds and Horse Park by developing a map of the storm sewer system.	Inventory and create a Storm Sewer System Map of the Del Mar Fairgrounds and Horse Park property. Show location of all known outfalls and the names and locations of all waters of the US that receive discharges from those outfalls.	Create/Periodically update map.	x	x	x	x	x	

Minimum Control Measure #3: Illicit Discharge Detection and Elimination (Continued)								
Best Management Practices	Task	Measurable Goals	BMP Implementation Timeline (Permit Year)					Staff Responsible for Implementation
			1	2	3	4	5	
Non-Storm Water Discharge Prevention								
Create ordinance or regulatory mechanism to effectively prohibit non-storm water discharges.	The site is owned and managed by the 22nd DAA. Its operations are more similar to a commercial property than a public agency. In lieu of an ordinance or regulatory mechanism to prohibit non-storm water discharges, this is done continuously by security and staff as part of their daily activities and maintenance routines. Annual training will be provided.	Enforce existing operating procedures in preventing non-storm water discharges.	x	x	x	x	x	
Policy for Non-Storm Water Discharge Detection								
Develop and implement a plan to detect and address non-storm water discharges.	The site is owned and managed by the 22nd DAA. This is done continuously by security and staff. This is also integrated into the Dry Weather Monitoring Program.		x	x	x	x	x	

Minimum Control Measure #3: Illicit Discharge Detection and Elimination (Continued)								
Best Management Practices	Task	Measurable Goals	BMP Implementation Timeline (Permit Year)					Staff Responsible for Implementation
			1	2	3	4	5	
Public Education								
Inform staff, promoters, vendors and tenants of the hazards that are generally associated with illegal discharges and improper disposal of waste.								
Public Education: Electronic Distribution of Information								
Distribute a quarterly or bi-yearly electronic newsletter in the form of an e-newsletter	Create a quarterly or bi-yearly e-newsletter published by the Del Mar Fairgrounds consisting of all pertinent information regarding the hazards that are generally associated with illegal discharges and improper disposal of waste.	Create email contact list including all staff, vendors, promoters and tenants.	x	x	x	x	x	22nd DAA Operations Dept.
		Verify annually that this contact database is up to date with new/updated contact information.	x	x	x	x	x	22nd DAA Operations Dept.
		Verify annually that the electronic newsletter was distributed successfully.		x	x	x	x	22nd DAA Operations Dept.
Maintain a Storm water Link on the San Diego Fair Website within the current 'Environmental Advocacy' link. The link will take viewers to current information regarding the hazards that are generally associated with illicit discharges and improper disposal of waste.	Create storm water link that makes pertinent information accessible and use a counter to track the number of impressions made.	Increase the number of impressions made between year 2 and 5.				x	x	22nd DAA Operations Dept.

Minimum Control Measure #3: Illicit Discharge Detection and Elimination (Continued)								
Best Management Practices	Task	Measurable Goals	BMP Implementation Timeline (Permit Year)					Staff Responsible for Implementation
			1	2	3	4	5	
Public Education: Informational Booth								
During the San Diego County Fair, the 22nd DAA will assist Think Blue, the City of San Diego's campaign for clean storm water, by providing support, materials to inform the general public all pertinent information regarding the hazards that are generally associated with illegal discharges and improper disposal of waste.	Appoint staff to organize booth information.	Appoint staff.		x	x	x	x	22nd DAA Operations Dept.
	During San Diego County Fair, assist Think Blue in informing general public all pertinent information regarding the hazards that are generally associated with illegal discharges and improper disposal of waste.	Present information at hosted booth during the San Diego County Fair.		x	x	x	x	22nd DAA Operations Dept.
Handouts including any combination of the following; pencils, stickers, fliers printed on recycled paper, will be distributed.	Distribute pencils, stickers, fliers on recycled paper to bring attention to efforts the 22nd DAA is taking regarding the hazards that are generally associated with illegal discharges and improper disposal of waste.	Increase the number of impressions made between year 2 and 5.		x	x	x	x	22nd DAA Operations Dept.

Minimum Control Measure #3: Illicit Discharge Detection and Elimination (Continued)								
Best Management Practices	Task	Measurable Goals	BMP Implementation Timeline (Permit Year)					Staff Responsible for Implementation
			1	2	3	4	5	
Public Education: Reader Boards								
Utilize any current and future "Reader Boards" to display periodic information regarding the effects and hazards generally associated with illegal discharges and improper disposal of waste to the passing public.	Appoint staff to collect, verify and organize information regarding the effects and hazards generally associated with illegal discharges and improper disposal of waste	Display collected educational information to the public using any available current and future "Reader Boards" at the beginning and end of every rainy season.			x	x	x	22nd DAA Operations Dept.
Communicate with local storm water advisory committees.	Communicate with local storm water advisory committees. Collect, verify and organize information regarding the effects and hazards generally associated with illegal discharges and improper disposal of waste.	Display collected educational information to the public using any available current and future "Reader Boards" at the beginning and end of every rainy season.			x	x	x	22nd DAA Operations Dept.
		Verify annually that this educational information was displayed to the passing public utilizing any available current and future "Reader Boards".			x	x	x	22nd DAA Operations Dept.

4.4 CONSTRUCTION SITE STORM WATER RUNOFF CONTROL

Due to the propensity to create large disturbed soil areas, construction sites are a major source of sediment contamination in storm water runoff. It is widely acknowledged that without proper pollution prevention practices, construction site erosion can be 10 to 1000 times greater than nature's erosion process. In addition to sediment, the intensity of activities and large amounts of materials used on construction sites can also contribute to storm water runoff pollution. For this reason, construction activities at the Del Mar Fairgrounds and Horse Park must be properly planned and controlled. The following section outlines the Minimum Control Measure components for mitigating and abating construction site storm water runoff pollution.

4.4.1 Policy for Erosion and Sediment Control

The 22nd DAA implements the standards set by the General Construction Permit as an on-site regulatory mechanism that requires erosion and sediment controls as well as sanctions and other mechanisms that ensure compliance under State and local laws. SWPPP protocols will be practiced and BMPs will be implemented on all construction sites within the Del Mar Fairgrounds and Del Mar Horse Park to ensure compliance with the General Construction Permit. The General Construction Permit states that "Reduction of storm water discharges from construction activity disturbing less than one acre must be included in your program if that construction activity is part of a larger common plan of development or sale that would disturb more than one acre." The Del Mar Fairgrounds often has ongoing construction or construction work planned for the future. It is considered in this case to be a common plan of development. This program will be enforced on all construction sites on the Fairgrounds property, including any and all sites smaller than one acre in size. These requirements and standards will be enforced upon all onsite construction site operators. Requirements for construction site operators include implementation of these appropriate erosion and sediment control BMPs in order to ensure the protection of beneficial uses of the downstream waters. These BMPs will include silt fencing, fiber rolls, storm drain protection and other erosion and sediment controls.

The Phase II Small MS4 General Permit requires the 22nd DAA to develop, implement and enforce a program to reduce pollutants in any storm water runoff to the Small MS4 from construction activities that result in land disturbance of greater than or equal to one acre.

The 22nd DAA will establish procedures for reviewing the operating site plan.

4.4.2 Construction Project Planning, Approval and Site Plan Review

This Minimum Control Measure BMP is a program element necessary to ensure that storm water quality is considered during a project's construction planning phase and continues to be reviewed on a regular basis. Since construction site erosion, runoff and sediment loss has long been recognized by the 22nd DAA as a threat to receiving waters, there is a process already in place at the Del Mar Fairgrounds for plan review and approval of construction projects. Any construction activity that disturbs less than one acre must be treated as construction activity that is part of a larger common plan of development that would disturb one acre or more. A Storm Water Pollution Prevention Plan (SWPPP) will be prepared for every construction site on the grounds as specified in the General

Construction Permit, Water Quality Order 2009-0009-DWQ. Construction site operators will be required to follow written guidelines in order to "control waste such as discarded building materials, concrete truck washout, chemicals, litter and sanitary waste at the construction site that may cause adverse impacts to water quality."

Procedures for a site plan review will be developed, implemented and enforced. These procedures will incorporate consideration of potential water quality impacts. They will ensure the site plan is being implemented and enforced. These procedures will also be in place to confirm that the site plan continues to be effective in protecting local water bodies from pollution by way of storm water runoff.

The 22nd DAA will continue to utilize its existing policies and procedures to ensure compliance with the General Construction Permit at the project planning and approval phase of Del Mar Fairgrounds construction projects.

4.4.3 Construction Site Compliance Inspections and Enforcement

The 22nd DAA will establish a formal process to inspect all active construction projects within the 22nd DAA property. All active construction sites will be inventoried and the inventory will be periodically updated. A minimum bi-weekly inspection frequency will be established for active construction sites during the rainy season (October 1 through May 1) to ensure continuing compliance with the 22nd DAA construction site storm water polices and proper implementation and maintenance of construction site BMPs. Periodic inspections during the non-rainy season will also be specified. The inspections will require documentation of any compliance deficiencies and the corrective actions implemented in response. This includes inspection of compliance activities related to the 2009 General Construction Permit, such as Visual Monitoring requirements, Rain Event Action Plans, Storm Water Discharge Water Quality Sampling requirements, and general adherence to the project SWPPPP, if applicable. Should corrective actions be noted during a scheduled inspection; follow-up inspections must be performed in addition to the minimum frequency requirement until the correction is satisfied.

Contractors performing work for the Del Mar Fairgrounds shall be enforced through contract provisions for managing storm water runoff pollution control during construction operations. The 22nd DAA will obtain adequate legal authority to enforce water quality violations through contract specifications or other equally effective method. Enforcement actions may include, but are not limited to, issuance of suspension of work, cost recovery for reparations, indemnity, and civil penalties.

This program component will be developed and implemented by Year 1 of the Del Mar Fairgrounds/Horse Park Phase II MS4 storm water program. Activities associated with this BMP will be recorded in the 22nd DAA database.

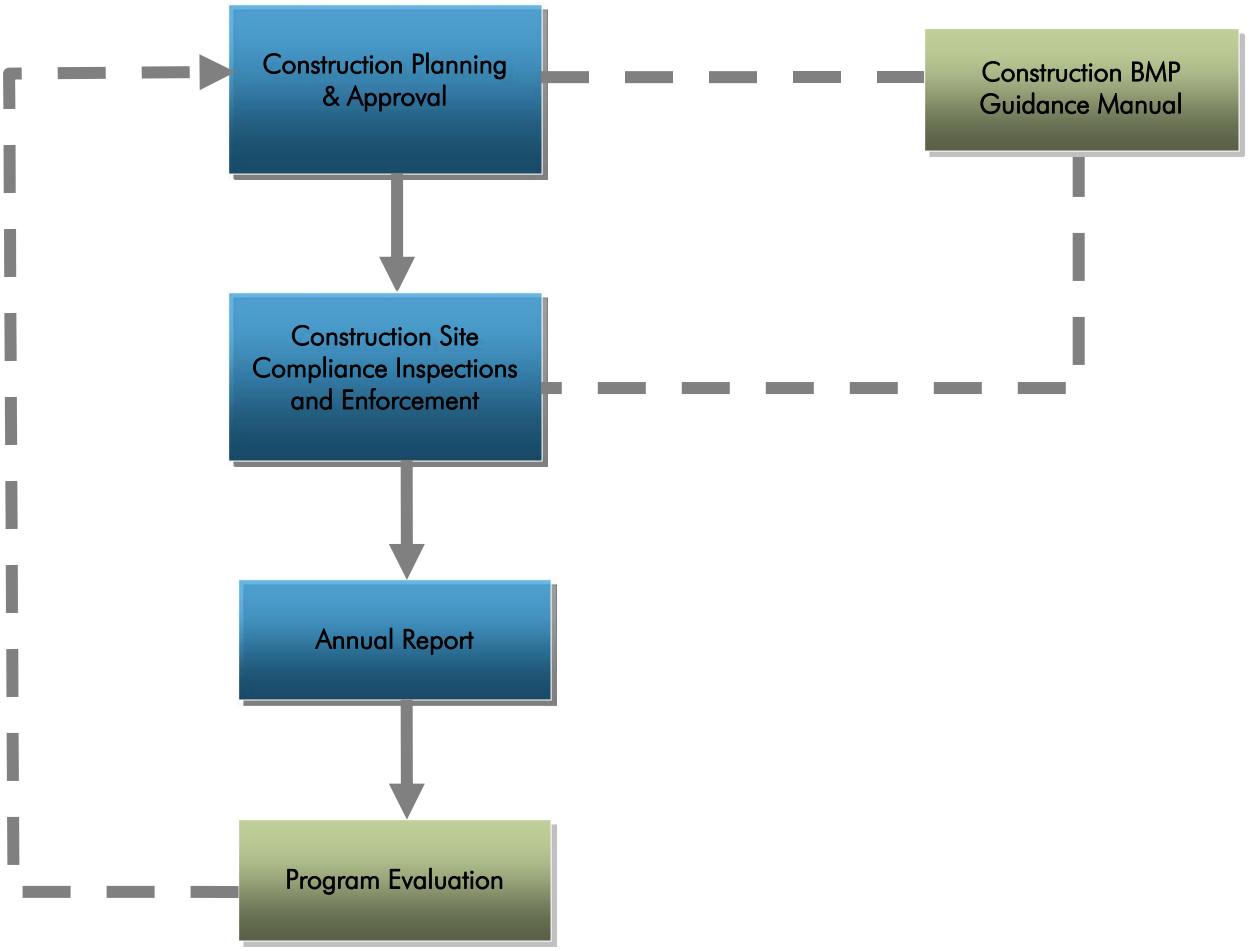
4.4.4 Construction BMP Guidance Manual

Construction planning and site inspections require an understanding of the proper selection and use of the many erosion (including wind erosion), sediment, tracking, materials management, and waste management strategies available. The 22nd DAA will develop or adopt a construction runoff guidance manual for use by project reviewers,

contractors, engineers, and others to ensure adequate water quality protection during the construction phase of a project. The manual will, at a minimum, be consistent with other MS4 permittees' (i.e. County of San Diego, Caltrans) guidelines an policies to ensure that uniform construction site BMP specifications are being provided to project applicants (developers, contractors, and engineers). The manual will also provide 22nd DAA staff a resource to understand proper selection, siting, and design of construction BMPs to aid in performing construction site compliance inspections required by this Model Construction Site Runoff Control Program. This document will also provide guidance to contractors for bidding purposes.

This program component will be developed and implemented by Year 1 of the Del Mar Fairgrounds/Horse Park Phase II MS4 storm water program. This MCM's expected outcome is to improve runoff quality from the property's construction related activities. Figure 5 and MCM #4 matrix, below, outlines the various measures that comprises this program framework.

Figure 5
CONSTRUCTION SITE STORM WATER RUNOFF CONTROL



Minimum Control Measure #4: Construction Site Storm Water Runoff Control								
Objective: To develop, implement, and enforce a program to reduce pollutants in any storm water runoff to the Small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Construction activities that disturb less than one acre must be included if that activity is part of a larger common plan of development or sale that would disturb one acre or more. The program must include: 1) An ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions, or other effective mechanism to ensure compliance 2) Requirement for construction site operators to implement appropriate erosion and sediment control BMPs 3) Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality 4) Procedures for site plan review which incorporate consideration of potential water quality impacts 5) Procedures for receipt and consideration of information submitted by the public; and 6) Procedures for site inspection and enforcement of control measures.								
Best Management Practices	Task	Measurable Goals	BMP Implementation Timeline (Permit Year)					Staff Responsible for Implementation
			1	2	3	4	5	
For construction projects, maintain compliance with the California General Construction Permit and the California Coastal Commission regulations. SWPPP Plan review and site inspections using CASQA Construction BMP Handbook (January 2011) guidelines.	Review construction Plans for each onsite project.	Ensure applicable permit requirements are met.	x	x	x	x	x	22nd DAA Operations Dept.
	Inspect each construction site to ensure that construction site runoff control is practiced.	Ensure inspections are performed per criteria annually.	x	x	x	x	x	22nd DAA Operations Dept.
Develop a Small Site Water Pollution Control Plan (SWPPP) for construction projects that are less than 1 acre in size.	Develop storm water protocols for sites that are less than 1 acre in size.	Implement and enforce Small Site SWPPP.	x	x	x	x	x	22nd DAA Operations Dept.

Minimum Control Measure #4: Construction Site Storm Water Runoff Control								
Best Management Practices	Task	Measurable Goals	BMP Implementation Timeline (Permit Year)					Staff Responsible for Implementation
Develop and/or adopt a construction runoff guidance manual guide BMP implementation. The target audience for the manual will be engineers, developers, plan reviewers, inspectors, contractors, and others involved in land development with storm water management requirements, a summary of the permit application and plan review process, and technical guidance for designing, implementing, and maintaining BMPs.	Adopt a manual designed to ensure compliance with Federal, State and/or local regulations.	Implement and enforce BMP manual.	x	x	x	x	x	22nd DAA Operations Dept.
Develop storm water runoff pollution control provisions in construction contract specifications to hold Contractors accountable and liable for water quality violations.	Adopt contract language to allow 22nd DAA to issue suspension of work, cost recovery, and withholding payment for Contractor failures to implement storm water best management practices and violations of the Statewide General Construction Permit.	Implement and enforce storm water runoff pollution control construction contract specifications.	x	x	x	x	x	22nd DAA Operations Dept.

4.5 POST CONSTRUCTION STORM WATER MANAGEMENT

The 22nd DAA recognizes that storm water runoff from future development projects has the potential to exacerbate water quality concerns on adjacent receiving waters, unless properly managed. The Del Mar Fairgrounds property is developed to a significant degree, however it contains minimal natural areas and minimal treatment control BMPs in place to provide treatment of runoff. Therefore, the implementation of regulations outlined in Section D.2.e, Page 11, of 2003-005-DWQ, at a minimum, will result in an improved water quality runoff environment, as compared with the existing condition.

Considering the Draft 2011 Phase II Small MS4 General Permit is tentatively scheduled for an adoption date in 2012, the 22nd DAA will implement permit conditions outlined in the draft tentative order, which calls for Phase II permittees located within a Phase I permit area to implement the Phase I MS4 post-construction storm water management requirements for new and redevelopment projects. Therefore the Del Mar Fairgrounds property will implement all applicable requirements in the City of Del Mar Standard Urban Storm Water Mitigation Plan (SUSMP), developed on January 14, 2011. The Model SUSMP has been included as Attachment 2 of this SWMP.

The 22nd DAA has determined that the Del Mar Fairgrounds property is exempt from Hydromodification Management Plan requirements of the Model SUSMP. The property discharges runoff directly or through a stabilized conveyance system to an exempt receiving water body. The San Dieguito River, from Lake Hodges Dam down to its outfall to the Pacific Ocean, is considered an exempt river reach in San Diego County (see Table 1-2 in the Model SUSMP). Furthermore, the subject property and its proximate receiving waters reside within a tidally-influenced area or lagoon. Therefore Hydromodification Mitigation Plan requirements are considered not applicable to the Del Mar Fairgrounds.

The proponent of an applicable Priority Development Project to be constructed onsite will be required to develop a Project-specific SWMP, which specifies Best Management Practices (BMPs) which are to be implemented onsite. The selection of BMPs for a project shall rely on a Low Impact Development (LID) design approach, by incorporating natural or biological features termed Integrated Management Practices (IMPs) into the site's design. Together with source control and treatment control BMPs, this LID approach will effectively reduce the discharge of pollutants to the maximum extent practicable and prevent runoff discharges from causing or contributing to a violation of water quality standards.

The selection of LID, source controls, and treatment control BMPs will be driven by the proposed project's pollutants of concern. For this reason, the selection process addresses, 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 Priority Development Project and pollutants associated with that land use type, and (3) pollutants expected to be present on site after project completion. Further details regarding post-construction development requirements can be found in Attachment 2 of this SWMP.

Below are descriptions of water quality planning which has been occurring concerning the Del Mar Fairgrounds, regarding current and future projects. This is included in this SWMP to frame the discussion regarding project approval protocols.

Current Project Atmosphere

Horse Wash Racks

As part of the Arena Roof Project in 2009, new wash rack facilities were constructed within the backstretch area. The wash racks were bermed or walled along sections of the perimeter. The design of these new wash racks focused on keeping horse wash water in, while preventing localized storm water flows from entering the sewer connected inlet. Grit chambers were also installed to reduce sediment and debris from entering the sewer system. These wash racks are the only wash racks authorized for use within the backstretch area during wintertime arena use activities, resulting in zero discharge to the storm drain system from the wash racks and removing the potential for mixing of storm water and sewer discharges.

Media Filter Units

In addition to the wash racks and roof, new water quality BMPs were installed in 2009 to treat runoff from the arena roof and adjacent walkways and barns. Two Kristar Up Flo media filtration units were installed in the storm drain lines currently serving the arena drainage areas. These units are proprietary, structural BMPs installed underground in the storm drain system and use passive, siphon-activated media-filled cartridges that trap and adsorb particulates and pollutants. The media filtration units have been sufficiently sized to treat first flush runoff from the arena drainage area as well as the adjacent barns.

Future Project Atmosphere

The 22nd DAA is currently in the process of updating the previous 1985 Master Plan to help guide the future development of the Fairgrounds facilities over the next 15 years. The proposed 2008 Master Plan includes both near-term and long-term projects (not shown in the table below) to upgrade existing facilities, remove irrelevant facilities, and construct new facilities in order to fulfill the mission of the 22nd DAA. Future projects which are being considered for development contain preliminary plans for Post Construction BMPs, as specified in the Master Plan EIR prepared for the Del Mar Fairgrounds site. However, all future Post Construction Water Quality Design will follow the guidance set forth in the City of Del Mar SUSMP.

These projects have not undergone final design as of the time of the development of this SWMP, and the project list shall be updated annually, as needed, as part of the Annual Report process.

Table 11 – Future Development Projects for Del Mar Fairgrounds

NEAR-TERM** PROJECTS – POTENTIAL TREATMENT CONTROL BMPs					
Project Name	Area	Existing/Proposed % Impervious	Potential LID/ Treatment BMPs	Minimum Treatment Flow Rate	Minimum Treatment Volume
Solana Gate Realignment	1 acre	80%/90%	▪ Inlet Filters* ▪ Flow-Through Planters	0.12 cfs	2,017 ft^3
East Parking Lot Improvements	23 acres	10%/95%	▪ Bioretention* ▪ Bioswales* ▪ Inlet Filters*	3.74 cfs	62,456 ft^3

NEAR-TERM** PROJECTS – POTENTIAL TREATMENT CONTROL BMPs					
Project Name	Area	Existing/Proposed % Impervious	Potential LID/ Treatment BMPs	Minimum Treatment Flow Rate	Minimum Treatment Volume
East RV Sewer Hookups	3.4 acres	No treatment required – utility work only			
New Administrative Offices	8.7 acres	100%/80%	▪ Bioretention ▪ Bioswales ▪ Downspout Filters ▪ Flow-Through Planters ▪ Media Filtration* ▪ Porous Pavement	1.3 cfs	15,400 ft^3
Maintenance Yard: Building A	0.5 acres	100%/100%	▪ Downspout Filters ▪ Flow-Through Planters ▪ Hydrodynamic Separation ▪ Media Filtration*		
Maintenance Yard: Building B	0.4 acres	100%/100%	▪ Downspout Filters ▪ Flow-Through Planters ▪ Hydrodynamic Separation ▪ Media Filtration*		
Maintenance Yard: Building D	1.2 acres	10%/100%	▪ Downspout Filters ▪ Flow-Through Planters ▪ Hydrodynamic Separation ▪ Media Filtration*		
Electronic Reader Board	To Be Treated In Conjunction with New Health Club				
New Health Club	1.33	20%/95%	▪ Downspout Filters*		
Turf Track Widening	7.55	15%/10%	▪ Infield Lakes*		

1 Approximate percent imperviousness of project footprint
2 Source: REC Consultants, Inc. Draft Water Quality Technical Report Del Mar Fairgrounds Surf and Turf Sports Complex and East Parking Lot. Prepared July 20, 2007.

* Denotes primary treatment control BMP
cfs cubic feet per second
**Long Term Projects Not Shown

4.5.1 Site Design Standard Requirements

For applicable development projects, as referenced above, the Project-specific SWMP shall adhere to the Low Impact Development Design Guide guidelines in Attachment 2, where feasible. This is briefly summarized below:

a. Optimize the Site Layout by preserving natural drainage features and designing buildings and circulation to minimize the amount of roofs and paving.

b. Use pervious surfaces such as turf, gravel, or pervious pavement – or use surfaces that retain rainfall, such as vegetated roofs. All drainages from these surfaces are considered to be "self-retained". No further management of runoff is necessary. An emergency overflow should be provided for extreme events.

c. Disperse runoff from impervious surfaces on to adjacent pervious surfaces (e.g. direct a roof downspout to disperse runoff onto a lawn).

d. Drain impervious surfaces to engineering Integrated Management Practices (IMPs), such as bioretention facilities, planter boxes, cisterns, or infiltration trenches. IMPs infiltration runoff to groundwater and/or percolate runoff through engineered soil and allow it to drain slowly. Depending on site conditions and local regulations, it may be possible to harvest and reuse rainwater in conjunction with IMPs.

e. Protect Slopes and Channels

If applicable, project plans must include BMPs which decrease the potential of slopes and/or channels from eroding and impacting storm water runoff:

1) Convey runoff safely from the tops of slopes and stabilize disturbed slopes.
2) Utilize natural drainage systems to the maximum extent practicable.
3) Stabilize permanent channel crossings.
4) Vegetate slopes with native or drought tolerant vegetation, as appropriate.
5) Install energy dissipaters, such as riprap, at the outlets of new storm drains, culverts, conduits, or channels that enter unlined channels in accordance with applicable specifications to minimize erosion, with the approval of all agencies with jurisdiction, e.g., the U.S. Army Corps of Engineers and the California Department of Fish and Game.

f. Provide Storm Drain System Stenciling and Signage

Storm drain stencils are highly visible source controls that are typically placed directly adjacent to storm drain inlets. The stencil contains a brief statement that prohibits the dumping of improper materials into the storm water conveyance system. Graphical icons, either illustrating anti-dumping symbols or images of receiving water fauna, are effective supplements to the anti-dumping message. All storm drain inlets and catch basins within the project area must be stenciled with prohibitive language (such as: "NO DUMPING – DRAINS TO OCEAN") and/or graphical icons to discourage illegal dumping. Signs and prohibitive language and/or graphical icons, which prohibit

illegal dumping, must be posted at public access points along channels and creeks within the project area. Legibility of stencils and signs must be maintained.

g. Properly Design Outdoor Material Storage Areas

Outdoor material storage areas refer to storage areas or storage facilities solely for the storage of materials. Improper storage of materials outdoors may provide an opportunity for toxic compounds, oil and grease, heavy metals, nutrients, suspended solids, and other pollutants to enter the storm water conveyance system. Where proposed project plans include outdoor areas for storage of materials that may contribute pollutants to the storm water conveyance system, the following Structural BMPs are required:

1) Materials with the potential to contaminate storm water must be: (1) placed in an enclosure such as, but not limited to, a cabinet, shed, or similar structure that prevents contact with runoff or spillage to the storm water conveyance system; or (2) protected by secondary containment structures such as berms, dikes, or curbs.
2) The storage area must be paved and sufficiently impervious to contain leaks and spills.
3) The storage area must have a roof or awning to minimize collection of storm water within the secondary containment area.

h. Properly Design Trash Storage Areas

A trash storage area refers to an area where a trash receptacle or receptacles are located for use as a repository for solid wastes. Loose trash and debris can be easily transported by the forces of water or wind into nearby storm drain inlets, channels, and/or creeks. All trash container areas must meet the following Structural or Treatment Control BMP requirements (individual single family residences are exempt from these requirements):

1) Trash containers (dumpsters) must not have drainage from adjoining roofs and pavement conveyed on or under the container.
2) Trash containers (dumpsters) must employ lids or coverings.

i. Employ Efficient Irrigation Systems

Projects shall design the timing and application methods of irrigation water to minimize the runoff of excess irrigation water into the storm water conveyance system.

1) Employing rain shutoff devices to prevent irrigation after precipitation.
2) Designing irrigation systems to each landscape area's specific water requirements.
3) Using flow reducers or shutoff valves triggered by a pressure drop to control water loss in the event of broken sprinkler heads or lines.
4) Employing other comparable, equally effective, methods to reduce irrigation water runoff.

4.5.2 Treatment Control Requirements

Applicable development projects must implement treatment control BMPs which meet the following treatment control BMP requirements:

a) Treatment control BMPs for all applicable development projects shall mitigate (infiltrate, filter, or treat) the required volume or flow of runoff 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 United States. Multiple 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 either project.

c) All treatment control BMPs for a single development project shall collectively be sized to comply with the following numeric sizing criteria:

Volumetric Treatment Control BMP

i. The 85th percentile 24-hour runoff event determined as the maximized capture storm water volume for the area, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ ASCE Manual of Practice No. 87, (1998); or

ii. The volume of annual runoff based on unit basin storage water quality volume, to achieve 80 percent or more volume treatment by the method recommended in California Storm Water Best Management Practices Handbook – Industrial/ Commercial, (2003); or

iii. The volume of runoff produced from a historical-record based reference 24-hour rainfall criterion for "treatment" that achieves approximately the same reduction in pollutant loads achieved by the 85th percentile 24-hour runoff event.

Flow Based Treatment Control BMP

i. The flow of runoff produced from a rainfall intensity of 0.2 inch of rainfall per hour, for each hour of a storm event; or

ii. The flow of runoff produced from a rain event equal to at least two times the 85th percentile hourly rainfall intensity for the area.

LID BMPs, as outlined in the Model SUSMP, that are correctly designed to effectively infiltrate, filter, or treat runoff can be considered as providing water quality treatment for a respective drainage area, provided calculations are provided demonstrating effective treatment.

d) All treatment control BMPs for applicable development projects shall, at a minimum be ranked with high or medium pollutant removal efficiency for the project's most significant pollutants of concern, as the pollutant removal efficiencies, as shown in the tables below.

Table 12 – 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	✓	✓	
Nutrients		✓	✓
Heavy Metals		✓	
Organic Compounds		✓	
Trash & Debris	✓		
Oxygen Demanding		✓	
Bacterial		✓	
Oil & Grease		✓	
Pesticides		✓	

Table 13 – Groups of Pollutants and Relative Effectiveness of Treatment Facilities

Pollutants of Concern	Bioretention Facilities (LID)	Settling Basins (Dry Ponds)	Wet Ponds & Constructed Wetlands	Infiltration Facilities or Practices (LID)	Media Filters	Higher Rate Biofilters	Higher Rate Media Filters	Trash Racks and Hydrodynamic Devices	Vegetated Swales
Coarse Sediment & 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

Treatment control BMPs with a low removal efficiency ranking shall be approved only when it is demonstrated in the Project-specific SWMP that implementation of treatment control BMPs with high or medium removal efficiency rankings are infeasible for an applicable development project.

4.5.3 Operations and Maintenance Considerations

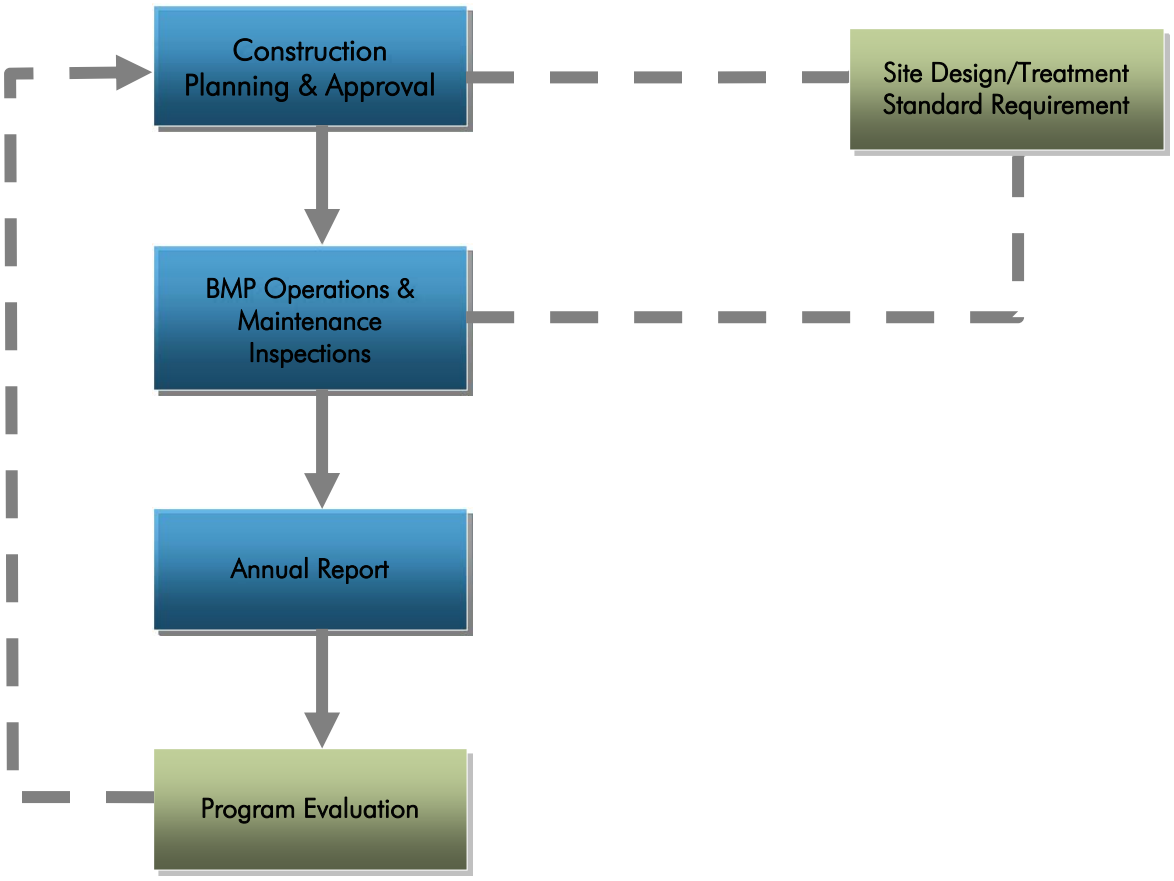
Improper maintenance is one of the most common reasons why water quality controls will not function as designed or which may cause the system to fail entirely. Development projects which are constructed at the Del Mar Fairgrounds and Horse Park are owned and operated by the 22nd DAA, and unless otherwise noted, maintenance responsibility will be that of the 22nd DAA. If the maintenance of any BMP is performed by a 3rd party or

leasee, the maintenance activity shall be recorded, however the responsibility for maintenance shall be of the 22nd DAA, unless specified otherwise in the Post Construction Water Quality Technical Report.

To be included in the Project-specific SWMP is a signed agreement from the 22nd DAA assuming responsibility for Structural or Treatment Control BMP maintenance. Although not anticipated, the transfer of property to a private or public owner must have conditions requiring the recipient to assume responsibility for maintenance of any Structural or Treatment Control BMP to be included in the sales or lease agreement for that property, and will be the owner's responsibility. The condition of transfer shall include a provision that the property owners conduct maintenance inspection of all Structural or Treatment Control BMPs at least once a year and retain proof of inspection. Educational materials and all maintenance information must be transferred to the new ownership entity.

This program component (regarding protocol and procedures) will be developed and implemented by Year 1 of the Del Mar Fairgrounds/Horse Park Phase II MS4 storm water program. However, actual implementation is dependent upon the Master Plan Schedule and individual projects. The desired outcome is to ultimately reduce pollutant loads from sources, as well as improving runoff quality. Figure 6 and MCM #5 Matrix, shown below, help demonstrate this program's framework and timeline to implement post-construction BMPs.

Figure 6
POST CONSTRUCTION STORM WATER MANAGEMENT



Minimum Control Measure #5: Post-Construction Storm Water Management in New Development and Re-Development								
Objective: 1) Develop, implement, and enforce a program to address storm water runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects that are less than one acre that are a part of a larger common plan of development or sale, that discharge into the Small MS4 by ensuring that controls are in place that would prevent or minimize water quality impacts 2) Develop and implement strategies, which include a combination of structural and/or non-structural BMPs appropriate for the Del Mar Fairgrounds site 3) use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects; and 4) Ensure adequate long-term operation and maintenance of BMPs.								
Best Management Practices	Task	Measurable Goals	BMP Implementation Timeline (Permit Year)					Staff Responsible for Implementation
			1	2	3	4	5	
Require that all applicable development projects submit a Post Construction Project-specific SWMP which details Best Management Practices employed onsite.	Review document for compliance with Model SUSMP.	Ensure applicable permit requirements are met.	x	x	x	x	x	22nd DAA Operations Dept
Ensure that post construction BMP maintenance entity verification is performed prior to plan approval.	Verify that maintenance entity exists.	Ensure applicable permit requirements are met, maintenance details are verified and in place.	x	x	x	x	x	22nd DAA Operations Dept
Evaluate the potential for LID features to be incorporated into the design for water quality treatment or a portion of the treatment thereof					X	X	X	22nd DAA Operations Dept

4.6 POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR ONSITE OPERATIONS

This SWMP Minimum Control Measure addresses potential pollutants generated as a result of daily operations and maintenance activities performed at the Del Mar Fairgrounds and the Del Mar Horse Park. There are 8 identified general categories of activities performed at the Del Mar Fairgrounds and Del Mar Horse Park on a day-to-day basis that impact storm water runoff. They are: (1) Liquid Materials Storage and Management (2) Landscaping and Grounds Maintenance, (3) Hardscape Maintenance and Repair, (4) Building Maintenance and Repair, (5) Vehicle Maintenance, Repair, Washing and Fueling, (6) Construction and Land Disturbances, (7) Materials Delivery, and (8) Flood Management and Storm Water Conveyance System Maintenance. Pollution prevention and good housekeeping BMPs will be developed as part of the Del Mar Fairgrounds/Horse Park Phase II SWMP for each of these areas of activity which, at minimum, will be derived from guidelines published in the California Storm Water Quality Association (CASQA) BMP Handbooks.

The 22nd DAA will implement an operation and maintenance program for the purpose of preventing or reducing pollutant runoff from facility operations. This operation and maintenance program will include a training component utilizing training materials available from the U.S. EPA, the State or other organizations. The program will also include employee training to prevent and reduce storm water pollution from activities such as facilities maintenance, new construction and land disturbances, and storm water system maintenance.

4.6.1 Liquid Materials Storage and Management

The following 22nd DAA operations involve the handling and/or use of liquid materials or liquid wastes. Three operations have been identified: (1) above ground storage tank operations, (2) hazardous waste/used oil management, and (3) water quality clarifiers/oil water separator operations. Facilities that carry out such operations are considered storm water "hot-spots" where pollutants generated can directly impact storm water runoff quality.

4.6.1.1 Above Ground Storage Tank Operations

Two above ground fuel storage tanks are located on the Del Mar Fairgrounds and one tank at the Horse Park site. One 1000 gallon unleaded gasoline tank and one 500 gallon diesel tank are located next to the washing area at the southwest portion of the property, south of Bing Crosby Hall. In addition, there is a diesel fuel tank located at the Del Mar Horse Park, at the northwest portion of the project site.

All fuel tanks are double lined and the above ground tanks are located within secondary containment basins as a spill prevention measure. The containment area has adequate capacity to capture potential overflows due to refueling.

Staff designated by the 22nd DAA cleans up minor spills promptly. Spill absorbent materials of various types are stored in locations throughout the facility. The material storage area is checked periodically by a designated staff member of the 22nd DAA. Areas are cleaned on an as needed basis. Fuel contaminated materials such as rags and adsorbent materials are placed in

covered containers. Containment drums are marked for these materials to ensure proper disposal.

4.6.1.2 Hazardous Waste/Used Oil Management

Periodically, hazardous waste/used oil generated at the Del Mar Fairgrounds is picked up and transported to a designated used oil recycling facility. Storage, record keeping and report generation is managed in accordance with applicable regulations.

4.6.1.3 Water Quality Clarifiers/ Oil Water Separator Operations

There are 4 water quality clarifiers/oil water separators in place at the Del Mar Fairgrounds. Two are located in the parking lot south of the training track, and the other two are located at the southwestern corner of the Main Parking Lot.

- All water quality clarifiers/oil water separators shall be kept in proper working order at all times.
- Currently, the clarifiers are cleaned prior to and following the rainy season by Ancon Marine, an independent contractor.
- In the event that a water quality clarifier/oil water separator is not working properly or undergoing maintenance, any potential runoff source or inlet shall be blocked off to eliminate the chance of contaminants flowing through the unit without filtration until the repairs and maintenance are complete.

Inspections will be performed quarterly to ensure proper procedures are employed to prevent storm water runoff pollution.

This program component will be developed and implemented by Year 1 of the Del Mar Fairgrounds/Horse Park Phase II storm water program. Activities associated with this BMP will be recorded and reported in the annual report. The desired outcome is to reduce pollutant loads from sources generated by maintenance practices.

4.6.2 Landscaping and Grounds Maintenance

Improperly managed landscape and grounds maintenance at the Del Mar Fairgrounds and Horse Park could negatively affect the receiving water such as the San Dieguito River, San Dieguito Lagoon, and Pacific Ocean. The following Best Management Practices (BMPs) are prescribed to minimize landscaping operations impacts.

4.6.2.1 Green Waste Management

All landscaped areas at the Del Mar Fairgrounds and Horse Park require periodic maintenance which generates green waste and debris, also possibly involving the utilization of chemicals such as pesticides, herbicides and fertilizers. In 2007 the facility produced approximately 22,000 tons of straw, manure, and wood shavings, tree trimmings in addition to approximately 187 tons of ADC Green Waste.

Landscape maintenance practices can potentially contribute pollutant loads to receiving waters if materials are not handled and/or applied properly. The objectives for SWMP compliance will include:

- Preventing all green waste from entering the storm drain system by placing any stockpiles away from watercourses or drainage conveyances and protecting them from run on/run off during any precipitation event.

- Inspections will be performed annually to ensure proper procedures are employed to prevent storm water runoff pollution.

This program component will be developed and implemented by Year 1 of the Del Mar Fairgrounds/Horse Park Phase II storm water program. Activities associated with this BMP will be recorded and reported in the annual report.

4.6.2.2 Efficient Irrigation

The over watering of landscaped areas is commonly overlooked in controlling urban runoff. Water discharged from over watering creates nuisance flows of non-point source runoff, which is often regarded as a major source of pollutants in water bodies. In addition, the Del Mar Fairgrounds currently uses recycled water from San Elijo Water Reclamation Facility for a significant portion (Approximately 75%) of landscaping water needs. In 2007 the facility used approximately 4,030,400 cubic feet of recycled water for irrigation and dust control.

The following practices will be implemented to reduce the impacts of irrigation runoff.

- Conduct surveys of the irrigation system at regular frequencies to determine if the system is working properly and if over watering is occurring. Repair the system as-needed.

- If over watering is occurring, reprogram the irrigation timers to deliver a lesser volume of water at a greater frequency.

- Over watering will be recognized by runoff from the landscaping area, at will be stopped as soon as possible.

- Upon the discovery of an overwatering location, a site by site determination will be made whether existing technology can accommodate the issue, or if new technology must be obtained.

Inspections will be performed annually to ensure proper procedures are employed to prevent storm water runoff pollution.

This program component will be developed and implemented by Year 1 of the Del Mar Fairgrounds/Horse Park Phase II storm water program. Activities associated with this BMP will be recorded and reported in the annual report.

4.6.2.3 Pesticide, Herbicide and Fertilizer Use

The use of pesticides, herbicides and fertilizers in a manner that is protective of water quality requires trained personnel who are knowledgeable about the potential environmental risks involved with application. Generally, herbicide and pesticide use should not be applied within 24 hours of forecasted precipitation. Herbicide and pesticide use should also be limited during high winds. Currently the facility submits a monthly use report online to the Dept. of Agriculture each month showing all pesticides used and amounts. All Pesticides are stored in locked and labeled pesticide enclosures in the infield shop. The facility is also inspected by the Dept. of Agriculture each January.

Trained personnel should be capable of implementing using integrated pest management (IPM) plan as a pest control strategy. A successful IPM will involve:

- Setting Action Thresholds – determining the point at which pest populations or environmental conditions indicate that pest control action must be taken.
- Monitoring and Identifying Pests – actively monitoring and identifying pest populations to determine if action is needed rather than assuming action is needed if pests are present.
- Prevention – managing and selecting a protocol palette in a manner that prevents pests from becoming a threat.
- Control – evaluate the proper control method for both effectiveness and risk.

Inspections will be performed annually to ensure proper procedures are employed to prevent storm water runoff pollution.

This program component will be developed and implemented by Year 1 of the Del Mar Fairgrounds/Horse Park Phase II storm water program. Activities associated with this BMP will be recorded and reported in the annual report. The desired outcome is to reduce pollutant loads from sources generated by maintenance practices.

4.6.3 Hardscape Maintenance and Repair

Activities performed on hardscape features at the Del Mar Fairgrounds and Horse Park serves two primary functions: preventative maintenance and repair. The amount of asphalt and concrete surfaces on the Fairgrounds ensures that there is an intense use of this category activity. Street sweeping and parking lot cleaning is a preventative maintenance activity that requires good housekeeping practices, while hardscape repair requires pollution prevention to the MEP.

4.6.3.1 Street and Parking Lot Cleaning

Street sweeping and parking lot cleaning occurs regularly at the Del Mar Fairgrounds to ensure that sediment, trash, debris and vehicle fluids are removed from the premises.

Street and parking lot sweeping shall be scheduled to occur with the following frequencies. High trash volume areas need to be swept at least once a month, moderate trash volume areas at least twice a year, and low trash volume areas at least once per year, prior to the start of the rainy season.

- All street sweet sweeping materials shall be disposed of in a manner that does not impact storm water. All streets and parking lots should be inspected periodically to detect vehicle fluid leaks and spills.
- In the event that small spills are detected, they should be cleaned up with rags or absorbent materials and disposed of in a manner that does not impact storm water.
- In the event that a large spill is detected, the Maintenance Manager should be notified and protocols for the clean-up of the large spill shall be executed.
- Unpaved parking lots shall have tracking controls in place at entrances to prevent tracking onto public streets. Should tracking occur, street sweeping activities will be implemented along Jimmy Durante Blvd.

Inspections will be performed annually to ensure proper procedures are employed to prevent storm water runoff pollution.

This program component will be developed and implemented by Year 1 of the Del Mar Fairgrounds/Horse Park Phase II storm water program. Activities associated with this BMP will be recorded and reported in the annual report.

4.6.3.2 Hardscape Repair

Hardscape repair includes, but are not limited to, the repair and resurfacing of streets, parking lots, sidewalks/walkways. Proper repair procedures will be developed to address storm water runoff pollution prevention, such as:

- All Hardscape repair should be performed during the dry season or unless the repair is deemed urgent. If performed in the wet season, the BMPs which preclude runoff will be employed onsite.
- Any broken concrete should be stockpiled away from watercourses.
- Storm drain inlets should be protected when broken concrete is present.
- Concrete washout areas should be contained in a bermed area using visqueen or plastic sheeting, or other equivalent method of containment.
- Hardscape debris should be recycled to the greatest extent possible.
- Water use during saw cutting and grinding operations should be minimized. The work area should be bermed to contain the slurry material. The slurry must be disposed of in a manner that does not impact the storm drain system or nearby water courses.

Inspections will be performed annually to ensure proper procedures are employed to prevent storm water runoff pollution.

This program component will be developed and implemented by Year 1 of the Del Mar Fairgrounds/Horse Park Phase II storm water program. Activities associated with this BMP will be recorded and reported in the annual report. The desired outcome is to reduce pollutant loads from sources generated by maintenance practices.

4.6.4 Building Maintenance and Repair

The 22nd DAA has designated the Fairgrounds appearance to be a top priority and has mandated that the daily cleaning and maintenance of buildings and grounds are to be monitored by appropriate personnel. The materials used and the debris generated during building maintenance are potential pollutants for storm water runoff. The following BMPs will be implemented, as needed, to minimize the potential for pollutants from building maintenance to be transported by storm water into the storm drainage system.

Maintenance and Repair

- Repair any leaking roofs to prevent storm water from contacting materials stored under roofs.
- Prevent concrete, steel, wood, metal parts, tools, or other work materials from entering storm drains.
- Concrete dust and debris with the potential to enter the MS4 or receiving waters must be cleaned to the maximum extent practicable.
- Thoroughly clean the job site when the repair and maintenance operations are completed.

Painting, Dry Wall, Stucco and Concrete

- Implement controls to prevent discharging into the storm drainage system of materials from painting, dry wall, stucco, and concrete work.
- Secure equipment and materials during transfer in vehicles to prevent spills. Transport paint and materials to and from job sites in containers with secure lids.
- Do not transfer or load paint near storm drain inlets or watercourses.
- Test and inspect spray equipment prior to starting to paint. Tighten all hoses and connections and do not overfill paint container.
- Educate personnel on proper cleaning and disposal methods (e.g., do not rinse tools off into the storm drainage system).
- Where significant risk of a spill reaching storm drains exists, cover nearby storm drain inlets prior to starting painting and remove the cover when the job is completed.
- Clean up spills immediately. Use scoops, rags, absorbents, or vacuuming to clean spills. Do not hose down or bury spilled materials. Collect spilled (non-hazardous) materials for reuse or recycling and properly dispose of non-recyclable wastes and spent absorbents.

Floor Cleaning

- Maintain a regular sweeping and cleaning schedule. Use brooms, shovels, vacuum cleaners, or cleaning machines.
- When possible, use a broom to sweep dry surfaces.
- Advise facility staff on proper disposal of cleaning water, wax, and unused floor stripper.
- Visually inspect drains and sinks to look for signs of improper disposal of waste liquids.

- Advise facility staff that waste wash water from automated floor cleaning equipment should be disposed n the sanitary sewer.

Indoor Equipment Cleaning

- Wastewater from cleaning equipment should be discharged into the sanitary sewer.

Indoor Residues and Spills

- Educate personnel on proper cleaning and disposal methods for spills and leaks. Proper disposal methods depend on the type of substance. If a hazardous material is spilled, the personnel should refer the incident to the 22nd DAA Operations Manager, and or Hazardous Material/ Public Safety Officer.
- Maintain appropriate absorbent materials in accessible locations and train employees on proper spill response techniques.
- All interior floor drains and sumps should be plumbed to the sanitary sewer.

Refuse Dumpsters

- Have garbage and waste materials collected and disposed of regularly.
- Maintain a sufficient number of trash receptacles that are appropriately distributed.
- Relocate dumpsters and bins away from storm drains.
- Advise facility operators to keep dumpster lids closed when not in use and replace bins without lids.
- Precipitation accumulated in refuse containers must be discharged to the sanitary sewer.
- Repair leaking dumpsters.

Loading Docks

- Inspect all loading dock drains for potential pollutants (from spilled materials or leaking vehicles).
- Debris in catch basins should be removed on a regular basis.
- Catch basin inlets should be protected from accidental spillage by capping inlets, or placing absorbent booms around them.
- Loading docks should be cleaned regularly using a mop, broom, or vacuum street sweeper.

Roof Vents and Equipment

- Roof vents that contact greasy materials should be inspected and cleaned prior to the wet season.
- If feasible, drip pans or trays should be installed at the base of the vents that discharge materials that may impact storm water runoff.
- Ductwork should be properly sealed and maintained.
- If feasible, protective devices should be installed around roof top storm drain inlets.
- Roofs should be inspected for residual machinery process residues (paper dust, sawdust, steam condensate, and paint). Hazardous materials should be properly handled and disposed.

Washing of Outside Areas

- Sweep and clean outdoor areas as close as possible to a forecasted rainfall event.
- Use brooms or street sweepers.
- If power washing must be used, wastewater should not be discharged to the storm drainage system. Water from power washing activities should not be allowed to enter the MS4 and will be collected using a wet vacuum and properly disposed.

HVAC, Chillers, and Refrigerators

- Evaluate the discharge location of air conditioning condensate.
- Prohibit discharges to the storm drain of flushing agents from air conditioning and chiller units. Direct HVAC contractors to by-pass condensate lines during flushing and to properly dispose of all descaling or anti-algae agents. The contractor should provide proof of disposal of liquids and flushing agents.
- Require contractors performing washing of equipment to contain wash water and discharge the water to the sanitary sewer.
- Properly dispose of waste compressor oil from chillers.

Boilers

- All treated boiler discharge must be discharged to the sanitary sewer or recycled/reused in an approved closed loop system.
- Discharges of boiler chemical additives may meet hazardous waste criteria and should be disposed of accordingly.
- Boiler roof vents can deposit condensate that contains potential storm water pollutants on the roof. Divert flow from boiler roof vents to the sanitary sewer.

Cooling Towers

- All cooling tower discharges must be directed to the sanitary sewer.
- Cooling tower chemicals should not be stored adjacent to any storm drains. Refer chemical storage problems to 22nd DAA Chief Plant Operations.
- Properly dispose of cooling tower chemicals.

Miscellaneous

- Prevent emergency eyewash and showers from discharging to the storm drain when used for decontamination.
- Water from back-flushing or backwashing filter equipment should be discharged to the sanitary sewer. Solids should be collected and disposed of into a refuse container.
- Water from overflow drains from ponds and decorative fountains should be used for irrigation or discharged into the sanitary sewer.

Inspections will be performed annually to ensure proper procedures are employed to prevent storm water runoff pollution.

This program component will be developed and implemented by Year 1 of the Del Mar Fairgrounds/Horse Park Phase II storm water program. Activities associated with this BMP will be recorded and reported in the annual report. The desired outcome is to reduce pollutant loads from sources generated by maintenance practices.

4.6.5 Vehicle Maintenance, Repair, Washing and Fueling

The following practices will be implemented to minimize the potential for pollutants in runoff from activities associated with vehicular maintenance, repair, washing and fueling.

4.6.5.1 Vehicle Maintenance and Repair

Vehicle maintenance facilities are considered storm water "hot-spots" where significant amounts of hydrocarbons, heavy metals, and other toxic pollutants can be produced and impact the quality of storm water runoff. Some of the wastes generated at vehicle maintenance facilities include the following:

- Solvents, paints, and paint thinners
- Motor oils
- Antifreeze
- Fuels (gasoline, diesel)
- Brake fluid and brake lining
- Lubricating grease
- Batteries
- Heavy metals

Vehicle maintenance is generally conducted at the 22nd DAA machine shops, or in the west parking lot. Drip trays/oil pans are to be used at all times if maintenance is taking place outdoors.

General pollution prevention and good housekeeping practices for implementation, as necessary, at the Del Mar Fairgrounds are as follows:

Waste Reduction

- Minimize the number of solvents used to maximize recycling and reduce costs.
- Centralize liquid cleaning areas to ensure that solvents and residues stay at a controlled area.
- Locate drip pans and draining boards to direct solvents pack into a solvent sink or holding tank for reuse.

Material Storage

- Evaluate the storage methods of materials and by-products to determine exposure to precipitation. Store materials under a cover or in bermed areas.
- Cover storm drains during material transfer and increase housekeeping in those areas.
- Liquid materials should be stored in sealed containers within secondary containment and solid materials should be placed on pallets and covered during forecasted precipitation. Any leaking containers should be disposed of properly.

Using Safer Alternatives

- Use non-hazardous cleaners when possible.
- Replace chlorinated organic solvents with non-chlorinated ones such as kerosene or mineral spirits.
- Purchase recycled products to support recycling (oil, transmission fluid, antifreeze, and hydraulic fluid).

Spill Clean Up

- Minimize water use during clean up of spills, leaks and drips.
- Use rags to clean up small spills, dry absorbent material for larger spills, and a mop for general cleanup. Properly dispose of mop water.
- Fuel contaminated materials such as rags and absorbent materials are placed in covered containment drums marked for these materials to ensure proper disposal.

Good Housekeeping

- Conduct personnel training and public outreach to reinforce proper disposal practices.
- Conduct maintenance work such as fluid changes indoors or in an area with secondary containment.
- Update facility schematics to accurately reflect all plumbing connections.
- Closely monitor parked vehicles for leaks and place drip pans under any leaks to collect the fluids for proper disposal or recycling.
- Transfer used fluids to recycling drums or hazardous waste containers.
- Do not pour liquid waste down floor drains, sinks, or outdoor storm drain inlets.
- Store cracked batteries in secondary containers.
- If large equipment is maintained on site, ensure the wash water used to clean equipment is not disposed in the storm drain directly of indirectly.
- Provide spill protection for storm drain inlets including mats to over drains in the event of a spill.

Parts Cleaning

- Use detergent-based or water-based cleaning systems instead of organic solvent degreasers.
- Steam cleaning and pressure washing may be used instead of solvent parts cleaning. The wastewater generated from steam cleaning can be discharged to the on-site oil/water separator.

Inspections will be performed quarterly to ensure proper procedures are employed to prevent storm water runoff pollution.

This program component will be developed and implemented by Year 1 of the Del Mar Fairgrounds/Horse Park Phase II storm water program. Activities associated with this BMP will be recorded and reported in the annual report. The desired outcome is to reduce pollutant loads from sources generated by maintenance practices.

4.6.5.2 Vehicle Washing

Outdoor vehicle washing can result in high loads of nutrients, metals and hydrocarbons, as the detergent-rich water flows down the street and into storm drains. Commercial wash facilities often recycle their wash water or treat it prior to its discharge to the sanitary sewer. Therefore, most storm water impacts from vehicle washing are from residents and facilities that discharge polluted wash water to the storm drainage system. The 22nd DAA already maintains a properly designed vehicle wash facility, which is connected to the sanitary sewer. All

personnel should use this facility for vehicle washing. Other general pollution prevention practices for vehicle washing are as follows.

- Wash all vehicles in areas designated to collect and hold the wash and rinse water or effluent generated. Wash water effluent should be recycled, collected, or treated prior to discharge to the sanitary sewer system.
- If wash water containment is not possible, wash vehicles on gravel, grass or other permeable surfaces.
- Block off the storm drain or use an insert to catch wash water.
- Use hoses with nozzles that automatically turn off when unattended.
- Use only biodegradable soaps.

Inspections will be performed quarterly to ensure proper procedures are employed to prevent storm water runoff pollution.

This program component will be developed and implemented by Year 1 of the Del Mar Fairgrounds/Horse Park Phase II storm water program. Activities associated with this BMP will be recorded and reported in the annual report.

4.6.5.3 Vehicle Fueling

The 22nd DAA already maintains designated vehicle fueling facilities. General fueling-related pollution prevention practices are as follows:

- Protect storm drains in areas where fuel dispensing equipment, fueling, or the transfer of any chemical from one vessel to another is conducted near a storm drain.
- Fuel vehicles in contained areas to prevent any fuel spillage from reaching the storm drainage system.
- Provide absorbent booms in uncontained fueling areas.
- Do not top-off the tank when fueling vehicles.
- Lock fuel dispensers when not in use.
- Fuel contaminated materials such as rags and absorbent materials are placed in covered containment drums marked for these materials to ensure proper disposal.

Inspections will be performed quarterly to ensure proper procedures are employed to prevent storm water runoff pollution.

This program component will be developed and implemented by Year 1 of the Del Mar Fairgrounds/Horse Park Phase II storm water program. Activities associated with this BMP will be recorded and reported in the annual report. The desired outcome is to reduce pollutant loads from sources generated by maintenance practices.

4.6.6 Construction and Land Disturbances

BMPs for construction and land disturbances are described in section 2.4.

4.6.7 Materials Delivery

Materials delivery areas on the 22nd DAA properties have the potential to discharge pollutants, including sediment, trash, heavy metals, and oil & grease. Vehicular traffic to and from the properties occur year round. For this reason, the Del Mar Fairgrounds has a central warehouse facility located south of Bing Crosby Hall (see Exhibit 2 and 7) where most all shipments are received and handled. Materials are then delivered to appropriate locations on the Fairgrounds by the suppliers, concessions staff, or 22nd DAA operations staff. The following practices will be implemented to minimize the potential for pollutants in runoff from activities associated with materials delivery.

Routine Inspection and Cleanup

- Keep areas clean and orderly. Remove debris in a timely fashion.
- Routinely sweep, shovel, dispose of litter in the trash. Use dry cleaning methods (e.g. sweeping and vacuuming) to prevent the discharge of pollutants into the storm drain system if possible.
- If wet methods are used for surface cleaning, collect and pump wash water to the sanitary sewer or discharge to pervious surface. Discharge soapy water remaining in mop or wash bucket to the sanitary sewer through appropriate or designated wash sink.
- Store and maintain appropriate spill cleanup materials in a location that is readily accessible and known to all and ensure that staff is familiar with proper spill cleanup procedures.

Loading and Unloading

- Check loading and unloading equipment readily for leaks.
- Have staff load and unload all materials in covered areas, such as building overhangs or indoors, when practical or if possible.
- Park vehicles delivering liquid materials away from storm drain inlets, where feasible.

4.6.8 Flood Management and Storm Water Conveyance System Maintenance

The following practices will be implemented to minimize the potential for pollutants in runoff from activities associated with flood management and storm water conveyance system maintenance.

Routine Inspection and Cleaning

- Flow diversion structures should be inspected annually to evaluate structural conditions and the impacts of erosion and sedimentation on the structure.
- Inspect storm water diversion systems periodically prior to the beginning of the Oct 1st- May 1st rainy season to remove debris that may impair or damage the system.
- Storm drain catch basins shall be cleaned as needed. Currently, the facility utilizes the clarifiers to trap sediment and debris, therefore catch basin cleaning is not always necessary on a regular basis. Typically, a catch basin should be cleaned if the depth of deposited materials is greater than or equal to one-third the depth of the catch basin. Catch basins observed to exceed the one-third depth standard should be cleaned more frequently. If debris or trash is observed to accumulate in a catch basin,

the frequency of inspection and cleaning should increase. Catch basins can be cleaned either manually or by specially designed equipment (vacuum trucks).

- Inspect and clean as needed all storm drain facilities that have been affected by emergency response activities.
- Storm Drain Flushing.
  - Storm drains are not flushed at the facility.
- Open Channel Maintenance
  - Debris and material removed from open channels should be disposed of at an approved location. Do not dump material into or near storm drain inlets, ditches, or watercourses.
  - Use temporary erosion control measures, such as sediment basins, silt fences, hay bales, or blankets, if necessary, to protect damaged channel slopes until permanent repairs have been completed.
  - Appropriate permits will be obtained, as necessary, when such maintenance activities involve waters of the U.S. and/or waters of the State.
  - Future maintenance dredging of Steven's Creek must be performed under a 401 Permit and 404 certification by the Regional Board. It should be noted that on-going maintenance activities have been permitted by regulatory agencies through year 2014.
- When materials are saturated with water, dewatering should be done in an area that does not drain to storm drains or receiving waters.
- Chemical analysis should be performed on materials removed from the storm drainage system to determine disposal options (materials removed may meet criteria for hazardous waste).

Solid Waste Management

- Debris from storm drain maintenance should be contained to prevent discharge to receiving waters. Catch basins observed to contain trash in excess of one-third of their capacity should be cleaned up as soon as possible.
- Provide containment for the storage of debris removed during cleaning. Containment should be constructed from impermeable materials.
- Dewatering of materials collected from storm drain maintenance should occur at a location that does not drain to the storm drain or receiving waters.
- Materials collected from storm drainage systems should be identified, quantified, and recorded.

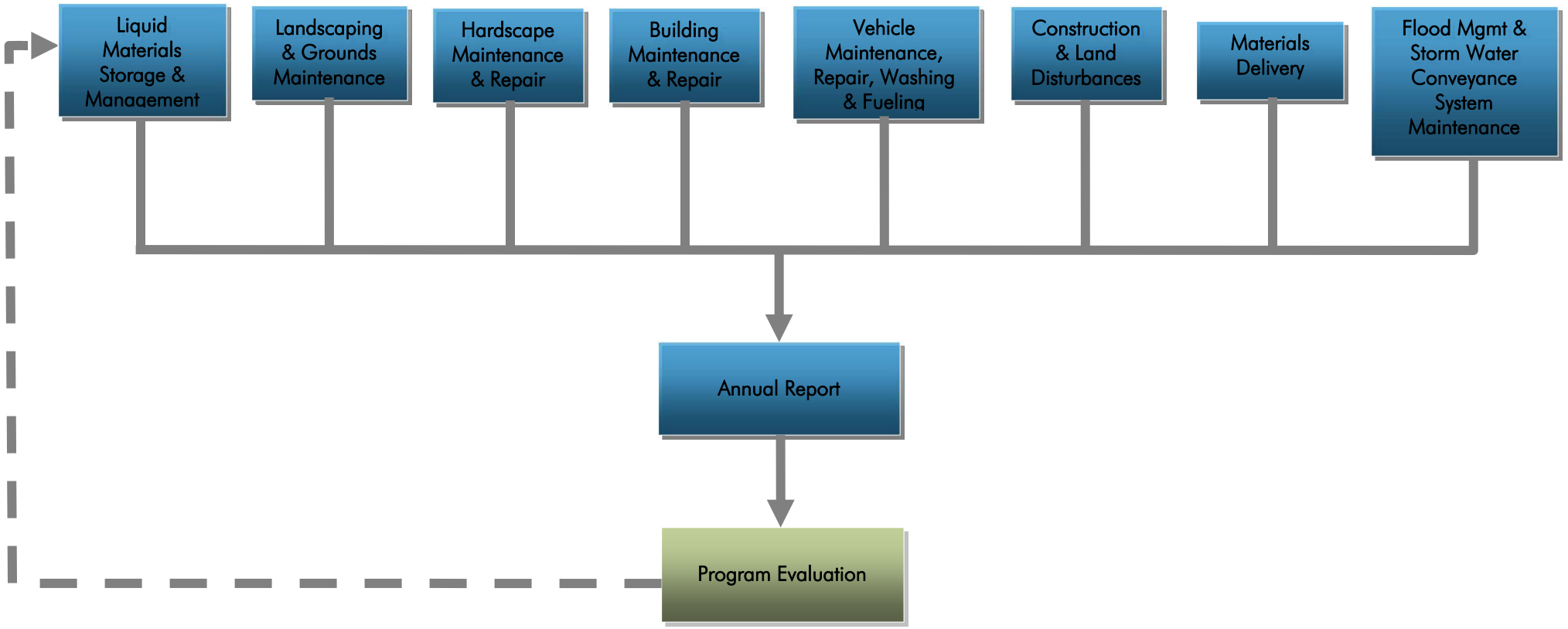
Record Keeping and Evaluation

- Maintain records of cleaning activities. Records should indicate the date, time, location, and activities performed.
- Document any unusual flows observed during inspection (non-storm water discharges).
- Perform an annual review of records to critique the effectiveness of storm drain operation and maintenance activities. Modifications to operation and maintenance policies and procedure should be documented and reported.

Inspections will be performed annually to ensure proper procedures are employed to prevent storm water runoff pollution.

This program component will be developed and implemented by Year 1 of the Del Mar Fairgrounds/Horse Park Phase II storm water program. Activities associated with this BMP will be recorded and reported in the annual report. The desired outcome is to reduce pollutant loads from sources generated by maintenance practices. See Figure 7 and MCM #6 Matrix below for further details.

Figure 7
POST CONSTRUCTION STORM WATER MANAGEMENT



Minimum Control Measure #6: Pollution Prevention / Good Housekeeping for Municipal Operations								
Objective: 1) Develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from Del Mar Fairgrounds and Horse Park operations; and 2) Using training materials that are available from USEPA, the State or other organizations, the program must include employee training to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet building maintenance, new construction and land disturbances, and storm water system maintenance.								
Best Management Practices	Task	Measurable Goals	BMP Implementation Timeline (Permit Year)					Staff Responsible for Implementation
			1	2	3	4	5	
Liquid materials storage and management	Inspect above ground storage tanks annually to ensure that proper storm water protection procedures are employed	Verify that inspections are occurring on a quarterly basis.	x	x	x	x	x	22nd DAA Operations Dept.
	Inspect hazardous waste/used oil locations annually to ensure that proper storm water protection procedures are employed.	Verify that inspections are occurring on a quarterly basis.	x	x	x	x	x	22nd DAA Operations Dept.
	Inspect clarifiers annually to ensure that proper storm water protection procedures are employed.	Verify that inspections are occurring on a quarterly basis.	x	x	x	x	x	22nd DAA Operations Dept.

Minimum Control Measure #6: Pollution Prevention / Good Housekeeping for Municipal Operations (Continued)								
Best Management Practices	Task	Measurable Goals	BMP Implementation Timeline (Permit Year)					Staff Responsible for Implementation
			1	2	3	4	5	
Landscaping and grounds maintenance	Inspect the green waste management protocol annually to ensure that proper storm water protection procedures are employed.	Verify that inspections are occurring on an annual basis.	x	x	x	x	x	22nd DAA Operations Dept.
	Inspect the irrigation system annually to ensure that proper storm water protection procedures are employed.	Verify that inspections are occurring on an annual basis.	x	x	x	x	x	22nd DAA Operations Dept.
	Inspect the pesticide, herbicide and fertilizer application program annually to ensure that proper storm water protection procedures are employed.	Verify that inspections are occurring on an annual basis.	x	x	x	x	x	22nd DAA Operations Dept.

Minimum Control Measure #6: Pollution Prevention / Good Housekeeping for Municipal Operations (Continued)								
Best Management Practices	Task	Measurable Goals	BMP Implementation Timeline (Permit Year)					Staff Responsible for Implementation
			1	2	3	4	5	
Hardscape maintenance and repair	Inspect the street and parking lot cleaning protocol before and after the rainy season to ensure that proper storm water protection procedures are employed.	Verify that inspections are occurring directly before and after rainy season (May 1 to October 1).			x	x	x	22nd DAA Operations Dept.
	Inspect the hardscape repair procedures annually to ensure that storm water protection procedures are employed.	Verify that inspections are occurring on an annual basis.			x	x	x	22nd DAA Operations Dept.
Building maintenance and repair: maintenance and repair, painting, dry wall, stucco, concrete, floor cleaning, indoor equipment cleaning, indoor residues and spills, refuse dumpsters, loading docks, roof vents and equipment, washing of outside areas, HVAC, chillers refrigerators, boilers, cooling towers, miscellaneous	Inspect the building maintenance and repair program annually to ensure that proper storm water protection procedures are employed. Address all categories listed.	Verify that inspections are occurring on an annual basis.			x	x	x	22nd DAA Operations Dept.

Minimum Control Measure #6: Pollution Prevention / Good Housekeeping for Municipal Operations (Continued)								
Best Management Practices	Task	Measurable Goals	BMP Implementation Timeline (Permit Year)					Staff Responsible for Implementation
			1	2	3	4	5	
Vehicle maintenance, repair, washing and fueling - waste reduction, material storage, using safer alternatives, spill clean-up, good housekeeping and parts cleaning.	Inspect the vehicle maintenance, repair, washing and fueling procedures annually to ensure that proper storm water protection procedures are employed. Address all categories listed.	Verify that inspections are occurring on a quarterly basis.			x	x	x	22nd DAA Operations Dept.
	Inspect vehicle washing procedures annually to ensure that proper storm water protection procedures are employed.	Verify that inspections are occurring on a quarterly basis.			x	x	x	22nd DAA Operations Dept.
	Inspect vehicle fueling procedures annually to ensure that proper storm water protection procedures are employed.	Verify that inspections are occurring on a quarterly basis.			x	x	x	22nd DAA Operations Dept.
Materials delivery	Inspect materials delivery procedures annually to ensure that storm water protection procedures are employed.	Verify that inspections are occurring on an annual basis.			x	x	x	22nd DAA Operations Dept.

Minimum Control Measure #6: Pollution Prevention / Good Housekeeping for Municipal Operations (Continued)								
Best Management Practices	Task	Measurable Goals	BMP Implementation Timeline (Permit Year)					Staff Responsible for Implementation
			1	2	3	4	5	
Flood management and storm water conveyance system maintenance - routine and inspection cleaning, solid waste management, record keeping and evaluation	Inspect flood management and storm water conveyance system maintenance procedures annually to ensure that proper storm water protection procedures are employed. Address all categories listed.	Verify that inspections are occurring on an annual basis.			x	x	x	22nd DAA Operations Dept.

4.7 MONITORING PROGRAM

The ultimate objective of storm water management programs is to protect and preserve the beneficial uses of receiving waters. For this reason, monitoring programs serve as an important tool for SWMPs in assessing the program's effectiveness in achieving this objective, whether directly or indirectly. Monitoring can help MS4 permittees determine (1) the current condition of the urban runoff quality and/or receiving waters for a given area and (2) whether the condition is improving or declining over time. With this information, the permittee can then evaluate and assess whether positive outcomes, or lack thereof, can be attributed to their SWMP's effectiveness in addressing stormwater discharge quality from their jurisdiction.

The San Diego Regional Water Quality Control Board has requested that the 22nd DAA include a monitoring program as part of its SWMP for the Del Mar Fairgrounds and Horse Park. The monitoring framework, at the minimum, should include (1) dry weather monitoring, (2) wet weather monitoring, and (3) the development of benchmark concentration levels for dry weather field screening and analytical monitoring results whereby exceedences would trigger follow-up investigations to identify and abate the source. The following sections describe how the 22nd DAA will implement these monitoring components as part of its SWMP.

4.7.1 Regional Monitoring

Phase I MS4 permittees in San Diego County have a well-established receiving waters and urban runoff monitoring program for the San Diego County area. The monitoring program includes the following:

1. Mass Loading Station and Temporary Watershed Assessment Station Monitoring
2. Bioassessment Monitoring and 2011 Stormwater Monitoring Coalition Monitoring Program
3. Toxicity Identification Evaluations
4. Ambient Bay and Lagoon Monitoring
5. Coastal Storm Drain Monitoring
6. Synthetic Pyrethroid Monitoring
7. Municipal Separate Storm Sewer System Outfall Monitoring
8. Source Identification Program Implementation
9. Dry Weather Field Screening and Analytical Monitoring
10. Southern California Bight 2008 Regional Monitoring Program
11. Total Maximum Daily Load Monitoring
12. Regional Harbor Monitoring Program

The majority of the regional monitoring programs listed above are beyond the scope and scale of the Del Mar Fairgrounds SWMP. The property is less than 0.002% of the 346 square mile San Dieguito Watershed which, in turn, is one of 12 watersheds in the San Diego Region. As a result, they offer limited assessment measures with which to iteratively evaluate overall program effectiveness of the SWMP at the local level.

Though the Phase I Regional Monitoring Program may not align well with the Del Mar Fairgrounds SWMP, the 22nd DAA and the Del Mar Fairgrounds, nevertheless, has an interest in their results and findings. In particular, MS4 Outfall Monitoring, Ambient Bay

and Lagoon Monitoring, and TMDL Monitoring may offer findings that may drive programmatic changes in the Fairgrounds' SWMP to meet region-wide objectives for water quality. As a permittee in the San Diego Region, it is important for the Fairgrounds property to maintain some level of consistency with regional approaches to protecting receiving water quality. For this reason, the 22nd DAA will review all applicable annual Monitoring Reports and Watershed Urban Runoff Management Program (WURMP) Annual Reports as a part of its annual reporting process and program effectiveness assessment.

4.7.2. Watershed Monitoring

In addition to regional monitoring efforts, Phase I MS4 permittees and stakeholder groups in the San Dieguito Watershed also conduct monitoring specific to the watershed and its storm water quality concerns. This work effort is led by the Cities of San Diego and Escondido, and is primarily focused on the Bacteria TMDL for the San Diego Region and the Comprehensive Load Reduction Plan (CLRP) for San Dieguito Watershed. As a property that is located in the San Dieguito Watershed, the Del Mar Fairgrounds and this SWMP will be directly influenced by these watershed monitoring efforts. For this reason, the 22nd DAA has elected to participate in this monitoring program as part of its SWMP.

The 22nd DAA will enter into an MOU with the Phase I MS4 permittees developing the CLRP for the San Dieguito Watershed. As a recognized stakeholder in this workgroup, the 22nd DAA will participate in and regularly attend meetings on the development and implementation of the CLRP, with the City of San Diego and Escondido as the lead agencies. Any monitoring activities on the Fairgrounds and Horse Park property associated with this effort will be directed and performed by the lead agencies and coordinated with the 22nd DAA.

4.7.3. General Industrial Storm Water Permit Monitoring

With portions of the Del Mar Fairgrounds property considered CAFO areas, as shown in Exhibit 2, these areas have been identified as an industrial category subject to General Industrial Storm Water Permit 97-03-DWQ. As a permittee, the 22nd DAA will be required to develop an SWPPP for the Fairgrounds' CAFO areas. Part of the SWPPP requirements is monitoring and reporting. This section will describe the monitoring requirement of the GISP, which will be considered a part of the monitoring program for this SWMP. Other GISP requirements will not be discussed herein, and can be found in the property's Industrial SWPPP.

Per the requirements of the GISP, the Fairgrounds facility is required to 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. In essence, these sampling events will be considered as part of the facility's wet weather monitoring program. The samples will be analyzed for:

- total suspended solids (TSS);
- pH;
- specific conductance (SC); and
- total organic carbon (TOC) **or** oil & grease (O&G).

Discharge sampling for GISP monitoring will be taken at Storm Drain Discharge Points #1, #2, and #5 of the Fairgrounds property (see Exhibit 7). These storm drain outfalls convey runoff from CAFO areas known as the Backstreach Stables, the Polytrack, and the Horse Arena, respectively. Any exceedences and subsequent follow-up investigations to identify the source will be appropriately documented in the property's industrial SWPPP, as required by the GISP. The SWPPP will be reviewed as part of the program effectiveness assessment for this SWMP. The monitoring data will also be summarized in the annual report and compiled along with other wet weather monitoring data collected during the year.

4.7.4. Dry Weather Monitoring

The Del Mar Fairgrounds and Horse Park does not discharge dry weather flows generated on-site. The property is located within a floodplain. All major outfalls of the facility are mechanically controlled or gated to keep dry weather flows on-site, as well as to preclude tidally influenced Stevens Creek and San Dieguito Lagoon along the facility's perimeter from flooding the property. For this reason, Discharge Points #1 through #5 will not be monitored for dry weather flows as those outfalls are closed during the dry season. The remaining three discharge points – two (2) at the Fairgrounds and one (1) at the Horse Park – will be monitored for dry weather runoff. The following table summarizes the property's outfalls for dry weather flows.

Table 14 – Dry Weather Controls for Storm Drain Outfalls at Del Mar Fairgrounds and Horse Park

STORM DRAIN OUTFALLS AT DEL MAR FAIRGROUNDS AND HORSE PARK		
OUTFALL	FLOW CONTROL	DESCRIPTION
Discharge Point #1	Pump Station to Sewer	Dry weather flows pumped to sewer. Manually switched to storm drain in wet season during rain events that exceed a pre-determined flow rate allowance by the sewer agency.
Discharge Point #2	Pump Station to Infield Lakes	Dry weather flows pumped to infield lakes for detention. No dry weather flows are released. During wet season, pump is shut off when lake capacity is reached.
Discharge Point #3	Sluice Gate	Sluice gate remains closed during dry season.
Discharge Point #4	Sluice Gate	Sluice gate remains closed during dry season.

STORM DRAIN OUTFALLS AT DEL MAR FAIRGROUNDS AND HORSE PARK		
OUTFALL	FLOW CONTROL	DESCRIPTION
Discharge Point #5	Sluice Gate	Sluice gate remains closed during dry season.
Discharge Point #6	None	No flow controls. Upstream inlets plugged with geotextile mat during dry season.
Discharge Point #7	None	No flow controls. Upstream inlets plugged with geotextile mat during dry season.
Horse Park Swale	None	No flow controls.

The two outfall locations at the Fairgrounds that do not have gates or mechanical controls, noted as Discharge Points #6 and #7, are located west of the Polytrack and receives runoff from a small parking lot. The storm drain inlets that convey runoff to Discharge Points #6 and #7 are fitted with a geotextile mat to plug the inlet during the dry season. Furthermore, they each include a storm drain clarifier, as described in 2.4 of this SWMP. Dry weather flows are, therefore, highly unlikely to be generated at these locations. Nevertheless, the 22nd DAA will be field screening for measurable dry weather runoff at these locations on a monthly basis from May 1 to October 1 each year. Visual observations, such as trash/floatables composition, odor, color & clarity of runoff (if any), vegetation, and biological organisms present, will be recorded.

One outfall exists at the Horse Park property, at the downstream end of a vegetated drainage swale that bisects the property, between the covered arena and horse barns (see Exhibit 3). Since the property is largely pervious, the vegetated swale receives little to no dry weather flows during the non-rainy season. The 22nd DAA will be field screening for measurable dry weather runoff at this location on a monthly basis from May 1 to October 1 each year. Visual observations will be recorded.

Should measurable dry weather runoff be encountered during field screening, the 22nd DAA will sample the runoff for constituents consistent with the Regional Monitoring Program conducted by Phase I MS4s in San Diego County. These constituents are summarized in the following table.

Table 15 – Dry Weather Sampling Constituents

DRY WEATHER SAMPLING CONSTITUENTS FOR STORM DRAIN DISCHARGE POINTS #6, #7, & HORSE PARK SWALE	
POTENTIAL POLLUTANT	SAMPLING FREQUENCY
Conductivity	Once per month
Oil & Grease	Once per month

DRY WEATHER SAMPLING CONSTITUENTS FOR STORM DRAIN DISCHARGE POINTS #6, #7, & HORSE PARK SWALE	
POTENTIAL POLLUTANT	SAMPLING FREQUENCY
pH	Once per month
Enterococcus	Once per month
Fecal Coliform	Once per month
Total Coliform	Once per month
Nitrogen, Ammonia (as N)	Once per month
Nitrate (as N)	Once per month
Orthophosphate (as P)	Once per month
MBAS	Once per month
Turbidity	Once per month
Chlorpyrifos	Once per month
Diazinon	Once per month
Cadmium – dissolved	Once per month
Lead – dissolved	Once per month
Zinc – dissolved	Once per month
Hardness	Once per month

Dry weather runoff field screening and sampling procedures are outlined in the *Dry Weather and MS4 Analytical and Field Screening Monitoring Procedures Manual* (May 2010), developed by the County of San Diego, Department of Public Works, Watershed Protection Program. Should there be measurable flow at the noted outfalls, samples will be collected once per month during the non-rainy season.

Should elevated levels of pollutant concentrations be discovered during dry weather monitoring that exceed dry weather benchmark concentrations, the 22nd DAA will investigate the source of the discharge and address the cause of the exceedance. Monitoring results will be summarized each year in the annual report, and evaluated to determine program effectiveness. Should it be determined that additional storm water pollutant indicators need to be monitored, as a result of illicit discharge investigations, regional or watershed monitoring reporting data, or other reasons, the dry weather monitoring program will be revised as part of the SWMP's program effectiveness assessment.

4.7.5. Wet Weather Monitoring

In addition to the wet weather monitoring requirements of the Fairgrounds' industrial SWPPP, as discussed in Section 4.7.3 above, the 22nd DAA will supplement the suite of wet weather storm event sampling constituents to include nutrients and bacteria indicators. This will be conducted to assess the effectiveness of Nutrient Management Plan implementation and other SWMP programs for CAFO areas. Samples will be collected at Storm Drain Discharge Points #1, #2, and #5 of the Fairgrounds property in conjunction with Industrial SWPPP sampling requirements.

In the past, the 22nd DAA has conducted wet weather monitoring at 5 storm drain discharge points (outfalls) of the Del Mar Fairgrounds property. The sampling results, from 2006-2011, are summarized in Appendix E of this SWMP. Those sampling events were performed as part of various permitting requirements, which included the GISP and California Coastal Commission permitting. Approximately 39 constituents were sampled for, including storm water pollutants not typically associated with the property's land uses, such as trace metals, VOCs, PCBs, fluoride, hexavalent chromium, and cyanide. Across all five sampling locations, roughly half of these constituents returned each year with Non-Detects from laboratory analyses. For this reason, constituents that are not indicative of CAFO activities do not warrant wet weather monitoring, including oil & grease. The table below summarizes the constituents to be monitored in wet weather discharges. This includes pollutants monitored for the industrial SWPPP.

Table 16 – Wet Weather Sampling Constituents

WET WEATHER SAMPLING CONSTITUENTS FOR STORM DRAIN DISCHARGE POINTS #1, #2, #5	
POTENTIAL POLLUTANT	SAMPLING FREQUENCY[2]
Nitrogen, Ammonia (as N)	2 storm events per year
Nitrate + Nitrite as N	2 storm events per year
Total Phosphorous	2 storm events per year
Enterococcus	2 storm events per year
Fecal Coliform	2 storm events per year
Total Coliform	2 storm events per year
pH[1]	2 storm events per year
Total Suspended Solids (TSS)[1]	2 storm events per year
Specific Conductance (SC)[1]	2 storm events per year
Total Organic Carbon (TOC)[1]	2 storm events per year

1. GISP required pollutant to be monitored.
2. Per the GISP, during periods of storm water discharge, samples shall be collected during the first hour of the discharge. Each separate storm event that results in a discharge of effluent shall be sampled, but no more than one sample per 2 weeks is required. Storm events must be preceded by at least 72 hours of dry weather or no discharge.

Wet weather sampling procedures shall, at minimum, be consistent with US EPA's *Industrial Stormwater Monitoring and Sampling Guide* (EPA 832-B-09-003, March 2009), as it will be performed concurrently with GISP sampling requirements for the Fairgrounds. At minimum, 2 rain events shall be sampled per year. Preferably, storm water samples will be collected 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, to coincide with GISP monitoring requirements, though not necessary.

Should elevated levels of pollutant concentrations be discovered during wet weather monitoring that exceed wet weather benchmark concentrations, the 22nd DAA will investigate the source of the discharge and address the cause of the exceedance per the Industrial SWPPP requirements. Monitoring results will be summarized each year in the annual report, and evaluated to determine program effectiveness. Should it be

determined that additional storm water pollutant indicators need to be monitored, as a result of illicit discharge investigations, regional or watershed monitoring reporting data, or other reasons, the wet weather monitoring program will be revised as part of the SWMP's program effectiveness assessment.

4.7.6 Action Levels for Water Quality Monitoring

Discharge monitoring programs, such as dry weather and wet weather monitoring described above, and the data obtained from these activities allow storm water program managers to investigate whether runoff from the property may be causing or contributing to exceedences of water quality objectives in receiving waters. To establish this cause and effect relationship, however, requires setting appropriate action levels or benchmarks that are designed to tell the storm water program manager that a prohibited non-storm water discharge may have occurred. Since there are many external factors that may affect water quality in receiving waters that are not correlated with discharges from the Fairgrounds property (i.e. upstream land uses), it can take years and significant resources to derive proper benchmarks. Because of this, often times Phase I and II MS4 storm water programs rely upon RWQCB Basin Plan beneficial uses and water quality objectives for receiving waters as a surrogate for benchmarks.

Phase I MS4 permittees in San Diego County have established action levels for their dry weather program. Action levels are evaluated by the permittees each year to determine whether they are appropriate and statistically significant. For this reason, the 22nd DAA and this SWMP will adopt these action levels due to the robustness of the Phase I MS4 monitoring program and for consistency within the San Dieguito Watershed. The table below summarizes the current Action Levels for dry weather monitoring. Should the parameters be revised for any of the constituents listed, this SWMP will be updated with the new benchmark parameters, and will be reported in the Annual Report.

Table 17 – 2011 Dry Weather Action Levels for Field Screening and Laboratory Analytical Parameters

FIELD SCREENING ANALYTES	ACTION LEVELS[1]	SOURCE/ NOTES
pH	<6.5 or >9.0	Basin Plan, w/ 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 (µS/cm)	Best Professional Judgment	Values > 5,000 umhos/cm may indicate IC/ID however; EC may be highly elevated in some regions due to high-TDS 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 < 750 may indicate excessive potable water discharge or flushing.
MBAS (mg/L)	1.0	Basin Plan, w/ allowance based on Workgroup field experience and possible field reagent interferences
LABORATORY ANALYTES	ACTION LEVELS	SOURCE/ NOTES
Oil and Grease (mg/L)	15	USEPA Multi-sector General Permit. If petroleum sheen is observed, the sample should 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 ug/L should focus on education and outreach to potential dischargers in the target drainage basin. Highly elevated levels should 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 appropriate action level for individual samples. Table provides benchmarks based on hardness and dissolved metals concentration. For example, at 300 mg/L hardness the following action levels would apply: Cd - 14 ppb; Cu - 38 ppb; Pb - 209 ppb; and Zn - 297 ppb.
Dissolved Copper (µg/L)	California Toxics Rule	
Dissolved Lead (µg/L)	California Toxics Rule	
Dissolved Zinc (µg/L))	California Toxics Rule	
Total Coliform (MPN/100 mL)	130,000	Action levels are based on 80th percentile values calculated from Copermittees 2002-2007 dry weather analytical monitoring data.
Fecal Coliform (MPN/100 mL)	13,000	
Enterococcus (MPN/100 mL)	7,000	

[1]The referenced action levels should not be the sole criteria for initiating a source identification investigation. Dry weather monitoring data should be interpreted using a variety of available information including best professional judgment and within-site and between-site sample variability.

Table updated 8-01-02, 9-20-02, 4-3-03, 04-20-04; 04-13-2005; 4-19-2006;4-21-2008; 1-13-2009; 3-17-2010

Upon discovery of benchmark exceedences in dry weather flows, the 22nd DAA will conduct a source investigation to determine the cause of the exceedence. Investigations will be documented and reported as part of the Illicit Discharge Detection and Elimination Program MCM #3. Should the cause be discovered and mitigated, the report will also document measures to prevent a recurrence of the illicit discharge. Each year, a summary of dry weather monitoring triggered investigations and reporting will be provided in the annual report.

Wet weather monitoring action levels for the Del Mar Fairgrounds are primarily driven by the tentative 2011 State General Industrial Storm Water Permit requirements and US EPA Numeric Action Levels (NALs). This includes action levels for pH, TSS, SC, TOC, ammonia, nitrate, and phosphorus. Other action levels for constituents such bacteria are derived from the San Diego Region Basin Plan and the California Ocean Plan. The table below summarizes the current Action Levels for wet weather monitoring. Should the parameters be revised for any of the constituents listed, this SWMP will be updated with the new benchmark parameters, and will be reported in the Annual Report.

Table 18 – Wet Weather Action Levels for Field Screening and Laboratory Analytical Parameters

ANALYTES	ACTION LEVELS[2]	SOURCE/ NOTES
pH[1]	<6.0 or >9.0	US EPA NAL Value
Total Suspended Solids (TSS)[1]	100 mg/L	US EPA NAL Value
Specific Conductance (SC)[1]	200 umhos/cm	US EPA NAL Value
Total Organic Carbon (TOC)[1]	110 mg/L	US EPA NAL Value
Nitrogen, Ammonia (as N)	19 mg/L	US EPA NAL Value
Nitrate + Nitrite as N	0.68 mg/L as N	US EPA NAL Value
Total Phosphorous	2 mg/L as P	US EPA NAL Value
Enterococcus	104 MPN/100 mL	California Ocean Plan Limit
Fecal Coliform	400 MPN/100 mL	California Ocean Plan Limit
Total Coliform	10,000 MPN/100 mL	California Ocean Plan Limit

[1] GISP required pollutant to be monitored.

[2]The referenced action levels should not be the sole criteria for initiating a source identification investigation. Wet weather monitoring data should be interpreted using a variety of available information including best professional judgment and visual observations.

Wet weather monitoring action level exceedences and subsequent follow-up activities are managed through the Del Mar Fairgrounds Industrial SWPPP. This SWMP, however, will be subject to MCM program revisions based on the findings of, and actions taken in the SWPPP. Each year, a summary of wet weather monitoring data and actions will be

provided in the annual report. The history of activities will be reviewed for program effectiveness assessment in improving water quality.

4.8 NUTRIENT MANAGEMENT PLAN

4.8.1. CAFO Areas

See attachment 1 of this SWMP.

4.8.2. Horse Park

The Horse Park property is designated a Non-CAFO area. Despite its designation, the facility carries out activities that have the potential to impact storm water runoff quality, with respect to pathogen generation, if not properly managed. This can lead to elevated bacteria levels in proximate receiving waters, such as the San Dieguito River, which lies immediately south of the property and is listed as impaired for indicator bacteria. Three source areas or activities of concern have been identified in this SWMP: (1) manure management, (2) hay and feed management, and (3) horse wash racks. The following practices have been implemented to minimize the potential for pollutants in runoff from activities associated with the Horse Park.

4.8.2.1. Manure Management

The Del Mar Fairgrounds and Horse Park is committed to consistently implementing effective protocols concerning collection, storage, and removal of manure and animal related waste. The investment involved in owning and training thoroughbred horses is very high, and the 22nd DAA and DMTC do not condone substandard conditions and do not compromise on cleanliness. The requirement to properly handle and store manure is in effect even in the absence of regulatory requirements.

There are no permanent manure storage facilities on-site. When stalls are cleaned daily, all manure is temporarily stockpiled at the end of each of the barn buildings for collection. Manure is then collected with a loader vehicle and transported to roll-off bins located at the front of the property near the designated recycling area. The bins are covered with tarp to prevent exposure to precipitation. In this manner, manure is not stored on the ground at any point after its collection. Collection may occur more frequently during scheduled events. Therefore, manure is generally not stored on-site for longer than 48 hours before removal from the Horse Park property. Any manure found in non-stable areas, including walkways between barns, exercise yards, trails, arenas, or anywhere else horses may be located, is quickly removed upon sight by staff and taken to the nearest temporary piling area of bedding waste awaiting removal from the site.

Should any manure be stored on-site, manure shall be kept covered in the roll-off bins, and shall not be kept on-site for longer than 7 days. Stockpile management procedures shall be followed. Manure storage areas, if any, shall

be located away from drainage courses, graded to minimize contact with runoff, stored off the ground, and shall be covered to minimize contact with precipitation.

The service contracted to haul all manure and bedding waste delivers the majority to a mushroom farm in Escondido, CA. Additional wood shavings and manure are delivered to a facility in Lakeside, CA where it is converted to compost and humus. 100% of all manure and bedding waste is recycled in this manner.

Inspections will be performed quarterly to ensure proper procedures are employed to prevent storm water runoff pollution.

4.8.2.2 Hay and Feed Management

Stockpiles of hay and feed have the potential to discharge pollutants and clog storm drain inlets if not properly managed. For this reason, clean hay, bedding, and/or feed are currently stored in stockpiles out in the open only during the dry season. Stockpiles of hay and feed should be a minimum of 50ft separation from concentrated flows of storm water, drainage courses, and inlets. Stockpiles exposed to the elements are mostly located north of the horse barns and exercise yards, just south of Via de la Valle. During the rainy season, hay and feed are stored within the covered arena, in sheds, or stockpiled and covered with tarp at the Horse Park property.

Inspections will be performed quarterly to ensure proper procedures are employed to prevent storm water runoff pollution.

4.8.2.3. Horse Wash Racks

Improvements were made at the Horse Park in 2010 to install horse wash rack facilities, as part of storm drain and sewer improvements at the property. Wash racks were designed to be covered, plumbed to sewer, and constructed to preclude storm water run-on from surrounding areas. These wash racks will be the only wash racks authorized for use during the rainy season, resulting in zero discharge to the storm drain system and removing the potential for comingling of storm water and sewer discharges.

Inspections will be performed quarterly to ensure proper procedures are employed to prevent storm water runoff pollution.

EXHIBIT 1

VICINITY MAP
DEL MAR FAIRGROUNDS/HORSE PARK

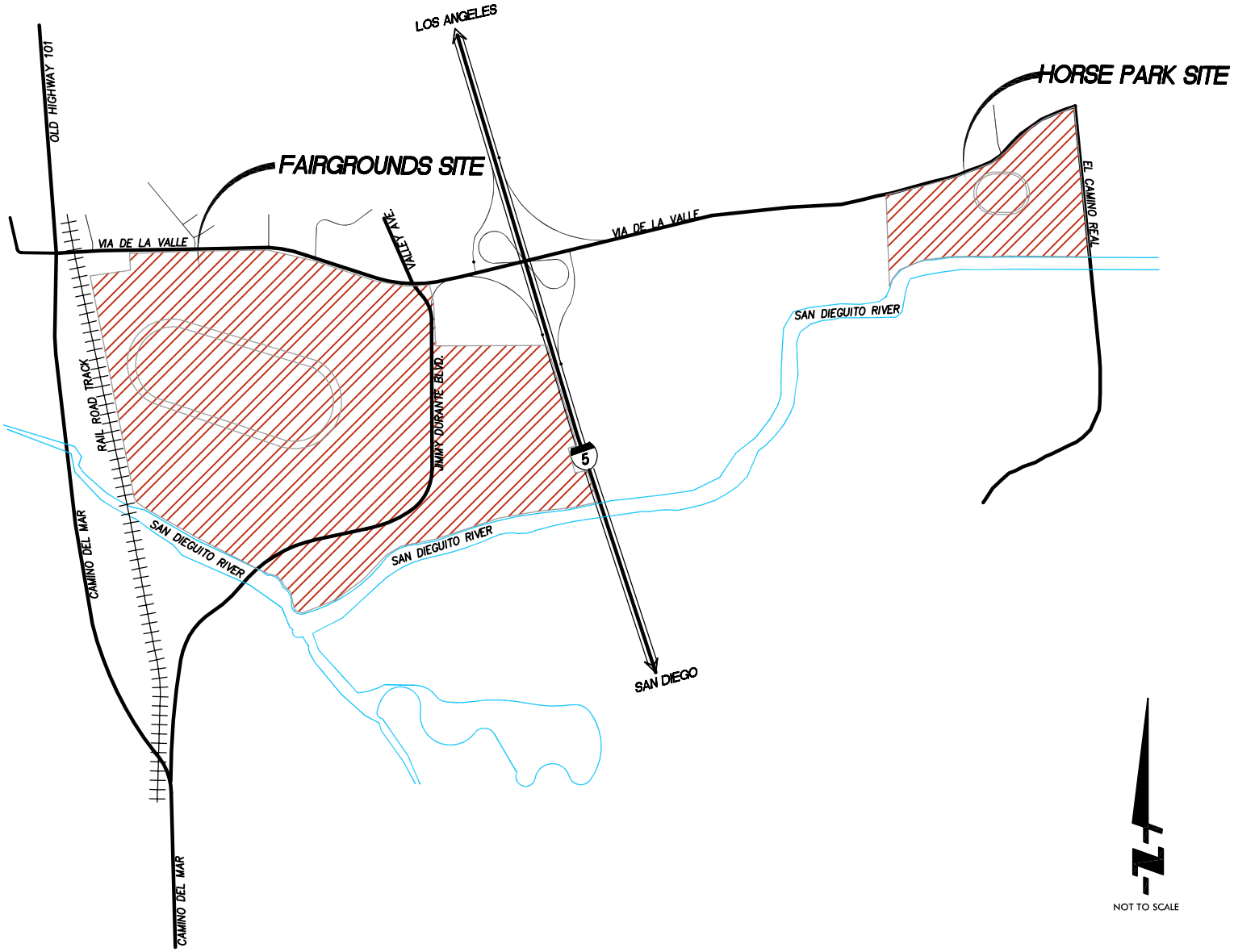


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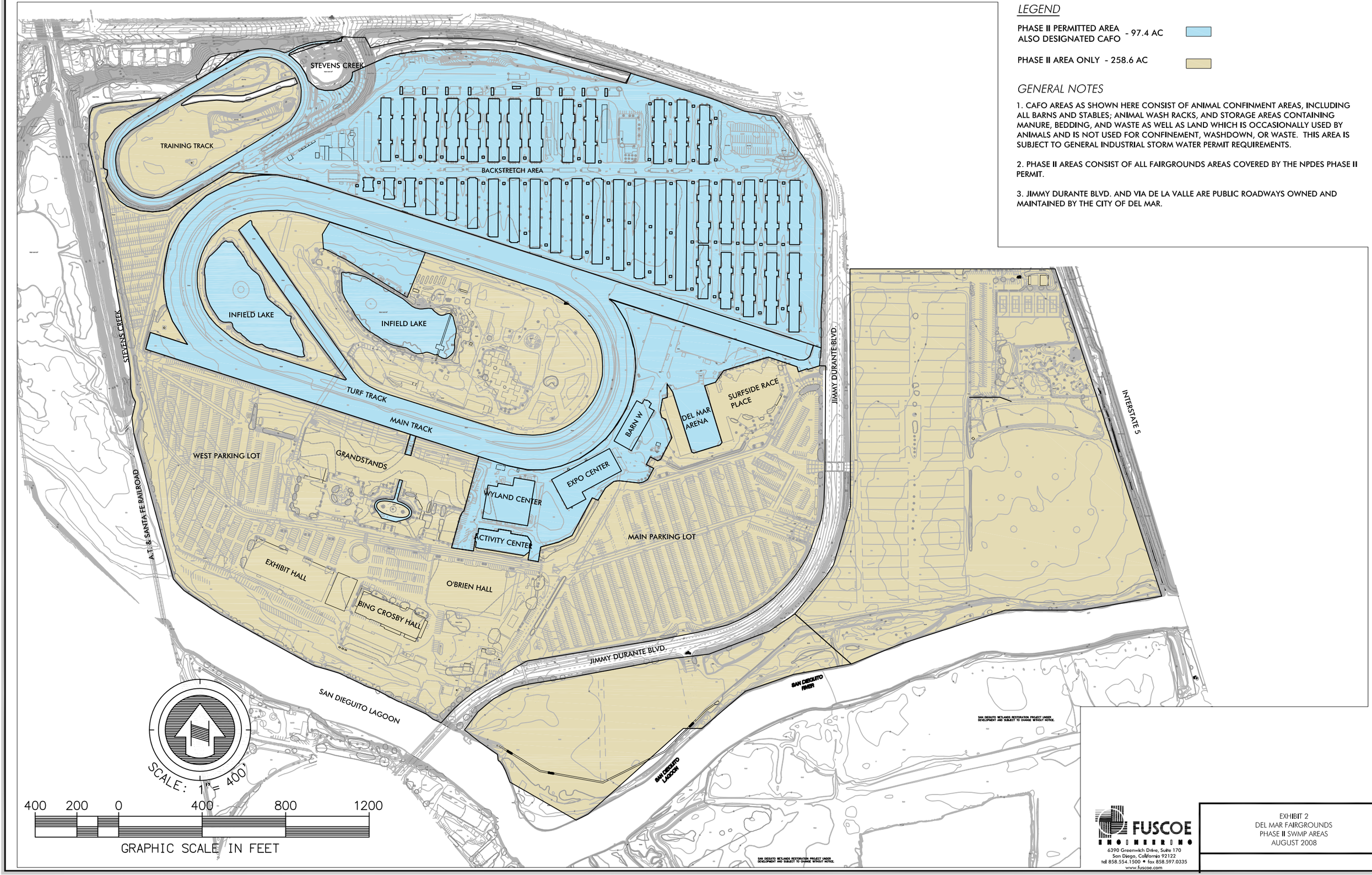
EXHIBIT 1 - VICINITY MAP
DEL MAR FAIRGROUNDS
& HORSE PARK AUGUST 2008

22nd District Agricultural Association
DEL MAR, CA

EXHIBIT 2

DEL MAR FAIRGROUNDS/HORSE PARK
PHASE II SWMP AREAS



LEGEND

PHASE II PERMITTED AREA ALSO DESIGNATED CAFO - 97.4 AC

PHASE II AREA ONLY - 258.6 AC

GENERAL NOTES

1. CAFO AREAS AS SHOWN HERE CONSIST OF ANIMAL CONFINMENT AREAS, INCLUDING ALL BARNS AND STABLES; ANIMAL WASH RACKS, AND STORAGE AREAS CONTAINING MANURE, BEDDING, AND WASTE AS WELL AS LAND WHICH IS OCCASIONALLY USED BY ANIMALS AND IS NOT USED FOR CONFINEMENT, WASHDOWN, OR WASTE. THIS AREA IS SUBJECT TO GENERAL INDUSTRIAL STORM WATER PERMIT REQUIREMENTS.

2. PHASE II AREAS CONSIST OF ALL FAIRGROUNDS AREAS COVERED BY THE NPDES PHASE II PERMIT.

3. JIMMY DURANTE BLVD. AND VIA DE LA VALLE ARE PUBLIC ROADWAYS OWNED AND MAINTAINED BY THE CITY OF DEL MAR.

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EXHIBIT 2
DEL MAR FAIRGROUNDS
PHASE II SWMP AREAS
AUGUST 2008

EXHIBIT 3

DEL MAR HORSE PARK

GENERAL NOTES

1. THE 22ND DAA OWNS AND OPERATES THE LAND AND FACILITIES ASSOCIATED WITH THE DEL MAR HORSE PARK. THESE FACILITIES INCLUDE HORSE BARNS, HORSE BOARDING, EXERCISE FIELDS, GRASS SHOW ARENA, RESTROOMS, CONCESSION STAND, A COVERED ARENA AND PARKING LOTS.

2. THE ENTIRE HORSE PARK IS COVERED BY THE PHASE II SWMP.

LEGEND

EXISTING SANITARY SEWER — — SS — —

EXISTING SANITARY SEWER FORCE MAIN — — FM — —

EXISTING SURAFCE STORM WATER CONVEYANCE ——— ———

EXISTING STORM DRAIN OUTFALL ●

DRY WEATHER SAMPLING LOCATION ●

SCALE: 1" = 200'

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EXHIBIT 3
DEL MAR HORSE PARK
JULY 2011

22nd District Agricultural Association
DEL MAR, CA

EXHIBIT 4

EXISTING HYDROLOGIC BASINS
DEL MAR FAIRGROUNDS

VIA DE LA VALLE

BASIN 1
0.7 AC

BASIN 2
13.3 AC

BASIN 3
4.1 AC

BASIN 4
4.8 AC

BASIN 5
3.7 AC

BASIN 6
52.2 AC

BASIN 7
49.1 AC

BASIN 8
15.2 AC

BASIN 9
15.1 AC

BASIN 10
10.9 AC

BASIN 11
13.8 AC

BASIN 12
34.5 AC

BASIN 13
3.7 AC

BASIN 14
1.8 AC

BASIN 15
16.5 AC

BASIN 16
46.0 AC

DP#1

DP#2

DP#3

DP#4

DP#5

DP#6

DP#7

INTERSTATE 5

JIMMY DURANTE BOULEVARD

SAN DIEGUITO WETLANDS RESTORATION PROJECT UNDER DEVELOPMENT AND SUBJECT TO CHANGE WITHOUT NOTICE.

EXISTING HYDROLOGIC FLOWS

Existing Flows					
Drainage Basin	Runoff Coefficient	Basin Area (AC)	Q2 (CFS) (I=1.51 in/hr)	Q10 (CFS) (I=1.83 in/hr)	Q100 (CFS) (I=2.69 in/hr)
1	0.30	0.7	0.3	0.4	0.6
2	0.28	13.3	5.6	6.8	10.0
3	0.84	4.1	5.2	6.3	9.3
4	0.84	4.8	6.1	7.4	10.8
5	0.47	3.7	2.6	3.2	4.7
6	0.75	52.2	59.1	71.6	105.3
7	0.41	49.1	30.4	36.8	54.2
8	0.86	15.2	19.7	23.9	35.2
9	0.85	15.1	19.4	23.5	34.5
10	0.75	10.9	12.3	15.0	22.0
11	0.50	13.8	10.4	12.6	18.6
12	0.86	34.5	44.8	54.3	79.8
13	0.90	3.7	5.0	6.1	9.0
14	0.90	1.8	2.4	3.0	4.4
15	0.25	16.5	6.2	7.5	11.1
16	0.32	46.0	22.2	26.9	39.6

HYDROLOGIC FLOWS AT DISCHARGE POINTS

Flows at Discharge Points:				
Point	Q2 (CFS)	Q10 (CFS)	Q100 (CFS)	Area
DP#1	64.1	77.7	114.3	55.9
DP#2	36.5	44.2	65.0	53.9
DP#3	19.7	23.9	35.2	15.2
DP#4	31.7	38.4	56.5	26.0
DP#5	63.9	77.4	113.8	66.6
DP#6	2.6	3.2	4.6	2.1
DP#7	2.6	3.2	4.6	2.1

NOTE: INTENSITIES ESTIMATE A TIME OF CONCENTRATION OF 20 MINUTES FOR EACH DRAINAGE BASIN.

LEGEND

EXISTING STORM DRAIN — SD —

PROPOSED DRAINAGE BASIN BOUNDARIES

DISCHARGE POINT DP#X

SCALE: 1"= 160'

160 80 0 160 320 480

GRAPHIC SCALE IN FEET

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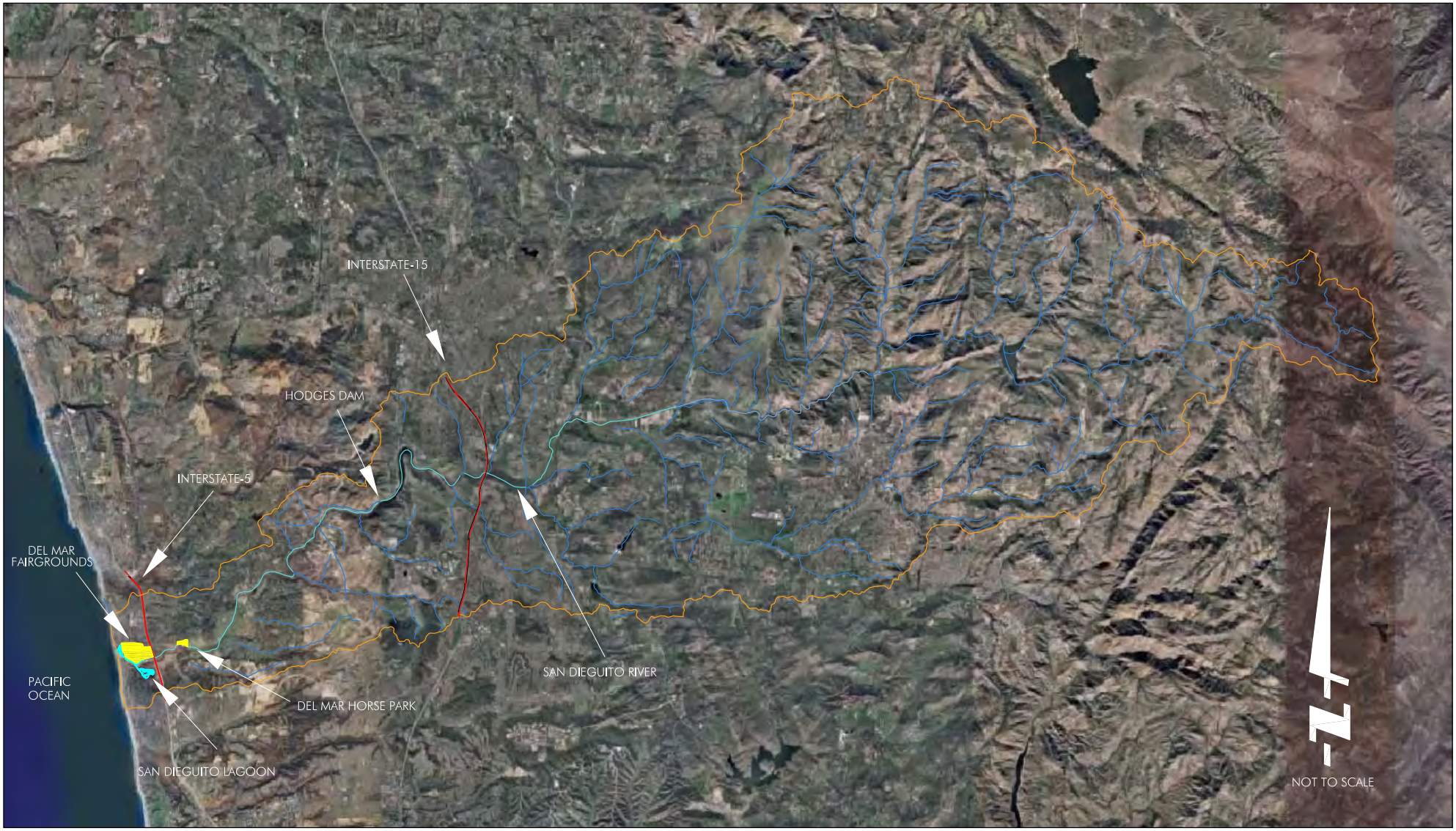
EXHIBIT 4 - EXISTING HYDROLOGIC BASINS
PHASE II SWMP
DEL MAR FAIRGROUNDS
JULY 2011

22nd District Agricultural Association
DEL MAR, CA

EXHIBIT 5

SAN DIEGUITO WATERSHED MAP



LEGEND

- PROJECT SITE
- SAN DIEGUITO WATERSHED
- SAN DIEGUITO RIVER
- TRIBUTARY
- LAGOON
- INTERSTATE FREEWAY

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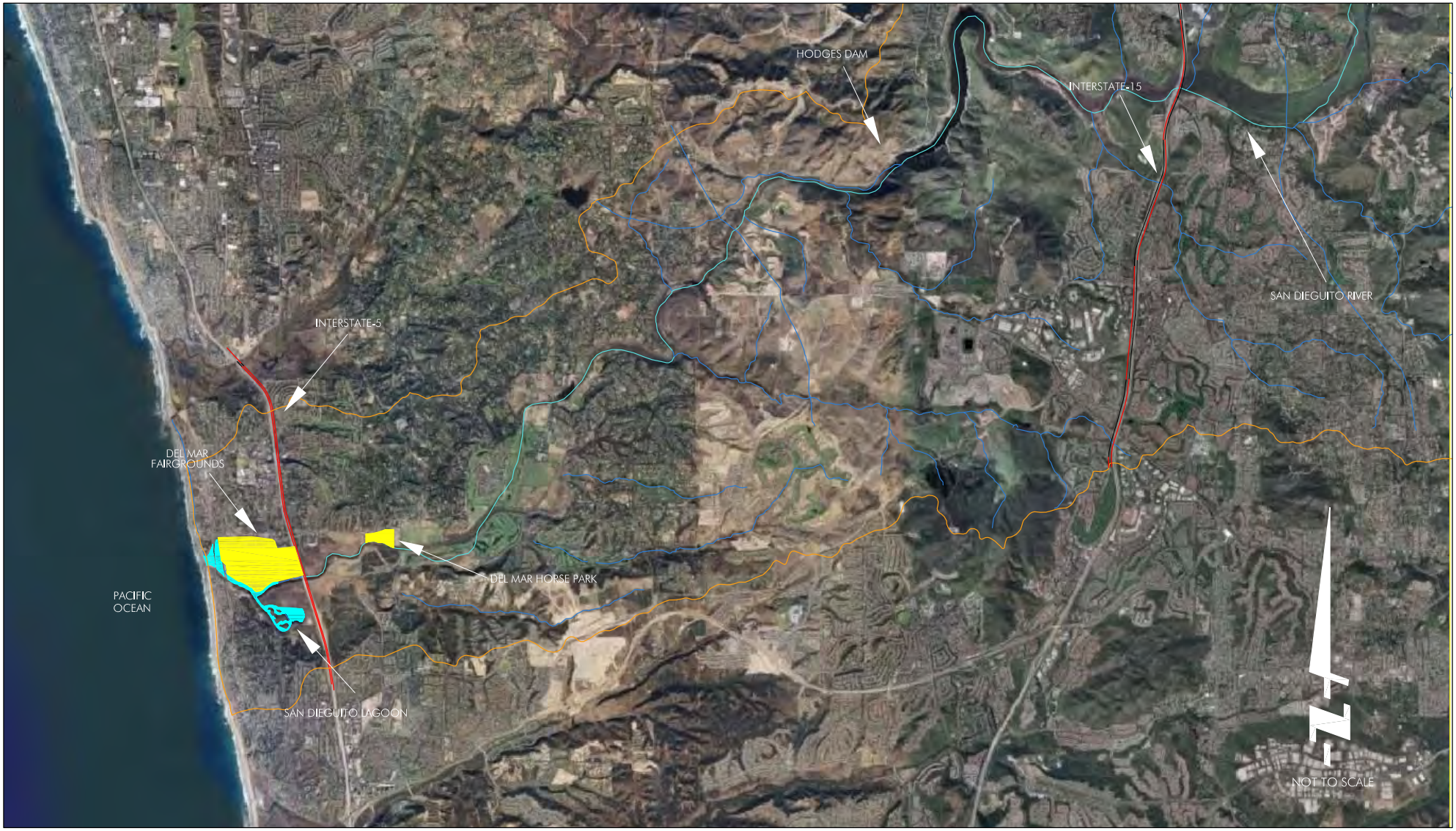
EXHIBIT 5 - SAN DIEGUITO WATERSHED MAP
AUGUST 2008

22nd District Agricultural Association
DEL MAR, CA

EXHIBIT 6

SAN DIEGUITO SUB-WATERSHED MAP



LEGEND

- PROJECT SITE
- SAN DIEGUITO WATERSHED
- SAN DIEGUITO RIVER
- TRIBUTARY
- LAGOON
- INTERSTATE FREEWAY

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EXHIBIT 6 - SAN DIEGUITO SUBWATERSHED MAP
AUGUST 2008

22nd District Agricultural Association
DEL MAR, CA

EXHIBIT 7

STORM SEWER SYSTEM MAP

STEVENS CREEK

BACKSTRETCH AREA

MAIN TRACK

WEST PARKING LOT

MAIN PARKING LOT

JIMMY DURANTE BOULEVARD

SAN DIEGUITO RIVER

SEWER DIVERSION PUMP STATION

STORM WATER DISCHARGE POINT 1

STORM WATER DISCHARGE POINT 6

STORM WATER DISCHARGE POINT 7

STORM WATER DISCHARGE POINT 2

STORM WATER DISCHARGE POINT 3

STORM WATER DISCHARGE POINT 4

STORM WATER DISCHARGE POINT 5

TRAINING TRACK

GRAND STAND

CLUB HOUSE

MISSION TOWER

OPEN

LOUNGE

ADMIN

CABALLO HALL

MULTI PURPOSE EXHIBIT FACILITY (NYLAND CENTER)

EXPO CENTER

ACTIVITY CENTER FACILITY

CLOCK TOWER

HARVEST HALL

BING CROSBY HALL

PAT O'BRIEN PAVILION

ANNEX OFFICE

WAREHOUSE

FIRE STATION

WARM UP RING

SATELLITE WAGERING BUILDING

ARENA

TO BE REMOVED PER ARENA ROOF PROJECT

LEGEND

- EXIST. STORM DRAIN — SD
- EXIST. STORM DRAIN FORCE MAIN — SD/FM
- EXIST. PERF. STORM DRAIN
- EXIST. MANHOLE
- EXIST. PUMP STATION
- EXIST. CATCH BASIN
- WET WEATHER SAMPLING LOCATION
- DRY WEATHER SAMPLING LOCATION

SCALE: 1" = 120'

120 60 0 120 240 360

GRAPHIC SCALE IN FEET

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EXHIBIT 7- STORM DRAIN MAP
DEL MAR FAIRGROUNDS
JULY 2011

22nd District Agricultural Association
DEL MAR, CA

W.O. NO. —
P.T.S. NO. —

FOR CITY ENGINEER ____ DATE ____

TM/TPM —

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	FEI			

— NAD 83 COORDINATES

— LAMBERT COORDINATES

CONTRACTOR ____ DATE STARTED ____
INSPECTOR ____ DATE COMPLETED ____

APPENDIX A

SWRCB WATER QUALITY ORDER NO. 2003-0005-DWQ

NPDES GENERAL PERMIT NO CAS 000004

STATE WATER RESOURCES CONTROL BOARD (SWRCB)
WATER QUALITY ORDER NO. 2003 - 0005 – DWQ

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT NO. CAS00000X

WASTE DISCHARGE REQUIREMENTS (WDRs) FOR STORM WATER DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s) (GENERAL PERMIT)

SWRCB finds that:

1. Urban runoff is a leading cause of pollution throughout California.

2. Pollutants of concern found in urban runoff include sediments, non-sediment solids, nutrients, pathogens, oxygen-demanding substances, petroleum hydrocarbons, heavy metals, floatables, polycyclic aromatic hydrocarbons (PAHs), trash, and pesticides and herbicides.

3. During urban development, two important changes occur. First, where no urban development has previously occurred, natural vegetated pervious ground cover is converted to impervious surfaces such as paved highways, streets, rooftops, and parking lots. Natural vegetated soil can both absorb rainwater and remove pollutants providing a very effective purification process. Because pavement and concrete can neither absorb water nor remove pollutants, the natural purification characteristics of the land are lost. Second, urban development creates new pollutant sources as human population density increases and brings with it proportionately higher levels of vehicle emissions, vehicle maintenance wastes, municipal sewage, pesticides, household hazardous wastes, pet wastes, trash, etc., which can be washed into the MS4. As a result of these two changes, the runoff leaving a developed urban area may be significantly greater in volume, velocity, and/or pollutant load than pre-development runoff from the same area.

4. A higher percentage of impervious area correlates to a greater pollutant loading, resulting in turbid water, nutrient enrichment, bacterial contamination, organic matter loads, toxic compounds, temperature increases, and increases of trash or debris.

5. Pollutants present in storm water can have damaging effects on both human health and aquatic ecosystems. In addition, the increased flows and volumes of storm water discharged from impervious surfaces resulting from development can significantly impact beneficial uses of aquatic ecosystems due to physical modifications of watercourses, such as bank erosion and widening of channels.

6. When water quality impacts are considered during the planning stages of a project, new development and many redevelopment projects can more efficiently incorporate measures to protect water quality.

7. On December 8, 1999, the U.S. Environmental Protection Agency (EPA) promulgated regulations under authority of the Clean Water Act (CWA) section 402(p)(6). These regulations require SWRCB to issue NPDES storm water permits to operators of small municipal separate storm sewer systems (Small MS4s) that discharge to waters of the U.S.

8. Of the Small MS4s defined by federal regulations, only "regulated Small MS4s" must obtain a permit. Title 40 of the Code of Federal Regulations (40 CFR) section 122.32(a) describes regulated Small MS4s as those traditional Small MS4s located within an urbanized area as determined by the latest Decennial Census by the Bureau of the Census and other Small MS4s that are designated by the permitting authority in accordance with designation criteria in Findings 10 and 11 below. Traditional Small MS4s within urbanized areas (Attachment 1) are automatically designated and are not subject to the designation criteria provided in Finding 10.

9. Section 123.35(b) of 40 CFR requires SWRCB to develop a process, as well as criteria, to designate Small MS4s as regulated Small MS4s.

10. In developing the designation criteria, factors were chosen to include parameters that may affect water quality. The following criteria will be considered in designating Small MS4s operated within a city or county as regulated Small MS4s.

    a. <u>High population density</u> – High population density means an area with greater than 1,000 residents per square mile. Also to be considered in this definition is a high density created by a non-residential population, such as tourists or commuters.

    b. <u>High growth or growth potential</u> – If an area grew by more than 25 percent between 1990 and 2000, it is a high growth area. If an area anticipates a growth rate of more than 25 percent over a 10-year period ending prior to the end of the first permit term, it has high growth potential.

    c. <u>Significant contributor of pollutants to an interconnected permitted MS4</u> – A Small MS4 is interconnected with a separately permitted MS4 if storm water that has entered the Small MS4 is allowed to flow directly into a permitted MS4. In general, if the Small MS4 discharges more than 10 percent of its storm water to the permitted MS4, or its discharge makes up more than 10 percent of the other permitted MS4's total storm water volume, it is a significant contributor of pollutants to the permitted MS4. In specific cases, the MS4s involved or third parties may show that the 10 percent threshold is inappropriate for the MS4 in question.

    d. <u>Discharge to sensitive water bodies</u> – Sensitive water bodies are receiving waters, which are a priority to protect. They include the following:

- those listed as providing or known to provide habitat for threatened or endangered species;

- those used for recreation that are subject to beach closings or health warnings; or

- those listed as impaired pursuant to CWA section 303(d) due to constituents of concern in urban runoff (these include biochemical oxygen demand (BOD), sediment, pathogens, oil and grease, and other constituents that are found in the MS4 discharge).

Additional criteria to qualify as a sensitive water body may exist and may be used by SWRCB or RWQCB on a case-by-case basis.

e. Significant contributor of pollutants to waters of the United States (U.S.) – Specific conditions presented by the MS4 may lead to significant pollutant loading to waters of the U.S. that are otherwise unregulated or inadequately regulated. An example of such a condition may be the presence of a large transportation industry.

This General Permit serves as notice to those Small MS4s on Attachment 2 that they are designated as regulated Small MS4s by the SWRCB at the time of permit adoption.

11. Section 122.26(b)(16)(iii) of 40 CFR defines systems that are similar to separate storm sewer systems in cities and counties, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares as Small MS4s. In this General Permit these types of Small MS4s are referred to as non-traditional MS4s that may be designated as regulated Small MS4s and required to seek coverage under this General Permit or coverage under a separate permit. Non-traditional MS4s often operate storm sewers that are similar to traditional MS4s operated by cities or counties and discharge the same types of pollutants that are typically associated with urban runoff.

12. This permit does not designate any non-traditional MS4s. SWRCB or RWQCB may designate non-traditional MS4s at any time subsequent to the adoption of this General Permit. Non-traditional MS4s that may be designated at a future date include, but are not limited to, those listed in Attachment 3 of this General Permit.

13. Non-traditional Small MS4 entities that are designated, but whose entire facilities are subject to the NPDES General Permit for the Discharge of Storm Water Associated with Industrial Activities and whose Storm Water Pollution Prevention Plan (SWPPP) addresses all six Minimum Control Measures described in this General Permit, are not required to obtain coverage under this General Permit. Such entities must present documentation to the appropriate RWQCB, showing that they meet the requirements for exclusion from coverage.

14. This General Permit requires regulated Small MS4s (Permittees) to develop a Storm Water Management Program (SWMP) designed to reduce the discharge of pollutants to the Maximum Extent Practicable (MEP) and to protect water quality. Upon approval of SWMP by the Regional Water Quality Control Board (RWQCB) or its Executive Officer,

the Permittees obtain coverage under this General Permit. This General Permit requires implementation of SWMP.

15. SWMP will be available for public review and comment and may be subject to a public hearing if requested prior to approval.

16. Permittees can satisfy the requirements through effective implementation of a SWMP, which must contain Best Management Practices (BMPs) that address six Minimum Control Measures. SWMP must incorporate measurable goals and time schedules of implementation.

17. The MEP standard is an ever-evolving, flexible, and advancing concept, which considers technical and economic feasibility. As knowledge about controlling urban runoff continues to evolve, so does that which constitutes MEP. Reducing the discharge of storm water pollutants to MEP in order to protect beneficial uses requires review and improvement, which includes seeking new opportunities. To do this, the Permittee must conduct and document evaluation and assessment of each relevant element of its program and revise activities, control measures, BMPs, and measurable goals, as necessary to meet MEP.

18. This General Permit includes Supplemental Provisions that apply to traditional and non-traditional Small MS4s serving a population of 50,000 people or more, or that are subject to high growth. These requirements address post-construction requirements and compliance with water quality standards. These Supplemental Provisions are similar to requirements for Medium and Large MS4s (Phase I), and are appropriate because larger Small MS4s are able to have more robust storm water programs and fast-growing Small MS4s may cause greater impacts to water quality.

19. The Receiving Water Limitations language contained in Attachment 4 is identical to the language established in SWRCB Water Quality Order WQ-99-05 adopted by the SWRCB on June 17, 1999. As interpreted in SWRCB Water Quality Order WQ-2001-15, adopted by the SWRCB on November 15, 2001, the receiving water limitations in this General Permit do not require strict compliance with water quality standards, but instead require compliance with water quality standards over time, through an iterative approach requiring improved BMPs.

20. The post-construction requirements, or Design Standards, contained in Attachment 4 are consistent with Order WQ-2000-11 adopted by SWRCB on October 5, 2000.

21. The purpose of the annual performance review is to evaluate (1) SWMP's effectiveness; (2) the implementation of SWMP (3) status of measurable goals; (4) effectiveness of BMPs; and (5) improvement opportunities to achieve MEP.

22. To apply for permit coverage authorizing storm water discharges to surface waters pursuant to this General Permit, the Permittees must submit a complete application package to the appropriate RWQCB. An application package includes a Notice of Intent

(NOI) to comply with the terms of this General Permit, appropriate fee (in accordance with the most recent fee schedule[1]), and SWMP. Permittees relying entirely on separately permitted Separate Implementing Entities (SIEs) to implement their entire programs are not required to submit a SWMP if the SIE being relied on has an approved SWMP. Attachment 8 gives contact information for each RWQCB.

23. Upon receipt of a complete permit application, the application will be public noticed for thirty days on SWRCB's website. During the public notice period, a member of the public may request that a public hearing be conducted by RWQCB. If no public hearing is requested, the application may be approved by the RWQCB Executive Officer. Permittees obtain coverage under the General Permit only after the SWMP has been approved.

24. Each Permittee 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, and for allocation of funds for the capital, operation and maintenance, and enforcement expenditures necessary to implement and enforce such control measures/BMPs within its jurisdiction. Enforcement actions concerning this General Permit will be pursued only against the individual Permittee responsible for specific violations of this General Permit.

25. In accordance with 40 CFR section 122.28(b)(3), a RWQCB may issue an individual MS4 NPDES Permit to a Permittee otherwise subject to this General Permit, or adopt an alternative general permit that covers storm water discharges regulated by this General Permit. The applicability of this General Permit is automatically terminated on the effective date of the individual permit or the date of approval for coverage under the alternative general permit.

26. Certain BMPs implemented or required by Permittees for urban runoff management may create a habitat for vectors (e.g., mosquitoes and rodents) if not properly designed or maintained. Close collaboration and cooperative effort between the Permittees, local vector control agencies, RWQCB staff, and the State Department of Health Services is necessary to identify and implement appropriate vector control measures that minimize potential nuisances and public health impacts resulting from vector breeding.

27. This General Permit may be reopened and modified if the decision *in Environmental Defense Center v. EPA* is revised or vacated.

28. This NPDES Permit is consistent with the antidegradation policies of 40 CFR section 131.12, SWRCB Resolution 68-16, and RWQCBs' individual Basin Plans. Implementing storm water quality programs that address the six Minimum Control Measures in previously unregulated areas will decrease the pollutant loading to the receiving waters and improve water quality.

[1] California Code of Regulations. Title 23. Division 3. Chapter 9 Waste Discharge Reports and Requirements. Article 1 Fees.

29. Following public notice in accordance with State and federal laws and regulations, SWRCB, in public hearings on December 2, 2002 and April 30, 2003, heard and considered all comments. SWRCB has prepared written responses to all significant comments.

30. This action to adopt an NPDES Permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code § 21100, et seq.) in accordance with section 13389 of the Porter-Cologne Water Quality Control Act (Porter-Cologne) (Division 7 of the California Water Code).

31. This NPDES Permit is in compliance with Part 402 of CWA and shall take effect 100 days after adoption by SWRCB. Once in effect, RWQCBs shall enforce the provisions herein.

IT IS HEREBY ORDERED that operators of Small MS4s subject to this General Permit shall comply with the following:

A. APPLICATION REQUIREMENTS

1. Deadlines for Application

a. By August 8, 2003, all Permittees automatically designated (see Attachment 1) must either apply for coverage under this General Permit (either individually or as a co-permittee), submit an application for an individual or alternative general Small MS4 permit (if applicable), or submit a joint application for modification of an existing large or medium MS4 permit (40 CFR §122.33(c)(1)).

Permittees that submitted complete application packages prior to the adoption of this General Permit to meet the federal regulation March 10, 2003 deadline have complied with this requirement and are not required to submit a duplicate application package.

b. By October 27, 2003, traditional Small MS4s designated according to Finding 10 (see Attachment 2), must either apply for coverage under this General Permit (either individually or as a co-permittee), submit an application for an individual or alternative general Small MS4 permit, or submit a joint application for modification of an existing large or medium MS4 permit (40 CFR §122.33(c)(2)). Written notices will be sent to designated parties subsequent to adoption of this General Permit.

c. Non-traditional Small MS4s, or other Small MS4s, which are designated by RWQCB or SWRCB after adoption of this General Permit must apply for coverage under this General Permit (either individually or as a co-

permittee), submit a complete application for an individual or alternative general Small MS4 permit, or submit a joint application for modification of an existing large or medium MS4 permit (40 CFR §122.33(c)(2)). Applications must be submitted within 180 days of designation unless a later date is provided in the designation letter.

2. General Permit Application

To obtain coverage under this General Permit, submit to the appropriate RWQCB a completed NOI (Attachment 7), a complete SWMP (one hard copy and one electronic copy in Word or PDF format), and appropriate fee. SWMP shall meet all the requirements of Section D of this General Permit. Permittees relying entirely on SIEs pursuant to Provision D.6 and permitted under the NPDES program are not required to submit a SWMP.

3. General Permit Coverage

Permit coverage will be in effect upon the completion of the following:

a. The Permittee has submitted a complete permit application to the appropriate RWQCB,

b. Receipt of a complete application is noticed for a minimum of 60 days and copies provided to the public for review and comment upon request,

c. The proposed SWMP has been reviewed by RWQCB staff, and

d. SWMP has been approved by the RWQCB Executive Officer, or approved by RWQCB in a public hearing, if requested.

B. DISCHARGE PROHIBITIONS

1. Discharges of waste that are prohibited by Statewide Water Quality Control Plans or applicable Regional Water Quality Control Plans (Basin Plans) are prohibited.

2. Discharges from the MS4s regulated under this General Permit that cause or threaten to cause nuisance are prohibited.

3. Discharges of material other than storm water to waters of the U.S. or another permitted MS4 must be effectively prohibited, except as allowed under Provision D.2.c, or as otherwise authorized by a separate NPDES permit.

C. EFFLUENT LIMITATIONS

1. Permittees must implement BMPs that reduce pollutants in storm water to the technology-based standard of MEP.

2. Storm water discharges regulated by this General Permit shall not contain a hazardous substance in amounts equal to or in excess of a reportable quantity listed in 40 CFR Part 117 or 40 CFR Part 302.

D. STORM WATER MANAGEMENT PROGRAM REQUIREMENTS

The Permittee shall maintain, implement, and enforce an effective SWMP, and develop adequate legal authority to implement and enforce the SWMP, designed to reduce the discharge of pollutants from the permitted MS4 to MEP and to protect water quality. SWMP shall serve as the framework for identification, assignment, and implementation of control measures/BMPs. The Permittee shall implement SWMP and shall subsequently demonstrate its effectiveness and provide for necessary and appropriate revisions, modifications, and improvements to reduce pollutants in storm water discharges to the MEP. SWMP shall be fully implemented by the expiration of this General Permit, or within five years of designation for Small MS4s designated subsequent to Permit adoption, with reasonable progress made towards implementation throughout the term of the General Permit. Existing programs that have storm water quality benefits can be identified in the SWMP and be a part of a Permittee's storm water program.

SWMP shall be revised to incorporate any new or modified BMPs or measurable goals developed through the Permittee's annual reporting process. The Permittee shall incorporate changes required by or acceptable to the RWQCB Executive Officer into applicable annual revisions to SWMP and adhere to its implementation.

1. The Permittee shall maintain, implement, and enforce an effective SWMP designed to reduce the discharge of pollutants from the regulated Small MS4 to the MEP and to protect water quality.

2. SWMP must describe BMPs, and associated measurable goals, that will fulfill the requirements of the following six Minimum Control Measures.

   a. **Public Education and Outreach on Storm Water Impacts**
   The Permittee must implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants in storm water runoff. For non-traditional Permittees, the employee/user population may serve as "the public" to target for outreach and involvement.

Non-traditional Small MS4s that discharge into medium and large MS4 may integrate public education and outreach program with the existing MS4 public education and outreach programs.

b. **Public Involvement/Participation**
The Permittee must at a minimum comply with State and local public notice requirements when implementing a public involvement/participation program.

c. **Illicit Discharge Detection and Elimination**
The Permittee must:

1) Develop, implement, and enforce a program to detect and eliminate illicit discharges (as defined at 40 CFR §122.26(b)(2)) into the regulated Small MS4;

2) Develop, if not already completed, a storm sewer system map, showing the location of all outfalls and the names and locations of all waters of the U.S. that receive discharges from those outfalls;

3) To the extent allowable under State or local law, effectively prohibit, through ordinance, or other regulatory mechanism, non-storm water discharges into the MS4 and implement appropriate enforcement procedures and actions;

4) Develop and implement a plan to detect and address non-storm water discharges, including illegal dumping, to the system that are not authorized by a separate NPDES permit;

5) Inform public employees, businesses, and the general public of the hazards that are generally associated with illegal discharges and improper disposal of waste; and

6) Address the following categories of non-storm water discharges or flows (i.e., authorized non-storm water discharges) only where they are identified as significant contributors of pollutants to the Small MS4:

1. water line flushing;
2. landscape irrigation;
3. diverted stream flows;
4. rising ground waters;
5. uncontaminated ground water infiltration (as defined at 40 CFR §35.2005(20)) to separate storm sewers;
6. uncontaminated pumped ground water;
7. discharges from potable water sources;
8. foundation drains;
9. air conditioning condensation;
10. irrigation water;
11. springs;
12. water from crawl space pumps;
13. footing drains;
14. lawn watering;
15. individual residential car washing;
16. flows from riparian habitats and wetlands; and
17. dechlorinated swimming pool discharges.

Discharges or flows from fire fighting activities are excluded from the effective prohibition against non-storm water and need only be addressed where they are identified as significant sources of pollutants to waters of the U.S.

If a RWQCB Executive Officer determines that any individual or class of non-storm water discharge(s) listed above may be a significant source of pollutants to waters of the U.S. or physically interconnected MS4, or poses a threat to water quality standards (beneficial uses), the RWQCB Executive Officer may require the appropriate Permittee(s) to monitor and submit a report and to implement BMPs on the discharge.

d. **Construction Site Storm Water Runoff Control**

The Permittee must develop, implement, and enforce a program to reduce pollutants in any storm water runoff to the Small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of storm water discharges from construction activity disturbing less than one acre must be included in your program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more. The program must include the development and implementation of, at a minimum:

1) An ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions, or other effective mechanisms, to ensure compliance, to the extent allowable under State, or local law;

2) Requirements for construction site operators to implement appropriate erosion and sediment control BMPs;

3) Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;

4) Procedures for site plan review which incorporate consideration of potential water quality impacts;

5) Procedures for receipt and consideration of information submitted by the public; and

6) Procedures for site inspection and enforcement of control measures.

e. **Post-Construction Storm Water Management in New Development and Redevelopment**

The Permittee must:

1) Develop, implement, and enforce a program to address storm water runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into the Small MS4 by ensuring that controls are in place that would prevent or minimize water quality impacts;

2) Develop and implement strategies, which include a combination of structural and/or non-structural BMPs appropriate for your community;

3) Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under State or local law For those Small MS4s described in Supplemental Provision E below, the requirements must at least include the design standards contained in Attachment 4 of this General Permit or a functionally equivalent program that is acceptable to the appropriate RWQCB; and

4) Ensure adequate long-term operation and maintenance of BMPs.

The General Permit does not require redesign of K-12 school or community college facilities that have been submitted to the Department of General Services, Division of the State Architect before adoption of the permit, and which receive final approval from the State Allocation Board or the Public Works Board, as appropriate, on or before December 31, 2004.

f. **Pollution Prevention/Good Housekeeping for Municipal Operations**
The Permittee must:

1) Develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations; and

2) Using training materials that are available from U.S. EPA, the State, or other organizations, the program must include employee training to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet building maintenance, new construction and land disturbances, and storm water system maintenance.

3. SWMP must identify the measurable goals for each of the BMPs, including, as appropriate, the months and years for scheduled actions, including interim milestones and the frequency of the action.

4. SWMP must identify the person or persons who will implement or coordinate SWMP, as well as each Minimum Control Measure.

5. Termination of coverage

A Permittee may terminate coverage if a new operator has assumed responsibility for the MS4, the Permittee has ceased operation of the MS4, or the Permittees has eliminated discharges from the MS4. To terminate coverage, the Permittee must submit a written request to the RWQCB.

6. Reliance on a SIE

The Permittee may rely on a SIE to satisfy one or more of the permit obligations, if the separate entity can appropriately and adequately address the storm water issues of the Permittee. The Permittee must describe the arrangement in the SWMP and the arrangement is subject to the approval of the RWQCB Executive Officer. The other entity must agree to implement the control measure(s), or components thereof, to achieve compliance with the General Permit. The Permittee remains responsible for compliance with this General Permit if the SIE fails to implement the control measure(s).

If the Permittee relies on an SIE to implement all six Minimum Control Measures and the SIE also has a storm water permit issued by SWRCB or RWQCB, the Permittee relying on the SIE must still submit an NOI, appropriate fee, and certification of the arrangement. The Permittee must note this fact in the NOI and provide proof that the SIE has an approved SWMP, but is not required to maintain a SWMP nor submit annual reports.

7. Outfalls not identified in the storm sewer system map required by Provision D.2.c.2), but constructed within the permitted area during the term of this General Permit to receiving waters identified in the NOI, shall not be considered a material change in character, location, or volume of the permitted discharge, and shall be allowed under the terms of this General Permit without permit application or permit modification, provided that the following information be provided in the subsequent annual report:

   a. Receiving water name;

   b. Storm sewer system map of added area;

   c. Certification that SWMP shall be amended to include the drainage area.

E. SUPPLEMENTAL PROVISIONS

Those regulated traditional and non-traditional Small MS4s serving a population over 50,000 or that are subject to high growth (at least 25 percent over ten years) must comply with the requirements in Attachment 4 of this General Permit. Compliance is required upon full implementation of the Small MS4s' storm water management plan.

Attachment 5 provides a list of communities that SWRCB anticipates being subject to the provisions in Attachment 4.

F. REPORTING REQUIREMENTS AND MONITORING

1. Reporting

   The Permittee must submit annual reports to the appropriate RWQCB by September 15th of each year (for Small MS4s designated with the adoption of this permit, the first annual report is to be submitted in 2004), or as otherwise required by the RWQCB Executive Officer, unless exempted under Provision D.6. The report shall summarize the activities performed throughout the reporting period (July 1 through June 30) and must include:

   a. The status of compliance with permit conditions;

   b. An assessment of the appropriateness and effectiveness of the identified BMPs;

   c. Status of the identified measurable goals;

   d. Results of information collected and analyzed, including monitoring data, if any, during the reporting period;

e. A summary of the storm water activities the Permittee plans to undertake during the next reporting cycle;

f. Any proposed change(s) to SWMP along with a justification of why the change(s) are necessary; and

g. A change in the person or persons implementing and coordinating SWMP.

2. RWQCB may impose additional monitoring requirements, which may include a reporting component. RWQCBs may adopt such requirements on an individual or group basis.

3. Recordkeeping

The Permittee must keep records required by this General Permit for at least five years or the duration of the General Permit if continued. The RWQCB Executive Officer may specify a longer time for record retention. The Permittee must submit the records to the RWQCB Executive Officer upon request. The Permittee must make the records, including the permit and SWMP, available to the public during regular business hours.

G. RWQCB AUTHORITIES

RWQCBs will review and approve SWMPs prior to permit coverage being in effect and will conduct public hearings of individual permit applications upon request. Where there is no hearing, the Executive Officer may approve the SWMP. RWQCBs will also oversee compliance with this General Permit. Oversight may include, but is not limited to, reviewing reports, requiring modification to SWMPs and other submissions, imposing region-specific monitoring requirements, conducting inspections, taking enforcement actions against violators of this General Permit, and making additional designations of Permittees pursuant with the criteria described in this General Permit and Fact Sheet. The RWQCBs may also issue individual permits to regulated Small MS4s, and alternative general permits to categories of regulated Small MS4s. Upon issuance of such permits by an RWQCB, this General Permit shall no longer regulate the affected Small MS4(s).

H. STANDARD PROVISIONS

1. General Authority

Three of the minimum control measures (illicit discharge detection and elimination, and the two construction-related measures) require enforceable controls on third party activities to ensure successful implementation of the measure. Some non-traditional operators, however, may not have the necessary legal regulatory authority to adopt these enforceable controls. As in the case of

local governments that lack such authority, non-traditional MS4s are expected to utilize the authority they do possess and to seek cooperative arrangements.

2. Duty to Comply

   The Permittee must comply with all of the conditions of this General Permit. Any permit noncompliance constitutes a violation of CWA and the Porter-Cologne and is grounds for enforcement action and/or removal from General Permit coverage. In the event that the Permittee is removed from coverage under the General Permit, the Permittee will be required to seek coverage under an individual or alternative general permit.

3. General Permit Actions

   This General Permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a General Permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not nullify 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 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 Permittee so notified.

4. Noncompliance Reporting

   Permittees who cannot certify compliance and/or who have had other instances of noncompliance shall notify the appropriate RWQCB within 30 days. Instances of noncompliance resulting in emergencies (i.e., that endanger human health or the environment) shall be reported orally to the RWQCB within 24 hours from the time the discharger becomes aware of the circumstance and in writing to the RWQCB within five days of the occurrence. The notification shall identify the noncompliance event and an initial assessment of any impact caused by the event, describe the actions necessary to achieve compliance, and include a time schedule indicating when compliance will be achieved. The time schedule and corrective measures are subject to modification by the RWQCB Executive Officer.

5. Need to Halt or Reduce Activity Not a Defense

   It shall not be a defense for the Permittee 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 General Permit.

6. Duty to Mitigate

   The Permittee shall take all responsible steps to minimize or prevent any discharge in violation of this General Permit that has a reasonable likelihood of adversely affecting human health or the environment.

7. Proper Operation and Maintenance

   The Permittee shall at all times properly operate and maintain any facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this General Permit and with the requirements of SWMP. Proper operation and maintenance also includes 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 the Permittee when necessary to achieve compliance with the conditions of this General Permit.

8. 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 does it authorize any infringement of federal, State, or local laws or regulations.

9. Duty to Provide Information

   The Permittee shall furnish RWQCB, SWRCB, or U.S. EPA, during normal business hours, any requested information to determine compliance with this General Permit. The Permittee shall also furnish, upon request, copies of records required to be kept by this General Permit.

10. Inspection and Entry

    The Permittee shall allow RWQCB, SWRCB, U.S. EPA, or an authorized representative of RWQCB, SWRCB, or U.S. EPA, upon the presentation of credentials and other documents as may be required by law, to:

    a. Enter upon the Permittee's premises during normal business hours where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this General Permit;

    b. Access and copy, during normal business hours, any records that must be kept under the conditions of this General Permit within a reasonable time from notification;

c. Inspect during normal business hours any municipal facilities; and

d. Sample or monitor at reasonable times for the purpose of assuring General Permit compliance.

11. Signatory Requirements

All NOIs, SWMPs, certifications, reports, or other information prepared in accordance with this General Permit submitted to SWRCB or RWQCB shall be signed by either a principal executive officer, ranking elected official, or duly authorized representative. 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 Administrator of U.S. EPA).

12. Certification

Any person signing documents under Section H.11 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, to the best of my knowledge and belief, the information submitted is true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

13. Anticipated Noncompliance

The Permittee will give advance notice to the RWQCB and local storm water management agency of any planned changes in the regulated Small MS4 activity that may result in noncompliance with General Permit requirements.

14. Penalties for Falsification of Reports

Section 309(c)(4) of 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.

15. Penalties for Violations of Permit Conditions

    a. Part 309 of CWA provides significant penalties for any person who violates a permit condition implementing Parts 301, 302, 306, 307, 308, 318, or 405 of CWA or any permit condition or limitation implementing any such section in a permit issued under Part 402. Any person who violates any permit condition of this General Permit is subject to a civil penalty not to exceed $27,500 per calendar day of such violation, as well as any other appropriate sanction provided by Part 309 of CWA.

    b. Porter-Cologne also provides for administrative, civil, and criminal penalties, which in some cases are greater than those under CWA.

16. Oil and Hazardous Substance Liability

    Nothing in this General Permit shall be construed to preclude the institution of any legal action against the Permittee or relieve the Permittee from any responsibilities, liabilities, or penalties to which the Permittee is or may be subject to under Part 311 of CWA.

17. 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.

18. Reopener Clause

    This General Permit may be modified, revoked and reissued, or terminated for cause due to promulgation of amended regulations, or otherwise in accordance with 40 CFR sections 122.62, 122.63, 122.64, and 124.5.

19. Availability

    A copy of this General Permit and SWMP shall be made available for public review.

20. Transfers

    This General Permit is not transferable. A Permittee must submit written notification to the appropriate RWQCB to terminate coverage of this General Permit.

21. Continuation of Expired Permit

This General Permit expires five years from the date of adoption. This General Permit continues in force and in effect until a new General Permit is issued or the SWRCB rescinds this General Permit. Only those Small MS4s authorized to discharge under the expiring General Permit are covered by the continued General Permit.

CERTIFICATION

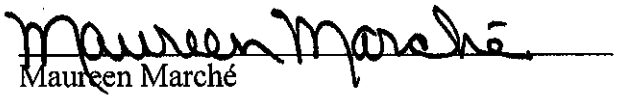
The undersigned, Clerk to the Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of SWRCB held on April 30, 2003.

AYE: Arthur G. Baggett, Jr.
Peter S. Silva
Richard Katz
Gary M. Carlton

NO: None

ABSENT: None

ABSTAIN: None



Maureen Marché
Clerk to the Board

Operators of Municipal Separate Storm Sewer Systems that serve areas within urbanized areas are automatically designated as regulated Small MS4s. These include the following areas. (For cities, the permit area boundary is the city boundary. For counties, permit boundaries must at least be inclusive of urbanized areas. The boundaries must be proposed in the permit application and may be developed in conjunction with the applicable regional water quality control board.)

Region 1
City of Cotati
Graton, County of Sonoma
City of Healdsburg
City of Rohnert Park
City of Sebastapool
Town of Windsor
County of Sonoma

Region 2
City of Belvedere
City of Benicia
Black Point-Green Point, County of Marin
Town of Corte Madera
Town of Fairfax
City of Larkspur
Lucas Valley-Marinwood, County of Marin
City of Mill Valley
City of Napa
City of Novato
City of Petaluma
Town of Ross
Town of San Anselmo
City of San Francisco (those areas not served by a CSO)
City of San Rafael
City of Sausalito
City of Tamalpais-Homestead Valley
City of Tiburon
Woodacre, County of Marin
County of Napa
County of Marin
County of Solano
County of Sonoma
County of San Francisco (those areas not served by a CSO)

Region 3
Aptos, County of Santa Cruz
City of Atascadero
Ben Lomand, County of Santa Cruz
Boulder Creek, County of Santa Cruz

City of Capitola
City of Carmel-by-the-Sea
Carmel Valley Village, County of Monterey
City of Carpinteria
Castroville, County of Monterey
Coralitos, County of Santa Cruz
City of Del Ray Oaks
Felton, County of Santa Cruz
City of Gilroy
Goleta, County of Santa Barbara
Isla Vista, County of Santa Barbara
Las Lomas, County of Santa Cruz
Live Oak, County of Santa Cruz
City of Lompoc
City of Marina
Montecito, County of Santa Barbara
City of Monterey
City of Morgan Hill
Nipomo, County of San Luis Obispo
Orcutt, County of Santa Barbara
City of Pacific Grove
Pajaro, County of Monterey
City of Paso Robles
Pebble Beach, County of Monterey
Prunedale, Count of Monterey
City of San Luis Obispo
City of Sand City
San Martin, County of Santa Clara
City of Santa Barbara
City of Santa Cruz
City of Santa Maria
City of Scotts Valley
City of Seaside
Soquel, County of Santa Cruz
Summerland, County of Santa Cruz
City of Watsonville
Templeton, County of San Luis Obispo
Vandenberg Village, County of Santa Barbara
County of Monterey
County of San Luis Obispo
County of Santa Barbara
County of Santa Clara
County of Santa Cruz

Region 5
City of Anderson
City of Atwater
City of Auburn

Bondelle Ranchos, County of Madera
City of Ceres
City of Chico
City of Davis
City of Delhi
El Dorado Hills, County of El Dorado
Empire, County of Stanislaus
City of Exeter
City of Farmersville
French Camp, County of San Joaquin
Goshen, County of Tulare
Granite Bay, County of Placer
City of Hughson
Kennedy, County of San Joaquin
Keyes, County of Stanislaus
City of Lathrop
Linda, County of Yuba
City of Lodi
Town of Loomis
City of Madera
Madera Acres, County of Madera
City of Manteca
City of Marysville
City of Merced
Morada, County of San Joaquin
North Auburn, County of Placer
North Woodbridge, County of San Joaquin
Olivehurst, County of Yuba
City of Porterville
City of Redding
City of Ripon
City of Riverbank
City of Rocklin
City of Roseville
Salida, County of Stanislaus
City of Shasta Lake
Strathmore, County of Tulare
South Yuba City, County of Sutter
City of Tracy
City of Turlock
City of Vacaville
City of Visalia
City of West Sacramento
City of Winton
City of Yuba City
County of Butte
County of Madera
County of Merced

County of Placer
County of San Joaquin
County of Shasta
County of Solano
County of Stanislaus
County of Sutter
County of Tulare
County of Yolo
County of Yuba

Region 6
City of Apple Valley
City of Hesperia
City of Lancaster
City of Palmdale
City of Victorville
County of San Bernadino
County of Los Angeles

Region 7
City of El Centro
Heber, County of Imperial
City of Imperial
County of Imperial

Operators of Municipal Separate Storm Sewer Systems that serve areas that are designated by the State Water Resources Control Board or Regional Water Quality Control Board in accordance with the designation criteria contained in the General Permit are regulated Small MS4s. These include, but are not limited to, the following areas. (For cities, the permit area boundary is the city boundary. For counties, permit boundaries must at least be inclusive of urbanized areas. The boundaries must be proposed in the permit application and may be developed in conjunction with the applicable regional water quality control board.)

Region 1

Area	Justification	Details
City of Arcata	• Discharge Into A Sensitive Water Body • High Population Density	• Mad River which is on the 303(d) list for sediment/turbidity • Urban cluster
City of Eureka	• Discharge Into A Sensitive Water Body • High Population Density	• Elk River and Freshwater Creek which are listed on the 303(d) list for sedimentation/siltation • Urban cluster
City of Fort Bragg	• Discharge Into A Sensitive Water Body • High Population Density	• Noyo River which is listed for sedimentation/siltation • Urban cluster
City of Fortuna	• Discharge Into A Sensitive Water Body • High Population Density	• Eel River which is on the 303(d) list for sedimentation/siltation and temperature • Urban cluster
McKinleyville, County of Humboldt	• Discharge Into A Sensitive Water Body • High Population Density	• Mad River which is on the 303(d) list for sedimentation/siltation and turbidity • Urban cluster
City of Ukiah	• Discharge Into A Sensitive Water Body • High Population Density	• Russian River which is listed for sedimentation/siltation • Urban cluster
County of Mendocino	• Discharge Into A Sensitive Water Body • High Population Density	• Russian River which is listed for sedimentation/siltation • Urban cluster •

Region 2

Area	Justification	Details
City of Calistoga	• Discharge Into A Sensitive Water Body • High Population Density	• Napa River, which is on the 303(d) list for sediment, nutrients, and pathogens • Urban cluster
City of St. Helena	• Discharge Into A Sensitive Water Body • High Population Density	• Napa River, which is on the 303(d) list for sediment, nutrients, and pathogens • Urban cluster
City of Sonoma	• Discharge Into A Sensitive Water Body • High Population Density	• Sonoma Creek, which is on the 303(d) list for sediment, nutrients, and pathogens • Urban cluster
Town of Yountville	• Discharge Into A Sensitive Water Body • High Population Density	• Napa River, which is on the 303(d) list for sediment, nutrients, and pathogens • Urban cluster

Region 3

Area	Justification	Details
City of Arroyo Grande	• High Population Density	• Tourism, Urban cluster
Baywood-Los Osos, County of San Luis Obispo	• Discharge Into A Sensitive Water Body • High Population Density	• Morro Bay which is on the 303(d) list for sediments • Urban cluster
City of Buellton	• Discharge Into A Sensitive Water Body • High Population Density	• Santa Ynez River, which is on the 303(d) list for nutrients and sediment • Urban cluster
Cambria, County of San Luis Obispo	• Discharge Into A Sensitive Water Body • High Population Density	• Marine Sanctuary • Urban cluster
City of Greenfield	• Discharge Into A Sensitive Water Body • High Growth Rate • High Population Density	• Salinas River, which is listed for sediment and salinity/TDS/chlorides • 68.6% over 10 years • Urban cluster
City of Grover Beach	• High Population Density	• Tourism, Urban cluster
City of Hollister	• Discharge Into A Sensitive Water Body • High Growth Rate • High Population Density	• San Benito River, which is listed for sediment • 79.1% over 10 years • Urban cluster
City of King City	• Discharge Into A Sensitive	• Salinas River, which is listed

	Water Body • High Growth Rate • High Population Density	for sediment and salinity/TDS/chlorides • 45.3% over 10 years • Urban cluster
	•	•
Los Olivos, County of Santa Barbara	• Discharge Into A Sensitive Water Body • High Population Density	• Santa Ynez River, which is on the 303(d) list for nutrients and sediment • Urban Cluster
City of Morro Bay	• Discharge Into A Sensitive Water Body • High Population Density	• Morro Bay, which is on the 303(d) list for sediments • Urban cluster
Oceano, County of San Luis Obispo	• High Population Density	• Tourism, Urban cluster
City of Pismo Beach	• High Population Density	• Tourism, Urban cluster
Santa Ynez, County of Santa Barbara	• Discharge Into A Sensitive Water Body • High Population Density	• Santa Ynez River, which is on the 303(d) list for nutrients and sediment • Urban cluster
Shell Beach, County of San Luis Obispo	• High Population Density	• Tourism
City of Soledad	• Discharge Into A Sensitive Water Body • High Growth Rate • High Population Density	• Salinas River, which is listed for sediment and salinity/TDS/chlorides • 57.6% over 10 years • Urban cluster
City of Solvang	• Discharge Into A Sensitive Water Body • High Population Density	• Santa Ynez River, which is on the 303(d) list for nutrients and sediment • Urban cluster • Tourism

Region 5

Area	Justification	Details
City of Clearlake	• Discharge Into A Sensitive Water Body • High Population Density	• Clear Lake which is on the 303(d) list for mercury and nutrients • Urbanized cluster
City of Dixon	• High Growth Or Growth Potential • High Population Density	• 54.8% over 10 years • Urban cluster
City of Grass Valley	• Discharge To Sensitive Water Bodies • High Growth Potential	• Receiving waters support threatened and endangered species

	• High Population Density	• Urban cluster
City of Hanford	• Urbanized Area in corrected census data	• Urbanized Area in corrected census data
City of Kingsburg	• Discharge To Sensitive Water Bodies • High Population Density	• Kings River, used for recreation and agriculture supply • Urban cluster
City of Lakeport	• Discharge To Sensitive Water Bodies • High Population Density	• Clear Lake which is on the 303(d) list for mercury and nutrients • Urban cluster
City of Lemoore	• Urbanized Area in corrected census data	• Urbanized Area in corrected census data
City of Lincoln	• Discharge To Sensitive Water Bodies • High Growth And Growth Potential • High Population Density	• Receiving waters support threatened and endangered species • 54.6% over 10 years and continuing at 15% per year • Urban cluster
City of Los Baños	• Discharge Into A Sensitive Water Body • High Growth • High Population Density	• Los Baños Canal which is used for agriculture supply and flows into a water of the U.S. • 78.2% growth over 10 years • Urban cluster
City of Oakdale	• Discharge To Sensitive Water Body • High Growth • High Population Density	• Stanislaus River which is on the 303(d) list for pesticides and unknown toxicity • 29.6% over 10 years • Urban cluster
City of Patterson	• Discharge To Sensitive Water Body • High Growth • High Population Density	• San Joaquin river which is on the 303(d) list for pesticides, and unknown toxicity • 34.5% over 10 years • Urban cluster
City of Placerville	• Discharge To Sensitive Water Body • High Population Density	• Receiving waters support threatened and endangered species • Urban cluster
City of Reedley	• Discharge Into Sensitive Water Body • High Population Density	• Kings River, used for recreation and agriculture supply • Urban cluster
City of Rio Vista	• Discharge To Sensitive Water Body	• Sacramento River, Delta, which is on the 303(d) list

	• High Population Growth Potential • High Population Density	for pesticides, mercury, and unknown toxicity • 210% projected growth between 2000 and 2010 • Urban cluster
City of Selma	• Discharge To Sensitive Water Bodies • High Population Density	• Discharge to Consolidated Irrigation Canal, which is tributary to Kings River, used for recreation and agriculture supply • Urban cluster
City of Tulare	• High Growth • Contributor Of Pollutants To Waters Of The U.S. • High Population Density	• 32.3% growth over 10 years • High population, approaching "urbanized area" • Urban cluster
City of Woodland	• Significant Contributor Of Pollutants To Waters Of The U.S. • High Population Density • Discharge To Sensitive Water Bodies	• 49,151 people at the time of the census, essentially the same threat as an urbanized area • Urban cluster • Contact recreation
County of Kings	• Urbanized Area in corrected census data	• Urbanized Area in corrected census data
County of Lake	• Discharge To Sensitive Water Bodies • High Population Density	• Clear Lake which is on the 303(d) list for mercury and nutrients • Urban cluster

Region 7

Area	Justification	Details
City of Brawley	• Discharge To Sensitive Water Body • High Population Density	• New River which is on the 303(d) list for bacteria, nutrients, pesticides, and sedimentation • Urban cluster
City of Calexico	• Discharge To Sensitive Water Body • High Population Density	• New River which is on the 303(d) list for bacteria, nutrients, pesticides, and sedimentation • Urban cluster

Non-Traditional Small MS4s

Attachment 3
WQO# 2003 – 0005 – DWQ

Non-traditional Small MS4s anticipated to be designated in the future will include the following entities.

Region	Agency	Facility	Address	City, State, ZIP
1	California Community Colleges	College of the Redwoods	7351 Tompkins Hill Road	Eureka, CA 95501-9301
1	California Community Colleges	Mendocino College	1000 Hensley Creek Rd. PO Box 3000	Ukiah, CA 95482-0300
1	California Community Colleges	Santa Rosa Junior College - Santa Rosa Campus	1501 Mendocino Avenue	Santa Rosa, CA 95401-4395
1	California State University	Humboldt State University	1 Harpst Street	Arcata, CA 95521-8299
1	California State University	Sonoma State University	1801 East Cotati Ave.	Rohnert Park, CA 94928-3609
1	District Agricultural Association	Humboldt County Fairgrounds	3750 Harris Street	Eureka, CA
1	District Agricultural Association	Mendocino County Fairgrounds	1055 North State Street	Ukiah, CA
1	School District, Alexander Valley Union Elementary		8511 Hwy. 128	Healdsburg, CA 95448-9020
1	School District, Arcata Elementary		1435 Buttermilk Lane	Arcata, CA 95521-
1	School District, Bellevue Union Elementary		3223 Primrose Ave.	Santa Rosa, CA 95407-7723
1	School District, Bennett Valley Union Elementary		2250 Mesquite Dr.	Santa Rosa, CA 95405-8310
1	School District, Cotati-Rohnert Park Unified		1601 E Cotati Ave.	Rohnert Park, CA 94928-3606
1	School District, Eureka City Unified		3200 Walford Ave.	Eureka, CA 95503-4887
1	School District, Fieldbrook Elementary		4070 Fieldbrook Road	Arcata, CA 95521-9709
1	School District, Fort Bragg Unified		312 S. Lincoln St.	Fort Bragg, CA 95437-4416
1	School District, Fortuna Union Elementary		843 L St.	Fortuna, CA 95540-1921
1	School District, Fortuna Union High		379 12th St.	Fortuna, CA 95540-2357
1	School District, Freshwater Elementary		75 Greenwood Heights Dr.	Eureka, CA 95503-9569
1	School District, Garfield Elementary		2200 Freshwater Road	Eureka, CA 95503-9562
1	School District, Gravenstein Union Elementary		3840 Twig Ave.	Sebastopol, CA 95472-5750
1	School District, Healdsburg Unified		925 University St.	Healdsburg, CA 95448-3528
1	School District, Mark West Union Elementary		305 Mark West Springs Road	Santa Rosa, CA 95404-1101
1	School District, McKinleyville Union Elementary		2275 Central Ave.	McKinleyville, CA 95519-3611
1	School District, Oak Grove Union Elementary		5285 Hall Road	Santa Rosa, CA 95401-5566
1	School District, Pacific Union Elementary		3001 Janes Road	Arcata, CA 95521-4701
1	School District, Piner-Olivet Union Elementary		3450 Coffey Lane	Santa Rosa, CA 95403-1919
1	School District, Rincon Valley Union Elementary		1000 Yulupa Ave.	Santa Rosa, CA 95405-7020
1	School District, Rohnerville Elementary		3850 Rohnerville Road	Fortuna, CA 95540-3122
1	School District, Roseland Elementary		950 Sebastopol Road	Santa Rosa, CA 95407-6829
1	School District, Santa Rosa Elementary		211 Ridgway Ave.	Santa Rosa, CA 95401-4320
1	School District, Santa Rosa High		211 Ridgway Ave.	Santa Rosa, CA 95401-4320
1	School District, Sebastopol Union Elementary		7905 Valentine Ave.	Sebastopol, CA 95472-3214
1	School District, South Bay Union Elementary		5248 Vance Ave.	Eureka, CA 95503-6351
1	School District, Twin Hills Union Elementary		700 Water Trough Road	Sebastopol, CA 95472-3917
1	School District, Ukiah Unified		925 N. State St.	Ukiah, CA 95482-3411
1	School District, West Side Union Elementary		1201 Felta Road	Healdsburg, CA 95448-9476
1	School District, West Sonoma County Union High		462 Johnson St.	Sebastopol, CA 95472-

Region	Agency	Facility	Address	City, State, ZIP
1	School District, Windsor Unified		9291 Old Redwood Hwy. #300 C	Windsor, CA 95492-9217
1	School District, Wright Elementary		4385 Price Ave.	Santa Rosa, CA 95407-6550
2	Bureau of Prisons	FCI Dublin	5701 8th Street - Camp Parks	Dublin, CA 94568
2	California Air National Guard	129th Rescue Wing	PO Box 103	Moffett Airfield, CA 94035-5006
2	California Community Colleges	Canada College	4200 Farm Hill Boulevard	Redwood City, CA 94061-1099
2	California Community Colleges	Chabot College	25555 Hesperian Blvd PO Box 5001	Hayward, CA 94545-5001
2	California Community Colleges	City College of San Francisco	50 Phelan Avenue, E200	San Francisco, CA 94112-1898
2	California Community Colleges	College of Alameda	555 Atlantic Avenue	Alameda, CA 94501-2109
2	California Community Colleges	College of San Mateo	1700 West Hillsdale Boulevard	San Mateo, CA 94402-3784
2	California Community Colleges	Contra Costa College	2600 Mission Bell Drive	San Pablo, CA 94806-3195
2	California Community Colleges	DeAnza College	21250 Stevens Creek Boulevard	Cupertino, CA 95014-5797
2	California Community Colleges	Diablo Valley College	321 Golf Club Road	Pleasant Hill, CA 94523-1544
2	California Community Colleges	Evergreen Valley College	3095 Yerba Buena Road	San Jose, CA 95135-1598
2	California Community Colleges	Foothill College	12345 El Monte Road	Los Altos Hills, CA 94022-4599
2	California Community Colleges	Laney College	900 Fallon Street	Oakland, CA 94607-4893
2	California Community Colleges	Las Positas College	3033 Collier Canyon Road	Livermore, CA 94550-7650
2	California Community Colleges	Los Medanos College	2700 East Leland Road	Pittsburg, CA 94565-5197
2	California Community Colleges	Merritt College	12500 Campus Drive	Oakland, CA 94619-3196
2	California Community Colleges	Mission College	3000 Mission College Boulevard	Santa Clara, CA 95054-1897
2	California Community Colleges	Napa Valley College	2277 Napa Vallejo Highway	Napa, CA 94558-6236
2	California Community Colleges	Ohlone College	43600 Mission Boulevard	Fremont, CA 94539-0911
2	California Community Colleges	San Jose City College	2100 Moorpark Avenue	San Jose, CA 95128-2799
2	California Community Colleges	Santa Rosa Junior College - Petaluma Campus	680 Sonoma Mountain Parkway	Petaluma, CA 94952
2	California Community Colleges	Skyline College	3300 College Drive	San Bruno, CA 94066-1662
2	California Community Colleges	Solano Community College	4000 Suisun Valley Road	Suisun City, CA 94585-3197
2	California Community Colleges	Vista College	2020 Milvia Street	Berkeley, CA 94704-1183
2	California Community Colleges	West Valley College	14000 Fruitvale Avenue	Saratoga, CA 95070-5699
2	California State University	California State University Hayward	25800 Carlos Bee Blvd	Hayward, CA 94542
2	California State University	California State University Maritime	200 Maritime Academy Drive	Vallejo, CA 94590
2	California State University	CSU Maritime Academy	200 MARITIME	Vallejo, CA
2	California State University	SF State University	1600 Holloway Avenue	San Francisco, CA 94132
2	Corrections, Dept of	San Quentin State Prison		San Quentin, CA 94964
2	Defense, Department of	Camp Parks	Bldg 790 Reserve Forces Training Area	Dublin, CA 94568-5201
2	Defense, Department of	Concord Naval Weapons Station	10 Delta St	Concord, CA 94520-5100
2	Defense, Department of	Oakland Army Base		, CA
2	Defense, Department of	Onizuka Air Station	1080 Lockheed Martin Way Box 41	Sunnyvale, CA 94089-1237
2	Defense, Department of	San Bruno Naval Facility	900 Commodore Drive	San Bruno, CA 94066-5006
2	Defense, Department of	Santa Clara Naval Reserve Center	500 Shenandoah Plaza, P.O. Box 128, M	Mountain View, CA 94035-0128
2	Defense, Department of	Travis Air Force Base	60 Support Group	Travis AFB, CA 94535-5049
2	Developmental Services, Dept of	Agnews Devolopmental Center East & West	3500 Zanker Road	San Jose, CA
2	District Agricultural Association	Napa County Fairgrounds	575 Third Street	Napa, CA
2	District Agricultural Association	Sonoma-Marin Fair	Fairgrounds Dr	Petaluma, CA

Region	Agency	Facility	Address	City, State, ZIP
2	Education, Dept of	Calif. School for the Blind	500 Walnut Ave.	Fremont, CA 94536-4365
2	Education, Dept of	Calif. School for the Deaf	39350 Gallaudet Dr.	Fremont, CA 94538-2308
2	Energy, Dept of	Sandia National Labs., CA Pgms.	P.O. Box 969, MS-9221	Livermore, CA 94550
2	Health Services, Dept of	Fairfield Animal Facility	6250 Lambie Road	Suisun City, CA
2	Menatl Health, Dept of	Napa State Hospital	2100 Napa-Vallejo Hwy	Napa, CA
2	NASA	Moffett Federal Air Field	NASA - AMES, MS 218-1	Moffett Airfield, CA 94035
2	Port of Oakland		530 Water Street	Oakland, CA 94607
2	Presido Trust		34 Graham Street PO Box 29052	San Franciso, CA 94129-0052
2	Rehabilitation, Dept of	Center for the Blind	400 Adams Street	Albany, CA
2	San Mateo Union High School District		650 N. Delaware St.	San Mateo, CA 94401-1795
2	School District, Acalanes Union High		1212 Pleasant Hill Road	Lafayette, CA 94549-2623
2	School District, Alameda City Unified		2200 Central Ave.	Alameda, CA 94501-4450
2	School District, Albany City Unified		904 Talbot Ave.	Albany, CA 94706-2020
2	School District, Alum Rock Union Elementary		2930 Gay Ave.	San Jose, CA 95127-2322
2	School District, Bayshore Elementary		1 Martin St.	Daly City, CA 94014-1603
2	School District, Belmont-Redwood Shores Elementary		2960 Hallmark Dr.	Belmont, CA 94002-2943
2	School District, Benicia Unified		350 East K St.	Benicia, CA 94510-3437
2	School District, Berkeley Unified		2134 Martin Luther King, Jr. W	Berkeley, CA 94704-1109
2	School District, Berryessa Union Elementary		1376 Piedmont Road	San Jose, CA 95132-2427
2	School District, Brisbane Elementary		1 Solano St.	Brisbane, CA 94005-1342
2	School District, Burlingame Elementary		1825 Trousdale Dr	Burlingame, CA 94010-4509
2	School District, Cabrillo Unified		498 Kelly Ave.	Half Moon Bay, CA 94019-1636
2	School District, Calistoga Joint Unified		1520 Lake St.	Calistoga, CA 94515-1605
2	School District, Cambrian Elementary		4115 Jacksol Dr.	San Jose, CA 95124-3312
2	School District, Campbell Union Elementary		155 N. Third St.	Campbell, CA 95008-2044
2	School District, Campbell Union High		3235 Union Ave.	San Jose, CA 95124-2009
2	School District, Canyon Elementary		187 Pinehurst Road	Canyon, CA 94516-0187
2	School District, Castro Valley Unified		4430 Alma Ave.	Castro Valley, CA 94546-0146
2	School District, Cinnabar Elementary		286 Skillman Lane	Petaluma, CA 94975-0399
2	School District, Cupertino Union Elementary		10301 Vista Dr.	Cupertino, CA 95014-2040
2	School District, Dixie Elementary		380 Nova Albion Way	San Rafael, CA 94903-3523
2	School District, Dublin Unified		7471 Larkdale Ave.	Dublin, CA 94568-1500
2	School District, Dunham Elementary		4111 Roblar Road	Petaluma, CA 94952-9202
2	School District, East Side Union High		830 N. Capitol Ave.	San Jose, CA 95133-1316
2	School District, Emery Unified		4727 San Pablo Ave.	Emeryville, CA 94608-3035
2	School District, Evergreen Elementary		3188 Quimby Road	San Jose, CA 95148-3022
2	School District, Fairfield-Suisun Unified		1975 Pennsylvania Ave.	Fairfield, CA 94533-
2	School District, Franklin-McKinley Elementary		645 Wool Creek Dr.	San Jose, CA 95112-2617
2	School District, Fremont Unified		4210 Technology Dr.	Fremont, CA 94537-5008
2	School District, Fremont Union High		589 W. Fremont Ave.	Sunnyvale, CA 94087-
2	School District, Hayward Unified		24411 Amador St.	Hayward, CA 94540-0001
2	School District, Hillsborough City Elementary		300 El Cerrito Ave.	Hillsborough, CA 94010-6818

Region	Agency	Facility	Address	City, State, ZIP
2	School District, Jefferson Elementary		101 Lincoln Ave.	Daly City, CA 94015-3934
2	School District, Jefferson Union High		699 Serramonte Blvd.,Suite 100	Daly City, CA 94015-4132
2	School District, John Swett Unified		341 #B (Selby)	Crockett, CA 94525-
2	School District, La Honda-Pescadero Unified		620 North St	Pescadero, CA 94060-0189
2	School District, Lafayette Elementary		3477 School St.	Lafayette, CA 94549-1029
2	School District, Laguna Joint Elementary		3286 Chileno Valley Road	Petaluma, CA 94952-9428
2	School District, Laguna Salada Union Elementary		375 Reina del Mar	Pacifica, CA 94044-3052
2	School District, Lakeside Joint Elementary		19621 Black Road	Los Gatos, CA 95030-9522
2	School District, Larkspur Elementary		230 Doherty Dr.	Larkspur, CA 94939-
2	School District, Las Lomitas Elementary		1011 Altschul Ave.	Menlo Park, CA 94025-6706
2	School District, Liberty Elementary		170 Liberty Road	Petaluma, CA 94952-1074
2	School District, Lincoln Elementary		1300 Hicks Valley Road	Petaluma, CA 94952-9407
2	School District, Livermore Valley Joint Unified		685 E. Jack London Blvd.	Livermore, CA 94550-1800
2	School District, Loma Prieta Joint Union Elementary		23800 Summit Road	Los Gatos, CA 95033-4054
2	School District, Los Altos Elementary		201 Covington Road	Los Altos, CA 94024-4030
2	School District, Los Gatos Union Elementary		15766 Poppy Lane	Los Gatos, CA 95030-3228
2	School District, Los Gatos-Saratoga Joint Union High		17421 Farley Road West	Los Gatos, CA 95030-3308
2	School District, Luther Burbank Elementary		4 Wabash Ave.	San Jose, CA 95128-1931
2	School District, Martinez Unified		921 Susana St.	Martinez, CA 94553-1848
2	School District, Menlo Park City Elementary		181 Encinal Ave.	Atherton, CA 94027-3102
2	School District, Mill Valley Elementary		411 Sycamore Ave.	Mill Valley, CA 94941-2231
2	School District, Millbrae Elementary		555 Richmond Dr.	Millbrae, CA 94030-1600
2	School District, Milpitas Unified		1331 E. Calaveras Blvd.	Milpitas, CA 95035-5707
2	School District, Montebello Elementary		15101 Montebello Road	Cupertino, CA 95014-5431
2	School District, Moraga Elementary		1540 School St.	Moraga, CA 94556-0158
2	School District, Moreland Elementary		4710 Campbell Ave.	San Jose, CA 95130-1709
2	School District, Mountain View-Los Altos Union High		1299 Bryant Ave.	Mountain View, CA 94040-4527
2	School District, Mountain View-Whisman Elementary		750 A San Pierre Way	Mountain View, CA 94043-
2	School District, Mt. Diablo Unified		1936 Carlotta Dr.	Concord, CA 94519-1358
2	School District, Mt. Pleasant Elementary		3434 Marten Ave.	San Jose, CA 95148-
2	School District, Napa Valley Unified		2425 Jefferson St.	Napa, CA 94558-4931
2	School District, New Haven Unified		34200 Alvarado-Niles Road	Union City, CA 94587-4402
2	School District, Newark Unified		5715 Musick Ave.	Newark, CA 94560-0385
2	School District, Novato Unified		1015 Seventh St.	Novato, CA 94945-2205
2	School District, Oak Grove Elementary		6578 Santa Teresa Blvd.	San Jose, CA 95119-1204
2	School District, Oakland Unified		1025 Second Ave.	Oakland, CA 94606-2212
2	School District, Old Adobe Union Elementary		845 Crinella Dr.	Petaluma, CA 94954-4450
2	School District, Orchard Elementary		921 Fox Lane	San Jose, CA 95131-
2	School District, Orinda Union Elementary		8 Altarinda Road	Orinda, CA 94563-2603
2	School District, Palo Alto Unified		25 Churchill Ave.	Palo Alto, CA 94306-1005
2	School District, Petaluma City Elementary		200 Douglas St.	Petaluma, CA 94952-2575
2	School District, Petaluma Joint Union High		200 Douglas St.	Petaluma, CA 94952-2575

Region	Agency	Facility	Address	City, State, ZIP
2	School District, Piedmont City Unified		760 Magnolia Ave.	Piedmont, CA 94611-4047
2	School District, Pittsburg Unified		2000 Railroad Ave.	Pittsburg, CA 94565-3830
2	School District, Pleasanton Unified		4665 Bernal Ave.	Pleasanton, CA 94566-7449
2	School District, Portola Valley Elementary		4575 Alpine Road	Portola Valley, CA 94028-8040
2	School District, Ravenswood City Elementary		2160 Euclid Ave.	East Palo Alto, CA 94303-1703
2	School District, Redwood City Elementary		750 Bradford St.	Redwood City, CA 94063-1727
2	School District, Reed Union Elementary		105A Avenida Miraflores	Tiburon, CA 94920-
2	School District, Ross Elementary		Lagunitas and Allen Aves.	Ross, CA 94957-1058
2	School District, Ross Valley Elementary		46 Green Valley Court	San Anselmo, CA 94960-1112
2	School District, San Bruno Park Elementary		500 Acacia Ave.	San Bruno, CA 94066-4298
2	School District, San Carlos Elementary		826 Chestnut St.	San Carlos, CA 94070-3802
2	School District, San Francisco Unified		135 Van Ness Ave.	San Francisco, CA 94102-5207
2	School District, San Jose Unified		855 Lenzen Ave.	San Jose, CA 95126-2736
2	School District, San Leandro Unified		14735 Juniper St.	San Leandro, CA 94579-1222
2	School District, San Lorenzo Unified		15510 Usher St.	San Lorenzo, CA 94580-
2	School District, San Mateo-Foster City Elementary		300 28th Ave.	San Mateo, CA 94402-0058
2	School District, San Rafael City Elementary		310 Nova Albion Way	San Rafael, CA 94903-
2	School District, San Rafael City High		310 Nova Albione	San Rafael, CA 94903-3500
2	School District, San Ramon Valley Unified		699 Old Orchard Dr.	Danville, CA 94526-4331
2	School District, Santa Clara Unified		1889 Lawrence Road	Santa Clara, CA 95052-0397
2	School District, Saratoga Union Elementary		20460 Forrest Hills Dr.	Saratoga, CA 95070-6020
2	School District, Sausalito Elementary		630 Nevada St.	Sausalito, CA 94965-1654
2	School District, Sequoia Union High		480 James Ave.	Redwood City, CA 94062-1041
2	School District, Sonoma Valley Unified		721 W. Napa St.	Sonoma, CA 95476-6412
2	School District, St. Helena Unified		465 Main St.	St. Helena, CA 94574-2159
2	School District, Sunnyvale Elementary		819 W. Iowa Ave.	Sunnyvale, CA 94088-3217
2	School District, Sunol Glen Unified		Main & Bond Sts.	Sunol, CA 94586-0569
2	School District, Tamalpais Union High		395 Doherty Dr.	Larkspur, CA 94977-0605
2	School District, Two Rock Union Elementary		5001 Spring Hill Road	Petaluma, CA 94952-9639
2	School District, Union Elementary		5175 Union Ave.	San Jose, CA 95124-5434
2	School District, Union Joint Elementary		5300 Red Hill Road	Petaluma, CA 94952-
2	School District, Vallejo City Unified		211 Valle Vista	Vallejo, CA 94590-3256
2	School District, Walnut Creek Elementary		960 Ygnacio Valley Road	Walnut Creek, CA 94596-3892
2	School District, Waugh Elementary		880 Maria Dr.	Petaluma, CA 94954-6837
2	School District, West Contra Costa Unified		1108 Bissell Ave.	Richmond, CA 94801-3135
2	School District, Wilmar Union Elementary		3775 Bodega Ave.	Petaluma, CA 94952-8023
2	School District, Woodside Elementary		3195 Woodside Road	Woodside, CA 94062-2552
2	Transportation, Department of	Alameda Coast Guard Integrated Support Command	MLCP "VS" Bldg 50-8, Coast Guard Isla	Alameda, CA 94501
2	Transportation, Department of	Petaluma Coast Guard Training Center	599 Tomales Rd	Petaluma, CA 94952-5000
2	University of California	Berkeley Laboratory	1 Cyclotron Road MS-65	Berkeley, CA 94720
2	University of California	Lawrence Livermore National Laboratory	7000 East Ave.	Livermore, CA 94550-9234
2	University of California	The University of California, San Francisco		San Francisco, CA 94143

Region	Agency	Facility	Address	City, State, ZIP
2	University of California	University of California Berkeley	Department/Office Name	Berkeley, CA 94720
2	Veteran Affairs	Martinez Center for Rehab & Extended Care	150 Muir Rd.	Martinez, CA 94553
2	Veteran Affairs	San Francisco VA Medical Center	4150 Clement Street	San Francisco, CA 94121-1598
2	Veteran Affairs	VA Northern California Health Care System	150 Muir Rd.	Martinez, CA 94553
2	Veteran Affairs	VA Palo Alto Health Care System	3801 Miranda Avenue	Palo Alto, CA 94304-290
3	Bureau of Prisons	FCI Lompoc	3600 Guard Road	Lompoc, CA 93436
3	Bureau of Prisons	USP Lompoc	3901 Klein Boulevard	Lompoc, CA 93436
3	California Army National Guard	Camp Roberts	ATTN: CACR-DIS	Camp Roberts, CA 93451-5000
3	California Army National Guard	Camp San Luis Obispo	PO Box 4360	San Luis Obispo, CA 93403-4360
3	California Community Colleges	Allan Hancock College	800 South College Drive	Santa Maria, CA 93454-6368
3	California Community Colleges	Cabrillo College	6500 Soquel Drive	Aptos, CA 95003-3119
3	California Community Colleges	Cuesta College	PO Box 8106	San Luis Obispo, CA 93403-8106
3	California Community Colleges	Gavilan College	5055 Santa Teresa Blvd.	Gilroy, CA 95020-9599
3	California Community Colleges	Hartnell College	156 Homestead Avenue	Salinas, CA 93901-1697
3	California Community Colleges	Monterey Peninsula College	980 Fremont Street	Monterey, CA 93940-4799
3	California Community Colleges	Santa Barbara City College	721 Cliff Drive	Santa Barbara, CA 93109-2394
3	California State University	California Polytechnic State University	1 Grand Ave.	San Luis Obispo, CA 93407
3	California State University	California State Monerey Bay	100 Canpus Center	Seaside, CA 93955
3	California Youth Authority	Ben Lomond Youth Conservation Camp	13575 Empire Grade	Santa Cruz, CA
3	California Youth Authority	El Paso de Robles Youth Correctional Facility	Airport Road	Paso Robles, CA
3	Corrections, Dept of	California Men's Colony	Highway 1	San Luis Obispo, CA 93409-8101
3	Corrections, Dept of	Correctional Training Facility	Highway 101 North	Soledad, CA 93960-0686
3	Corrections, Dept of	Salinas Valley State Prison	PO Box 1020	Soledad, CA 93960-1020
3	Defense, Department of	Camp San Luis Obispo	PO Box 4360	San Luis Obispo, CA 93403-4360
3	Defense, Department of	Defense Language Institute Foreign Language Center and	Bldg 4463 Giggling Rd.	Presido of Monterey, CA 93941-5777
3	Defense, Department of	Fort Hunter Liggett	AFRC-FMH-CDR	Fort Hunter Liggett, CA 93928-7000
3	Defense, Department of	Naval Postgraduate School Monterey Bay	1 University Circle	Monterey, CA 93943-5001
3	Defense, Department of	Vandenberg Air Force Base	30 CES/CEZ, 806 13th St. Suite 116	Vandenberg Air Force Base, CA 93437-5242
3	District Agricultural Association	Earl Warren Showgrounds (National Horse Show)	3400 Calle Real	Santa Barbara, CA
3	District Agricultural Association	Monterey County Fairgrounds	2004 Fairground Road	Monterey, CA
3	District Agricultural Association	San Luis Obispo County Fairgrounds	2198 Riverside Avenue	Paso Robles, CA
3	District Agricultural Association	Santa Cruz County Fairgounds	2601 Eest Lake Avenue	Watsonville, CA
3	District Agricultural Association	Santa Maria Fairpark	937 S Thornburg Street	Santa Maria, CA
3	Mental Health, Dept of	Atascadero State Hospital	10333 El Camino Real	Atascadero, CA
3	School District, Alisal Union Elementary		1205 E. Market St.	Salinas, CA 93905-2831
3	School District, Atascadero Unified		5601 West Mall	Atascadero, CA 93422-4234
3	School District, Ballard Elementary		2425 School St.	Solvang, CA 93463-9709
3	School District, Bitterwater-Tully Union Elementary		Lonoak Rt.	King City, CA 93930-
3	School District, Blochman Union Elementary		4949 Foxen Canyon Road	Santa Maria, CA 93454-9666
3	School District, Bonny Doon Union Elementary		1492 Pine Flat Road	Santa Cruz, CA 95060-9711

Region	Agency	Facility	Address	City, State, ZIP
3	School District, Buellton Union Elementary		301 Second St.	Buellton, CA 93427-0075
3	School District, Carmel Unified		4380 Carmel Valley Road	Carmel, CA 93922-2700
3	School District, Carpinteria Unified		1400 Lindon Ave.	Carpinteria, CA 93013-1414
3	School District, Cayucos Elementary		2950 Santa Rosa Creek Road	Cambria, CA 93428-3506
3	School District, Cienega Union Elementary		11936 Cienega Road	Hollister, CA 95023-9697
3	School District, Coast Unified		2950 Santa Rosa Creek Road	Cambria, CA 93428-3506
3	School District, Cold Spring Elementary		2243 Sycamore Canyon Road	Santa Barbara, CA 93108-1909
3	School District, College Elementary		3325 Pine St.	Santa Ynez, CA 93460-0188
3	School District, Gilroy Unified		7810 Arroyo Circle	Gilroy, CA 95020-7313
3	School District, Goleta Union Elementary		401 N. Fairview Ave.	Goleta, CA 93117-1732
3	School District, Graves Elementary		15 McFadden Road	Salinas, CA 93908-
3	School District, Greenfield Union Elementary		493 El Camino Real	Greenfield, CA 93927-
3	School District, Happy Valley Elementary		3125 Branciforte Dr.	Santa Cruz, CA 95065-9775
3	School District, Hollister School District		2690 Cienega Rd	Hollister, CA 95023-
3	School District, Hope Elementary		3970 la Colina Road	Santa Barbara, CA 93110-1563
3	School District, King City Joint Union High		800 Broadway	King City, CA 93930-3326
3	School District, King City Union Elementary		800 Broadway	King City, CA 93930-2984
3	School District, Lagunita Elementary		975 San Juan Grade Road	Salinas, CA 93907-8438
3	School District, Live Oak Elementary		984-1 Bostwick Lane	Santa Cruz, CA 95062-1756
3	School District, Live Oak Unified		2201 Pennington Road	Live Oak, CA 95953-2469
3	School District, Lompoc Unified		1301 North A St.	Lompoc, CA 93438-8000
3	School District, Los Olivos Elementary		2540 Alamo Pintado Ave.	Los Olivos, CA 93441-0208
3	School District, Lucia Mar Unified		602 Orchard St.	Arroyo Grande, CA 93420-4000
3	School District, Mission Union Elementary		36825 Foothill Road	Soledad, CA 93960-9656
3	School District, Montecito Union Elementary		385 San Ysidro Road	Santa Barbara, CA 93108-2131
3	School District, Monterey Peninsula Unified		700 Pacific St.	Monterey, CA 93942-1031
3	School District, Morgan Hill Unified		15600 Concord Circle	Morgan Hill, CA 95037-7110
3	School District, Mountain Elementary		3042 Old San Jose Road	Soquel, CA 95073-9752
3	School District, North County Joint Union Elementary		500 Spring Grove Road	Hollister, CA 95023-9366
3	School District, Nuestro Elementary		3934 Broadway Road	Live Oak, CA 95953-9401
3	School District, Orcutt Union Elementary		Soares & Dyer Sts.	Orcutt, CA 93457-2310
3	School District, Pacific Grove Unified		555 Sinex Ave.	Pacific Grove, CA 93950-4320
3	School District, Pajaro Valley Joint Unified		294 Greenvalley Rd	Watsonville, CA 95076-
3	School District, Paso Robles Joint Unified		800 Niblick Road	Paso Robles, CA 93447-7010
3	School District, Salinas City Elementary		431 W. Alisal St.	Salinas, CA 93901-1624
3	School District, Salinas Union High		431 W. Alisal St.	Salinas, CA 93901-1624
3	School District, San Benito High		1220 Monterey St.	Hollister, CA 95023-4708
3	School District, San Lorenzo Valley Unified		6134 Hwy. 9	Felton, CA 95018-9704
3	School District, San Luis Coastal Unified		1500 Lizzie St.	San Luis Obispo, CA 93401-3099
3	School District, Santa Barbara Elementary		720 Santa Barbara St.	Santa Barbara, CA 93101-
3	School District, Santa Barbara High		720 Santa Barbara St.	Santa Barbara, CA 93101-
3	School District, Santa Cruz City Elementary		2931 Mission St.	Santa Cruz, CA 95060-

Region	Agency	Facility	Address	City, State, ZIP
3	School District, Santa Cruz City High		2931 Mission St.	Santa Cruz, CA 95060-5709
3	School District, Santa Maria Joint Union High		2560 Skyway Dr.	Santa Maria, CA 93455-
3	School District, Santa Maria-Bonita Elementary		708 S. Miller St.	Santa Maria, CA 93454-6230
3	School District, Santa Rita Union Elementary		57 Russell Road	Salinas, CA 93906-4325
3	School District, Santa Ynez Valley Union High		2975 E. Hwy. 246	Santa Ynez, CA 93460-
3	School District, Scotts Valley Unified		4444 Scotts Valley Dr., Ste 5B	Scotts Valley, CA 95066-4529
3	School District, Soledad Unified		335 Market St.	Soledad, CA 93960-
3	School District, Solvang Elementary		565 Atterdag Road	Solvang, CA 93463-2690
3	School District, Soquel Union Elementary		620 Monterey Ave.	Capitola, CA 95010-3618
3	School District, Southside Elementary		4991 Southside Road	Hollister, CA 95023-9637
3	School District, Templeton Unified		960 Old County Road	Templeton, CA 93465-9419
3	School District, Washington Union Elementary		43 San Benancio Canyon Rd	Salinas, CA 93908-
3	University of California	UC Santa Barbara		Santa Barbara, CA 93106
3	University of California	University of California, Santa Cruz	1156 High Street	Santa Cruz, CA 95064
4	Bureau of Prisons	CCM Long Beach	535 N. Alameda Street	Los Angeles, CA 90012
4	Bureau of Prisons	FCI Terminal Island	1299 Seaside Avenue	Terminal Island, CA 90731
4	California Air National Guard	Channel Island Air National Guard Base	100 Mulcahey Dr	Port Hueneme, CA 93041-4002
4	California Community Colleges	Cerritos College	11110 Alondra Boulevard	Norwalk, CA 90650-6269
4	California Community Colleges	Citrus College	1000 West Foothill Boulevard	Glendora, CA 91741-1899
4	California Community Colleges	College Of The Canyons	26455 N. Rockwell Canyon Road	Santa Clarita, CA 91355-1899
4	California Community Colleges	Compton College	1111 East Artesia Boulevard	Compton, CA 90221-5393
4	California Community Colleges	East Los Angeles College	1301 Avenida Cesar Chavez	Monterey Park, CA 91754-6099
4	California Community Colleges	El Camino College	16007 Crenshaw Boulevard	Torrance, CA 90506-0002
4	California Community Colleges	Glendale Community College	1500 North Verdugo Road	Glendale, CA 91208-2894
4	California Community Colleges	Long Beach City College	4901 East Carson Street	Long Beach, CA 90808-1706
4	California Community Colleges	Los Angeles City College	855 North Vermont Avenue	Los Angeles, CA 90029-3590
4	California Community Colleges	Los Angeles Harbor College	1111 Figueroa Place	Wilmington, CA 90744-2397
4	California Community Colleges	Los Angeles Mission College	13356 Eldridge Avenue	Sylmar, CA 91342-3200
4	California Community Colleges	Los Angeles Pierce College	6201 Winnetka Avenue	Woodland Hills, CA 91371-0001
4	California Community Colleges	Los Angeles Southwest College	1600 West Imperial Highway	Los Angeles, CA 90047-4899
4	California Community Colleges	Los Angeles Trade-Tech College	400 West Washington Boulevard	Los Angeles, CA 90015-4108
4	California Community Colleges	Los Angeles Valley College	5800 Fulton Avenue	Van Nuys, CA 91401-4096
4	California Community Colleges	Moorpark College	7075 Campus Road	Moorpark, CA 93201-1695
4	California Community Colleges	Mt. San Antonio College	1100 North Grand Avenue	Walnut, CA 91789-1399
4	California Community Colleges	Oxnard College	4000 South Rose Avenue	Oxnard, CA 93033-6699
4	California Community Colleges	Pasadena City College	1570 East Colorado Boulevard	Pasadena, CA 91106-2003
4	California Community Colleges	Rio Hondo College	3600 Workman Mill Road	Whittier, CA 90601-1699
4	California Community Colleges	Santa Monica College	1900 Pico Boulevard	Santa Monica, CA 90405-1628
4	California Community Colleges	Ventura College	4667 Telegraph Road	Ventura, CA 93003-3899
4	California Community Colleges	West Los Angeles College	4800 Freshman Drive	Culver City, CA 90230-3500
4	California State University	California State Polytechnic University, Pomona	3801 West Temple Avenue	Pomona, CA 91768
4	California State University	California State University Channel Islands	One University Drive	Camarillo, CA 93012

Region	Agency	Facility	Address	City, State, ZIP
4	California State University	California State University Dominguez Hills	1000 E. Victoria Street	Carson, CA 90747
4	California State University	California State University Long Beach	1250 Bellflower Blvd.	Long Beach, CA 90840
4	California State University	California State University Los Angeles	5151 State University Drive	Los Angeles, CA 90032-4226
4	California State University	California State University Northridge	18111 Nordhoff Street	Northridge, CA 91330
4	California Youth Authority	Fred C. Nelles Youth Correcitonal Facility	11850 E Whittier	Whittier, CA
4	California Youth Authority	Southern Youth Correctional Reception Center and Clinic	13200 S Bloomfield Ave	Norwalk, CA
4	California Youth Authority	Ventura Youth Correctional Facility	3100 Wright Rd	Camarillo, CA
4	Defense, Department of	Corona Naval Station	P.O. Box 5000	Corona, CA 92878-5000
4	Defense, Department of	Los Angeles Air Force Base	61 ABG/CEZV, 2420 Vela Way Suite 14	El Segundo, CA 90245
4	Defense, Department of	Naval Auxiliary Landing Field, San Clemente Island	33000 Nixie Way Bldg 50, Suite 326	San Diego, CA 92147-5110
4	Defense, Department of	Naval Base Ventura County		, CA
4	Defense, Department of	Port Hueneme Naval Facility	4363 Missile Way	Port Hueneme, CA 93043-4307
4	Defense, Department of	San Nicholas Island Naval Facility	NAWS-890000E	Point Mugu, CA 93042-5001
4	Devlopmental Services, Dept of	Lanterman Developmental Center	3530 West Pomona Blvd	Pomona, CA
4	District Agricultural Association	Ventura County Fairgrounds	10 West Harbor Blvd	Ventura, CA
4	Mental Health, Dept of	Metropolitan State Hospital	11401 Bloomfield Avenue	Norwalk, CA
4	School District, ABC Unified		16700 Norwalk Blvd.	Cerritos, CA 90703-1838
4	School District, Acton-Agua Dulce Unified		32248 N. Crown Valley Road	Acton, CA 93510-0068
4	School District, Alhambra City Elementary		15 W. Alhambra Road	Alhambra, CA 91802-2110
4	School District, Alhambra City High		15 W. Alhambra Road	Alhambra, CA 91802-2110
4	School District, Arcadia Unified		234 Campus Dr.	Arcadia, CA 91007-6902
4	School District, Azusa Unified		546 S. Citrus Ave.	Azusa, CA 91702-0500
4	School District, Baldwin Park Unified		3699 N. Holly Ave.	Baldwin Park, CA 91706-5397
4	School District, Bassett Unified		904 N. Willow Ave.	La Puente, CA 91746-1615
4	School District, Bellflower Unified		16703 S. Clark Ave.	Bellflower, CA 90706-5203
4	School District, Beverly Hills Unified		255 S. Lasky Dr.	Beverly Hills, CA 90212-3644
4	School District, Bonita Unified		115 W. Allen Ave.	San Dimas, CA 91773-1437
4	School District, Briggs Elementary		14438 W. Telegraph Road	Santa Paula, CA 93060-3088
4	School District, Burbank Unified		1900 W Olive Ave	Burbank, CA 91506
4	School District, Castaic Union Elementary		28131 Livingston Ave.	Valencia, CA 91355-
4	School District, Centinela Valley Union High		14901 S. Inglewood Ave.	Lawndale, CA 90260-1251
4	School District, Charter Oak Unified		20240 Cienega Ave.	Covina, CA 91723-0009
4	School District, Claremont Unified		2080 N. Mountain Ave.	Claremont, CA 91711-2643
4	School District, Compton Unified		604 S. Tamarind Ave.	Compton, CA 90220-3826
4	School District, Conejo Valley Unified		1400 E. Janss Road	Thousand Oaks, CA 91362-2133
4	School District, Covina-Valley Unified		519 E. Badillo St.	Covina, CA 91723-0269
4	School District, Culver City Unified		4034 Irving Pl.	Culver City, CA 90232-2810
4	School District, Downey Unified		11627 Brookshire Ave.	Downey, CA 90241-7017
4	School District, Duarte Unified		1620 Huntington Dr.	Duarte, CA 91010-2534
4	School District, East Whittier City Elementary		14535 E. Whittier Blvd.	Whittier, CA 90605-2130
4	School District, El Monte City Elementary		3540 N. Lexington Ave.	El Monte, CA 91731-2684
4	School District, El Monte Union High		3537 Johnson Ave.	El Monte, CA 91731-3290

Region	Agency	Facility	Address	City, State, ZIP
4	School District, El Rancho Unified		9333 Loch Lomond Dr.	Pico Rivera, CA 90660-2913
4	School District, El Segundo Unified		641 Sheldon St.	El Segundo, CA 90245-3036
4	School District, Fillmore Unified		627 Sespe Ave.	Fillmore, CA 93016-0697
4	School District, Garvey Elementary		2730 N. del Mar	Rosemead, CA 91770-3026
4	School District, Glendale Unified		223 N. Jackson St.	Glendale, CA 91206-4334
4	School District, Glendora Unified		500 N. Loraine Ave.	Glendora, CA 91741-2964
4	School District, Hacienda la Puente Unified		15959 E. Gale Ave.	City Of Industry, CA 91716-
4	School District, Hawthorne Elementary		14120 S. Hawthorne Blvd.	Hawthorne, CA 90250-
4	School District, Hermosa Beach City Elementary		1645 Valley Dr.	Hermosa Beach, CA 90254-2921
4	School District, Hueneme Elementary		205 North Ventura Road	Port Hueneme, CA 93041-3065
4	School District, Inglewood Unified		401 S. Inglewood Ave.	Inglewood, CA 90301-2501
4	School District, La Canada Unified		5039 Palm Dr.	La Canada, CA 91011-1518
4	School District, Las Virgenes Unified		4111 N. Las Virgenes Road	Calabasas, CA 91302-1929
4	School District, Lawndale Elementary		4161 W. 147th St.	Lawndale, CA 90260-1709
4	School District, Lennox Elementary		10319 S. Firmona Ave.	Lennox, CA 90304-1419
4	School District, Little Lake City Elementary		10515 S. Pioneer Blvd.	Santa Fe Springs, CA 90670-3703
4	School District, Long Beach Unified		1515 Hughes Way	Long Beach, CA 90810-1839
4	School District, Los Angeles Unified		450 N. Grand Ave.	Los Angeles, CA 90012-2100
4	School District, Los Nietos Elementary		8324 S. Westman Ave., Whittier	Whittier, CA 90606-
4	School District, Lowell Joint		11019 Valley Home Ave.	Whittier, CA 90603-3042
4	School District, Lynwood Unified		11321 Bullis Road	Lynwood, CA 90262-3600
4	School District, Manhattan Beach Unified		1230 Rosecrans Suite 400	Manhattan Beach, CA 90266-2478
4	School District, Mesa Union Elementary		3901 N. Mesa School Road	Somis, CA 93066-9734
4	School District, Monrovia Unified		325 E. Huntington Dr.	Monrovia, CA 91016-3585
4	School District, Montebello Unified		123 S. Montebello Blvd.	Montebello, CA 90640-4729
4	School District, Moorpark Unified		30 Flory Ave.	Moorpark, CA 93021-1862
4	School District, Mountain View Elementary		3320 Gilman Road	El Monte, CA 91732-3226
4	School District, Mupu Elementary		4410 N. Ojai Road	Santa Paula, CA 93060-9681
4	School District, Newhall Elementary		25375 Orchard Village, Ste. 200	Valencia, CA 91355-3055
4	School District, Norwalk-La Mirada Unified		12820 Pioneer Blvd.	Norwalk, CA 90650-2894
4	School District, Ocean View Elementary		2382 Etting Road	Oxnard, CA 93033-6864
4	School District, Ojai Unified		414 E. Ojai Ave.	Ojai, CA 93024-0878
4	School District, Oxnard Elementary		1051 South A St.	Oxnard, CA 93030-7442
4	School District, Oxnard Union High		309 South K St.	Oxnard, CA 93030-5212
4	School District, Palos Verdes Peninsula Unified		3801 Via la Selva	Palos Verdes Estates, CA 90274-1119
4	School District, Paramount Unified		15110 California Ave.	Paramount, CA 90723-4320
4	School District, Pasadena Unified		351 S. Hudson Ave.	Pasadena, CA 91101-3507
4	School District, Pleasant Valley Elementary		600 Temple Ave.	Camarillo, CA 93010-4835
4	School District, Pomona Unified		800 S. Garey Ave	Pomona, CA 91769-2900
4	School District, Redondo Beach Unified		1401 Inglewood Ave.	Redondo Beach, CA 90278-3912
4	School District, Rio Elementary		3300 Cortez St.	Oxnard, CA 93030-1309

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4	School District, Rosemead Elementary		3907 Rosemead Blvd.	Rosemead, CA 91770-2041
4	School District, Rowland Unified		1830 Nogales St.	Rowland Heights, CA 91748-
4	School District, San Gabriel Unified		102 E. Broadway	San Gabriel, CA 91776-4500
4	School District, San Marino Unified		1665 West Dr.	San Marino, CA 91108-2594
4	School District, Santa Clara Elementary		20030 E. Telegraph Road	Santa Paula, CA 93060-9691
4	School District, Santa Monica-Malibu Unified		1651 16th St.	Santa Monica, CA 90404-3891
4	School District, Santa Paula Elementary		201 S. Steckel Dr.	Santa Paula, CA 93061-0710
4	School District, Santa Paula Union High		500 E. Santa Barbara St.	Santa Paula, CA 93060-2633
4	School District, Saugus Union Elementary		24930 Avenue Stanford .	Santa Clarita, CA 91355-1272
4	School District, Simi Valley Unified		875 E. Cochran	Simi Valley, CA 93065-0999
4	School District, Somis Union Elementary		5268 North St.	Somis, CA 93066-0900
4	School District, South Pasadena Unified		1020 El Centro St.	South Pasadena, CA 91030-3118
4	School District, South Whittier Elementary		10120 Painter Ave.	Whittier, CA 90605-0037
4	School District, Sulphur Springs Union Elementary		17866 Sierra Hwy.	Canyon Country, CA 91351-1671
4	School District, Temple City Unified		9700 Las Tunas Drive	Temple City, CA 91780-
4	School District, Torrance Unified		2335 Plaza del Amo	Torrance, CA 90501-3420
4	School District, Valle Lindo Elementary		1431 N. Central Ave.	South El Monte, CA 91733-3388
4	School District, Ventura Unified		120 E. Santa Clara St.	Ventura, CA 93001-2716
4	School District, Walnut Valley Unified		880 S. Lemon Ave.	Walnut, CA 91789-2931
4	School District, West Covina Unified		1717 W. Merced Ave.	West Covina, CA 91790-3406
4	School District, Whittier City Elementary		7211 S. Whittier Ave.	Whittier, CA 90602-1123
4	School District, Whittier Union High		9401 S. Painter Ave.	Whittier, CA 90605-2798
4	School District, William S. Hart Union High		21515 Redview Dr.	Santa Clarita, CA 91350-2948
4	School District, Wiseburn Elementary		13530 Aviation Blvd.	Hawthorne, CA 90250-6462
4	Science Center, California	California Science Center	700 State Drive	Los Angeles, CA
4	University of California	UCLA	405 Hilgard Avenue Box 951361	Los Angeles, CA 90095-1361
4	Veteran Affairs	Long Beach VA Medical Center	5901 E. 7th Street	Long Beach, CA 90822
4	Veteran Affairs	VA Greater Los Angeles Healthcare System (GLA)	11301 Willshire Boulevard	Los Angeles, CA 90073
5F	Bureau of Prisons	USP Atwater	PO Box 019000	Atwater, CA 95301
5F	California Air National Guard	144th Fighter Wing	5323 East McKinley Avenue	Fresno, CA 93727-2199
5F	California Air National Guard	Fresno Air National Guard Base	5323 E McKinley Ave	Fresno, CA 93727
5F	California Community Colleges	Bakersfield College	1801 Panorama Drive	Bakersfield, CA 93305-1299
5F	California Community Colleges	College of the Sequoias	915 South Mooney Boulevard	Visalia, CA 93277-2234
5F	California Community Colleges	Fresno City College	1101 E. University Avenue	Fresno, CA 93741-0001
5F	California Community Colleges	Merced College	3600 M Street	Merced, CA 95348-2898
5F	California Community Colleges	Porterville College	100 East College Avenue	Porterville, CA 93257-5901
5F	California Community Colleges	Reedley College	995 N. Reed Avenue	Reedley, CA 93654-2099
5F	California State University	California State University Bakersfield	9001 Stockdale Highway	Bakersfield, CA 93311-1099
5F	Defense, Department of	Lemoore Naval Air Station	751 Enterprise Ave	Lemoore NAS, CA 93246
5F	Developmental Services, Dept of	Porterville Developmental Center	26501 AVE 140	Porterville, CA
5F	District Agricultural Association	Kern County Fairgrounds	1142 South P Street	Bakersfield, CA
5F	District Agricultural Association	Kings County Fairgrounds	810 S 10th Ave	Hanford, CA

Region	Agency	Facility	Address	City, State, ZIP
5F	District Agricultural Association	Madera County Fairgournds	1850 W Cleveland	Madera, CA
5F	District Agricultural Association	Merced County Fairgrounds	900 Martin Luther King	Merced, CA
5F	District Agricultural Association	The Big Fresno Fair	1121 Chance Ave	Fresno, CA
5F	District Agricultural Association	Tulare County Fairgrounds	215 Martin Luther King	Tulare, CA
5F	School District, Alta Vista Elementary		2293 E. Crabtree Ave.	Porterville, CA 93257-5225
5F	School District, American Union Elementary		2801 W. Adams Ave.	Fresno, CA 93706-9601
5F	School District, Atwater Elementary		1401 Broadway Ave.	Atwater, CA 95301-
5F	School District, Bakersfield City Elementary		1300 Baker St.	Bakersfield, CA 93305-4326
5F	School District, Beardsley Elementary		1001 Roberts Lane	Bakersfield, CA 93308-4503
5F	School District, Buena Vista Elementary		21660 Road 60	Tulare, CA 93274-9470
5F	School District, Burton Elementary		264 N. Westwood St.	Porterville, CA 93257-2542
5F	School District, Central Unified		4605 N. Polk Ave.	Fresno, CA 93722-5334
5F	School District, Central Union Elementary		15783 18th Ave.	Lemoore, CA 93245-9742
5F	School District, Citrus South Tule Elementary		31374 Success Valley Dr.	Porterville, CA 93257-9638
5F	School District, Clay Joint Elementary		12449 S. Smith Ave.	Kingsburg, CA 93631-9717
5F	School District, Clovis Unified		1450 Herndon Ave.	Clovis, CA 93611-0567
5F	School District, Delhi Unified		9715 Hinton Ave.	Delhi, CA 95315-0338
5F	School District, Delta View Joint Union Elementary		1201 Lacey Blvd.	Hanford, CA 93230-9306
5F	School District, Edison Elementary		9600 Eucalyptus Dr.	Bakersfield, CA 93306-6781
5F	School District, Exeter Union Elementary		134 South E St.	Exeter, CA 93221-
5F	School District, Exeter Union High		134 South E St.	Exeter, CA 93221-
5F	School District, Fairfax Elementary		1500 S. Fairfax Road	Bakersfield, CA 93307-3151
5F	School District, Farmersville Unified		281 S. Farmersville Blvd.	Farmersville, CA 93223-1833
5F	School District, Fresno Unified		Ed. Cntr., Tulare & M Sts	Fresno, CA 93721-
5F	School District, Fruitvale Elementary		7311 Rosedale Hwy.	Bakersfield, CA 93308-5738
5F	School District, General Shafter Elementary		1316 Shafter Road	Bakersfield, CA 93313-9766
5F	School District, Golden Valley Unified		37479 Avenue 12	Madera, CA 93638-
5F	School District, Greenfield Union Elementary		1624 Fairview Road	Bakersfield, CA 93307-5512
5F	School District, Hanford Elementary		714 N. White St.	Hanford, CA 93232-
5F	School District, Hanford Joint Union High		120 E. Grangeville Road	Hanford, CA 93230-3067
5F	School District, Hope Elementary		816 W. Teapot Dome Ave.	Porterville, CA 93257-9465
5F	School District, Island Union Elementary		7799 21st Ave.	Lemoore, CA 93245-9673
5F	School District, Kern Union High		5801 Sundale Ave	Bakersfield, CA 93309-2924
5F	School District, Kings Canyon Joint Unified		675 W. Manning Ave.	Reedley, CA 93654-2427
5F	School District, Kings River Union Elementary		3961 Ave. 400	Kingsburg, CA 93631-9660
5F	School District, Kings River-Hardwick Union Elementary		10300 Excelsior Ave.	Hanford, CA 93230-9108
5F	School District, Kingsburg Joint Union Elementary		1310 Stroud Ave.	Kingsburg, CA 93631-1000
5F	School District, Kingsburg Joint Union High		1900 18th Ave.	Kingsburg, CA 93631-1629
5F	School District, Kit Carson Union Elementary		9895 Seventh Ave.	Hanford, CA 93230-8802
5F	School District, Lakeside Union Elementary		9100 Jersey Ave.	Hanford, CA 93230-9560
5F	School District, Lakeside Union School		14535 Old River Rd.	Bakersfield, CA 93311-9756
5F	School District, Lemoore Union Elementary		100 Vine St.	Lemoore, CA 93245-3418

Region	Agency	Facility	Address	City, State, ZIP
5F	School District, Lemoore Union High		101 E. Bush St.	Lemoore, CA 93245-3601
5F	School District, Liberty Elementary		11535 Ave. 264	Visalia, CA 93277-9483
5F	School District, Los Banos Unified		1717 S. 11th St.	Los Banos, CA 93635-4800
5F	School District, Madera Unified		1902 Howard Road	Madera, CA 93637-5123
5F	School District, McSwain Union Elementary		926 N. Scott Road	Merced, CA 95340-8893
5F	School District, Merced City Elementary		444 W. 23rd St.	Merced, CA 95340-3723
5F	School District, Merced Union High		Olive Ave. & G St.	Merced, CA 95344-0147
5F	School District, Monroe Elementary		11842 S. Chestnut Ave.	Fresno, CA 93725-9618
5F	School District, Norris Elementary		6940 Calloway Dr.	Bakersfield, CA 93312-9005
5F	School District, Oak Valley Union Elementary		24500 Road 68	Tulare, CA 93274-9607
5F	School District, Orange Center Elementary		3530 S. Cherry Ave.	Fresno, CA 93706-5615
5F	School District, Outside Creek Elementary		26452 Road 164	Visalia, CA 93292-9740
5F	School District, Pacific Union Elementary		2065 E. Bowles Ave.	Fresno, CA 93725-9630
5F	School District, Palo Verde Union Elementary		9637 Ave. 196	Tulare, CA 93274-9529
5F	School District, Panama Buena Vista Union Elementary		4200 Ashe Road	Bakersfield, CA 93313-2029
5F	School District, Pioneer Union Elementary		8810 14th Ave.	Hanford, CA 93230-9677
5F	School District, Plainsburg Union Elementary		3708 S. Plainsburg Road	Merced, CA 95340-9557
5F	School District, Pleasant View Elementary		14004 Road 184	Porterville, CA 93257-9214
5F	School District, Porterville Unified		600 West Grand Ave.	Porterville, CA 93257-2029
5F	School District, Rio Bravo-Greeley Union Elementary		6521 Enos Lane	Bakersfield, CA 93312-8721
5F	School District, Rockford Elementary		14983 Road 208	Porterville, CA 93257-9318
5F	School District, Rosedale Union Elementary		2553 Old Farm Road	Bakersfield, CA 93312-3531
5F	School District, Selma Unified		3036 Thompson Ave.	Selma, CA 93662-2497
5F	School District, Standard Elementary		1200 N. Chester Ave.	Bakersfield, CA 93308-3521
5F	School District, Stone Corral Elementary		15590 Ave. 383	Visalia, CA 93292-9545
5F	School District, Strathmore Union Elementary		23024 Ave. 198	Strathmore, CA 93267-0247
5F	School District, Strathmore Union High		22568 Ave. 196	Strathmore, CA 93267-0114
5F	School District, Sundale Union Elementary		13990 Ave. 240	Tulare, CA 93274-9563
5F	School District, Sunnyside Union Elementary		21644 Ave. 196	Strathmore, CA 93267-9795
5F	School District, Tulare City Elementary		600 N. Cherry Ave.	Tulare, CA 93274-2920
5F	School District, Tulare Joint Union High		426 N. Blackstone	Tulare, CA 93274-4449
5F	School District, Vineland Elementary		14713 Weedpatch Hwy.	Bakersfield, CA 93307-9653
5F	School District, Visalia Unified		5000 W Cypress Ave.	Visalia, CA 93277-8300
5F	School District, Washington Colony Elementary		130 E. Lincoln Ave.	Fresno, CA 93706-6043
5F	School District, Washington Union High		6041 S. Elm Ave.	Fresno, CA 93706-6099
5F	School District, Waukena Joint Union Elementary		19113 Road 28	Tulare, CA 93274-
5F	School District, Weaver Union Elementary		3076 E. Childs Ave.	Merced, CA 95340-9583
5F	School District, West Fresno Elementary		2888 S. Ivy St.	Fresno, CA 93706-5513
5F	School District, West Park Elementary		2695 S. Valentine Ave.	Fresno, CA 93706-9042
5F	School District, Woodville Elementary		16541 Road 168	Porterville, CA 93257-9205
5F	University of California	University of California, Merced	1170 W. Olive Avenue Suite I	Merced, CA 95348-1959
5F	Veteran Affairs	VA Central California Health Care System	2615 E. Clinton Avenue	Fresno, CA 93703

Region	Agency	Facility	Address	City, State, ZIP
5R	California Community Colleges	Shasta College	11555 Old Oregon Trail PO Box 496006	Redding, CA 96049-6006
5R	California State University	California State University Chico	400 West First Street	Chico, CA 95929
5R	District Agricultural Association	Shasta County Fairgrounds	1890 Briggs Street	Anderson, CA
5R	District Agricultural Association	Silver Dollar Fairgrounds	2357 Fair Street	Chico, CA
5R	School District, Anderson Union High		1471 Ferry St.	Anderson, CA 96007-3313
5R	School District, Cascade Union Elementary		1645 W. Mill St.	Anderson, CA 96007-3226
5R	School District, Chico Unified		1163 E. Seventh St.	Chico, CA 95928-5903
5R	School District, Columbia Elementary		10142 Old Oregon Trail Road	Redding, CA 96003-7995
5R	School District, Durham Unified		9420 Putney Dr.	Durham, CA 95938-0300
5R	School District, Enterprise Elementary		1155 Mistletoe Lane	Redding, CA 96002-0749
5R	School District, Gateway Unified		4411 Mountain Lakes Blvd.	Redding, CA 96003-1446
5R	School District, Grant Elementary		8835 Swasey Dr.	Redding, CA 96001-9722
5R	School District, Happy Valley Union Elementary		16300 Cloverdale Road	Anderson, CA 96007-
5R	School District, Pacheco Union Elementary		7433 Pacheco Rd	Redding, CA 96002-4603
5R	School District, Redding Elementary		5885 E. Bonnyview Road	Redding, CA 96099-2418
5R	School District, Shasta Union High		2200 Eureka way Suite B	Redding, CA 96001-
5S	California Air National Guard	162nd Combat Communications Group	3900 Roseville Road	North Highlands, CA 95660-5794
5S	California Community Colleges	American River College	4700 College Oak Drive	Sacramento, CA 95841-4286
5S	California Community Colleges	Cosumnes River College	8401 Center Parkway	Sacramento, CA 95823-5799
5S	California Community Colleges	Modesto Junior College	435 College Avenue	Modesto, CA 95350-5800
5S	California Community Colleges	Sacramento City College	3835 Freeport Boulevard	Sacramento, CA 95822-1386
5S	California Community Colleges	San Joaquin Delta College	5151 Pacific Avenue	Stockton, CA 95207-6370
5S	California Community Colleges	Sierra College	5000 Rocklin Road	Rocklin, CA 95677-3397
5S	California Community Colleges	Yuba College	2088 North Beale Road	Marysville, CA 95901-7699
5S	California State University	California State University Sacramento	6000 J Street	Sacramento, CA 95819
5S	California State University	California State University Stanislaus	801 West Monte Vista Ave	Turlock, CA 95382
5S	California Youth Authority	Northern California Youth Correctional Center	7650 Newcastle Rd	Stockton, CA
5S	California Youth Authority	Northern Youth Correctional Reception Center and Clinic	3001 Ramona Ave	Sacramento, CA
5S	Corrections, Dept of	California Medical Facility	1600 California Dr	Vacaville, CA 95696-2000
5S	Corrections, Dept of	CSP, Sacramento	PO Box 29	Represa, CA 95671
5S	Corrections, Dept of	CSP, Solano County	2100 Peabody Road	Vacaville, CA 95696-4000
5S	Corrections, Dept of	Deuel Vocational Institution	23500 Kasson Road	Tracy, CA 95378-0004
5S	Corrections, Dept of	Folsom State Prison	300 Prison Road	Represa, CA 95671
5S	Corrections, Dept of	Northern California Women's Facility	7150 East Arch Road	Stockton, CA 95213-9006
5S	Defense, Department of	Beale Air Force Base	9 CES/CEV 6601 B Street	Beale AFB, CA 95903-1708
5S	Defense, Department of	Defense Distribution San Joaquin	PO Box 960001	Stockton, CA 95296-0002
5S	Defense, Department of	McClellan Air Force Base	3237 Peacekeeper Way Suite 1	McClellan AFB, CA 95652-1044
5S	Defense, Department of	Stockton Naval Communications Station	305 Fyffe Ave	Stockton, CA 95203-4920
5S	District Agricultural Association	Contra Costa County Fairgrounds	1201 West 10th Street	Antioch, CA
5S	District Agricultural Association	Dixon May Fair	655 S First Street	Dixon, CA
5S	District Agricultural Association	Gold Country Fairgrounds	1273 High Street	Auburn, CA
5S	District Agricultural Association	Lake County Fairgrounds	401 Martin Street	Lakeport, CA

Region	Agency	Facility	Address	City, State, ZIP
5S	District Agricultural Association	Nevada County Fairgrounds	11228 McCourtney Road	Grass Valley, CA
5S	District Agricultural Association	San Joaquin County Fairgrounds	1658 S Airport Way	Stockton, CA
5S	District Agricultural Association	Stanislaus County Fairgrounds	900 N Broadway	Turlock, CA
5S	District Agricultural Association	Sutter County Fairgrounds	442 Franklin Ave	Yuba City, CA
5S	District Agricultural Association	Yolo County Fairgrounds	Hwy 113 & Gibson Rd	Woodland, CA
5S	Exposition & State Fair, California	California Exposition & State Fair	1600 Exposition Blvd	Sacramento, CA
5S	School District, Ackerman Elementary		13777 Bowman Road	Auburn, CA 95603-3147
5S	School District, Antioch Unified		510 G St.	Antioch, CA 94509-0904
5S	School District, Arcohe Union Elementary		11755 Ivie Road	Herald, CA 95638-0093
5S	School District, Auburn Union Elementary		55 College Way	Auburn, CA 95603-
5S	School District, Brentwood Union Elementary		255 Guthrie Lane	Brentwood, CA 94513-1610
5S	School District, Center Joint Unified		8408 Watt Ave.	Antelope, CA 95843-9116
5S	School District, Ceres Unified		2503 Lawrence St	Ceres, CA 95307-0307
5S	School District, Chatom Union Elementary		7201 Clayton Ave.	Turlock, CA 95380-9352
5S	School District, Chicago Park Elementary		15725 Mt Olive Road	Grass Valley, CA 95945-7906
5S	School District, Clear Creek Elementary		17700 McCourtney Road	Grass Valley, CA 95949-7636
5S	School District, Davis Joint Unified		526 B St.	Davis, CA 95616-3811
5S	School District, Del Paso Heights Elementary		3780 Rosin Court, Suite 270	Sacramento, CA 95834-1646
5S	School District, Dixon Unified		305 N. Almond St.	Dixon, CA 95620-2702
5S	School District, Dry Creek Joint Elementary		9707 Cook Riolo Road	Roseville, CA 95747-9793
5S	School District, El Dorado Union High		4675 Missouri Flat Road	Placerville, CA 95619-
5S	School District, Elk Grove Unified		9510 Elk Grove-Florin Road	Elk Grove, CA 95624-1801
5S	School District, Elverta Joint Elementary		8920 Elwyn Ave.	Elverta, CA 95626-9217
5S	School District, Empire Union Elementary		116 N. McClure Road	Modesto, CA 95357-1329
5S	School District, Eureka Union Elementary		5477 Eureka Road	Granite Bay, CA 95746-8808
5S	School District, Folsom-Cordova Unified		125 East Bidwell St.	Folsom, CA 95630-3241
5S	School District, Franklin Elementary		332 N. Township Road	Yuba City, CA 95993-9629
5S	School District, Galt Joint Union Elementary		1018 C St. Suite 210	Galt, CA 95632-
5S	School District, Galt Joint Union High		145 N. Lincoln Way	Galt, CA 95632-1720
5S	School District, Gold Oak Union Elementary		3171 Pleasant Valley Road	Placerville, CA 95667-7836
5S	School District, Gold Trail Union Elementary		1575 Old Ranch Road	Placerville, CA 95667-8929
5S	School District, Grant Joint Union High		1333 Grand Ave.	Sacramento, CA 95838-3697
5S	School District, Grass Valley Elementary		10840 Gilmore Way	Grass Valley, CA 95945-5409
5S	School District, Hart-Ransom Union Elementary		3920 Shoemake Ave.	Modesto, CA 95358-8577
5S	School District, Holt Union Elementary		1545 S. Holt Road	Stockton, CA 95206-9618
5S	School District, Hughson Unified		7419 East Whitmore Ave.	Hughson, CA 95326-
5S	School District, Jefferson Elementary		7500 W. Linne Road	Tracy, CA 95376-9278
5S	School District, Keyes Union Elementary		5465 Seventh St.	Keyes, CA 95328-0549
5S	School District, Knightsen Elementary		1923 Delta Road	Knightsen, CA 94548-0265
5S	School District, Lakeport Unified		100 Lange St.	Lakeport, CA 95453-3297
5S	School District, Lammersville Elementary		16555 W. Von Sosten Road	Tracy, CA 95376-7220
5S	School District, Liberty Union High		20 Oak St.	Brentwood, CA 94513-1379

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5S	School District, Lincoln Unified		2010 W. Swain Road	Stockton, CA 95207-4055
5S	School District, Lodi Unified		1305 E. Vine St.	Lodi, CA 95240-3148
5S	School District, Loomis Union Elementary		3290 Humphrey Road	Loomis, CA 95650-9043
5S	School District, Manteca Unified		2901 E. Louise Ave.	Manteca, CA 95336-0032
5S	School District, Marysville Joint Unified		1919 B St.	Marysville, CA 95901-3731
5S	School District, Modesto City Elementary		426 Locust St.	Modesto, CA 95351-2631
5S	School District, Modesto City High		426 Locust St.	Modesto, CA 95351-2631
5S	School District, Mother Lode Union Elementary		3783 Forni Road	Placerville, CA 95667-6207
5S	School District, Natomas Unified		1515 Sports Dr., Suite 1	Sacramento, CA 95834-1905
5S	School District, Nevada Joint Union High		11645 Ridge Road	Grass Valley, CA 95945-5024
5S	School District, New Jerusalem Elementary		31400 S. Koster Road	Tracy, CA 95376-8824
5S	School District, North Sacramento Elementary		670 Dixieanne Ave.	Sacramento, CA 95815-3023
5S	School District, Oakdale Joint Unified		168 S. Third Ave.	Oakdale, CA 95361-3935
5S	School District, Oakley Union Elementary		91 Mercedes Lane	Oakley, CA 94561-
5S	School District, Paradise Elementary		3361 California Ave.	Modesto, CA 95358-8337
5S	School District, Patterson Joint Unified		200 N. Seventh St.	Patterson, CA 95363-0547
5S	School District, Placer Union High		13000 New Airport Road	Auburn, CA 95604-5048
5S	School District, Placerville Union Elementary		1032 Thompson Way	Placerville, CA 95667-5713
5S	School District, Pleasant Ridge Union Elementary		22580 Kingston Lane	Grass Valley, CA 95949-7706
5S	School District, Plumas Elementary		2743 Plumas-Arboga Road	Marysville, CA 95901-9638
5S	School District, Rio Linda Union Elementary		627 L St.	Rio Linda, CA 95673-3430
5S	School District, Ripon Unified		304 N. Acacia Ave.	Ripon, CA 95366-2404
5S	School District, River Delta Joint Unified		445 Montezuma	Rio Vista, CA 94571-1651
5S	School District, Riverbank Unified		6715 7th St.	Riverbank, CA 95367-2345
5S	School District, Robla Elementary		5248 Rose St.	Sacramento, CA 95838-1633
5S	School District, Rocklin Unified		5035 Meyers St.	Rocklin, CA 95677-2811
5S	School District, Roseville City Elementary		1000 Darling Way	Roseville, CA 95678-4341
5S	School District, Roseville Joint Union High		1750 Cirby Way	Roseville, CA 95661-5520
5S	School District, Sacramento City Unified		520 Capitol Mall	Sacramento, CA 95812-2271
5S	School District, Salida Union Elementary		5250 Tamara Way	Salida, CA 95368-9226
5S	School District, San Juan Unified		3738 Walnut Ave.	Carmichael, CA 95609-0477
5S	School District, Shiloh Elementary		6633 Paradise Road	Modesto, CA 95358-9253
5S	School District, Stanislaus Union Elementary		3601 Carver Road	Modesto, CA 95356-0926
5S	School District, Stockton City Unified		701 N. Madison St.	Stockton, CA 95202-1634
5S	School District, Sylvan Union Elementary		605 Sylvan Ave.	Modesto, CA 95350-1517
5S	School District, Tracy Joint Unified		315 East Eleventh St.	Tracy, CA 95376-4095
5S	School District, Turlock Joint Elementary		1574 E Canal Dr.	Turlock, CA 95381-1105
5S	School District, Turlock Joint Union High		1574 E Canal Dr.	Turlock, CA 95381-1105
5S	School District, Union Hill Elementary		10879 Bartlett Dr.	Grass Valley, CA 95945-8730
5S	School District, Vacaville Unified		751 School St.	Vacaville, CA 95688-3945
5S	School District, Washington Unified		930 West Acres Road	West Sacramento, CA 95691-3224
5S	School District, Western Placer Unified		810 J Street	Lincoln, CA 95648-1825

Region	Agency	Facility	Address	City, State, ZIP
5S	School District, Woodland Joint Unified		630 Cottonwood St.	Woodland, CA 95695-3615
5S	School District, Yuba City Unified		750 Palora Ave.	Yuba City, CA 95991-3627
5S	University of California	The University of California, Davis	One Shields Avenue	Davis, CA 95616
5S	Veteran Affairs	Sacramento Medical Center @ Mather	10535 Hospital Way	Sacramento, CA 95655
6A	School District, Lake Tahoe Unified		1021 Al Tahoe Blvd.	South Lake Tahoe, CA 96150-4426
6B	Bureau of Prisons	FCI Victorville	PO Box 5400	Adelanto, CA 92301
6B	California Community Colleges	Antelope Valley College	3041 West Avenue K	Lancaster, CA 93536-5426
6B	California Community Colleges	Victor Valley College	18422 Bear Valley Road	Victorville, CA 92392-5849
6B	Corrections, Dept of	CSP, Los Angeles County	44750 60th Street West	Lancaster, CA 93536-7620
6B	Defense, Department of	Production Flight Test Installation, Air Force Plant 42	2503 East Avenue P	Palmdale, CA 93550-2196
6B	District Agricultural Association	San Bernardino County Fairgrounds	14800 Seventh Street	Victorville, CA
6B	School District, Antelope Valley Union High		44811 North Sierra Hwy.	Lancaster, CA 93534-3226
6B	School District, Apple Valley Unified		22974 Bear Valley Road	Apple Valley, CA 92308-7423
6B	School District, Eastside Union Elementary		6742 E. Avenue H	Lancaster, CA 93535-7849
6B	School District, Hesperia Unified		9144 Third St.	Hesperia, CA 92345-3643
6B	School District, Lancaster Elementary		44711 N. Cedar Ave.	Lancaster, CA 93534-3210
6B	School District, Palmdale Elementary		39139 10th St. East.	Palmdale, CA 93550-3419
6B	School District, Victor Elementary		15579 Eighth St.	Victorville, CA 92392-3348
6B	School District, Victor Valley Union High		16350 Mojave Dr.	Victorville, CA 92392-3655
6B	School District, Westside Union Elementary		46809 N. 70th St. West	Lancaster, CA 93535-7836
6B	School District, Wilsona Elementary		18050 East Ave. O	Palmdale, CA 93591-3800
7	California Community Colleges	College of the Desert	43 500 Monterey Avenue	Palm Desert, CA 92260-2499
7	School District, Banning Unified		161 W. Williams St.	Banning, CA 92220-4746
7	School District, Brawley Elementary		261 D St.	Brawley, CA 92227-1912
7	School District, Brawley Union High		480 N. Imperial Ave.	Brawley, CA 92227-1625
7	School District, Calexico Unified		901 Andrade Ave.	Calexico, CA 92232-0792
7	School District, Central Union High		1001 Brighton Ave.	El Centro, CA 92243-3110
7	School District, Coachella Valley Unified		87-225 Church St.	Thermal, CA 92274-0847
7	School District, Desert Sands Unified		47-950 Dune Palms Rd	La Quinta, CA 92253-4000
7	School District, El Centro Elementary		1256 Broadway	El Centro, CA 92243-2317
7	School District, Imperial Unified		219 North E Street	Imperial, CA 92254
7	School District, Palm Springs Unified		333 S. Farrell Dr.	Palm Springs, CA 92262-7905
8	California Air National Guard	163rd Air Refueling Wing	1620 Graeber Street, #6	March Field, CA 92518-1614
8	California Army National Guard	Los Alamitos AFRC	Lexington Dr	Los Alamitos, CA 90720
8	California Community Colleges	Chaffey College	5885 Haven Avenue	Rancho Cucamonga, CA 91737-3002
8	California Community Colleges	Coastline Community College	11460 Warner Avenue	Fountain Valley, CA 92708-2597
8	California Community Colleges	Crafton Hills College	11711 Sand Canyon Road	Yucaipa, CA 92399-1799
8	California Community Colleges	Cypress College	9200 Valley View Street	Cypress, CA 90630-5897
8	California Community Colleges	Fullerton College	321 East Chapman Avenue	Fullerton, CA 92832-2095
8	California Community Colleges	Golden West College	15744 Goldenwest Street	Huntington Beach, CA 92647 0592
8	California Community Colleges	Irvine Valley College	5500 Irvine Center Drive	Irvine, CA 92720-4399

Region	Agency	Facility	Address	City, State, ZIP
8	California Community Colleges	Mt. San Jacinto College	1499 North State Street	San Jacinto, CA 92583-2399
8	California Community Colleges	Orange Coast College	2701 Fairview Road PO Box 5005	Costa Mesa, CA 92628-5005
8	California Community Colleges	Riverside Community College	4800 Magnolia Avenue	Riverside, CA 92506-1293
8	California Community Colleges	San Bernardino Valley College	701 S. Mt. Vernon Avenue	San Bernardino, CA 92410-2798
8	California Community Colleges	Santa Ana College	1530 W. 17th Street	Santa Ana, CA 92706-3398
8	California Community Colleges	Santiago Canyon College	8045 E. Chapman Avenue	Orange, CA 92869-4512
8	California State University	California State University Fullerton	P.O. Box 34080	Fullerton, CA 92834
8	California State University	California State University San Bernardino	5500 University Parkway	San Bernardino, CA 92407
8	California Youth Authority	Heman G. Stark Youth Correctional Facility	15180 Eculid Ave	Chino, CA
8	Corrections, Dept of	California Institution for Men	14901 Central Avenue	Chino, CA 91710
8	Corrections, Dept of	California Institution for Women	16756 Chino-Corona Road	Corona, CA 92878-6000
8	Corrections, Dept of	California Rehabilitation Center	5th & Western	Norco, CA 91760
8	Defense, Department of	March Air Reserve Base	2145 Graeber St, Ste 117	March ARB, CA 92518-1671
8	Defense, Department of	Naval Warfare Assessment Sation	2300 Fifth St	Norco, CA 91760
8	Defense, Department of	Seal Beach Naval Weapons Station	800 Seal Beach Blvd	Seal Beach, CA 90740-5000
8	Developmental Services, Dept of.	Fairview Developmental Center	2501 Harbor Blvd	Cotsa Mesa, CA
8	District Agricultural Association	Orange County Fairgrounds	88 Fair Drive	Costa Mesa, CA
8	Education, Dept of	Calif. School for the Deaf	3044 Horace St.	Riverside, CA 92506-4498
8	Mental Health, Dept of	Patton State Hospital	3102 e Highland Ave	Patton, CA
8	School District, Alta Loma Elementary		9340 Baseline Road	Alta Loma, CA 91701-5821
8	School District, Alvord Unified		10365 Keller Ave	Riverside, CA 92505-1349
8	School District, Anaheim Elementary		1001 S. East St.	Anaheim, CA 92805-5749
8	School District, Anaheim Union High		501 Crescent Way	Anaheim, CA 92803-3520
8	School District, Bear Valley Unified		42271 Moonridge Road	Big Bear Lake, CA 92315-1529
8	School District, Beaumont Unified		500 Grace Ave.	Beaumont, CA 92223-0187
8	School District, Brea-Olinda Unified		Number One Civic Cntr.	Brea, CA 92821-9990
8	School District, Buena Park Elementary		6885 Orangethorpe Ave.	Buena Park, CA 90620-1348
8	School District, Central Elementary		10601 Church St., Suite 112	Rancho Cucamonga, CA 91730-6863
8	School District, Centralia Elementary		6625 la Palma Ave.	Buena Park, CA 90620-2859
8	School District, Chaffey Joint Union		211 W. Fifth St.	Ontario, CA 91762-1698
8	School District, Chino Valley Unified		5130 Riverside Dr.	Chino, CA 91710-4130
8	School District, Colton Joint Unified		1212 Valencia Dr.	Colton, CA 92324-1798
8	School District, Corona-Norco Unified		2820 Clark Ave.	Norco, CA 91760-1903
8	School District, Cucamonga Elementary		8776 Archibald Ave.	Rancho Cucamonga, CA 91730-4698
8	School District, Cypress Elementary		9470 Moody St.	Cypress, CA 90630-2919
8	School District, Etiwanda Elementary		6061 East Ave.	Etiwanda, CA 91739-0248
8	School District, Fontana Unified		9680 Citrus Ave.	Fontana, CA 92335-5571
8	School District, Fountain Valley Elementary		17210 Oak St.	Fountain Valley, CA 92708-3405
8	School District, Fullerton Elementary		1401 W. Valencia Dr.	Fullerton, CA 92633-3938
8	School District, Fullerton Joint Union High		1051 W. Bastanchury Road	Fullerton, CA 92833-2247

Region	Agency	Facility	Address	City, State, ZIP
8	School District, Garden Grove Unified		10331 Stanford Ave.	Garden Grove, CA 92840-6351
8	School District, Hemet Unified		2350 W. Latham Ave.	Hemet, CA 92545-3632
8	School District, Huntington Beach City Elementary		20451 Craimer Lane	Huntington Beach, CA 92646-0071
8	School District, Huntington Beach Union High		10251 Yorktown Ave.	Huntington Beach, CA 92646-2999
8	School District, Irvine Unified		5050 Barranca Parkway	Irvine, CA 92604-4652
8	School District, Jurupa Unified		3924 Riverview Dr.	Riverside, CA 92509-6611
8	School District, La Habra City Elementary		500 N. Walnut St.	La Habra, CA 90633-0307
8	School District, Lake Elsinore Unified		545 Chaney St.	Lake Elsinore, CA 92530-2723
8	School District, Los Alamitos Unified		10293 Bloomfield St.	Los Alamitos, CA 90720-2264
8	School District, Magnolia Elementary		2705 W. Orange Ave.	Anaheim, CA 92804-3203
8	School District, Menifee Union Elementary		30205 Menifee Road	Menifee, CA 92584-8109
8	School District, Moreno Valley Unified		25634 Alessandro Blvd.	Moreno Valley, CA 92553-4306
8	School District, Mountain View Elementary		2585 S. Archibald Ave.	Ontario, CA 91761-8146
8	School District, Newport-Mesa Unified		2985-A Bear St.	Costa Mesa, CA 92626-
8	School District, Nuview Union Elementary		29780 Lakeview Ave.	Nuevo, CA 92567-9261
8	School District, Ocean View Elementary		17200 Pinehurst Lane	Huntington Beach, CA 92647-5569
8	School District, Ontario-Montclair Elementary		950 West D St.	Ontario, CA 91762-3026
8	School District, Orange Unified		1401 N. Handy St.	Orange, CA 92856-
8	School District, Perris Elementary		143 E. First St.	Perris, CA 92570-2113
8	School District, Perris Union High		155 E. Fourth St.	Perris, CA 92570-2124
8	School District, Placentia-Yorba Linda Unified		1301 E. Orangethorpe Ave.	Placentia, CA 92670-5302
8	School District, Redlands Unified		20 W. Lugonia	Redlands, CA 92373-1508
8	School District, Rialto Unified		182 E. Walnut Ave.	Rialto, CA 92376-3530
8	School District, Riverside Unified		3380 14th St.	Riverside, CA 92516-2800
8	School District, Romoland Elementary		25900 Leon Road	Homeland, CA 92548-
8	School District, San Bernardino City Unified		777 North F St.	San Bernardino, CA 92410-3017
8	School District, San Jacinto Unified		2045 S. San Jacinto Ave.	San Jacinto, CA 92583-5626
8	School District, Santa Ana Unified		1601 E. Chestnut Ave.	Santa Ana, CA 92701-6322
8	School District, Savanna Elementary		1330 S. Knott Ave.	Anaheim, CA 92804-4711
8	School District, Tustin Unified		300 South C St.	Tustin, CA 92780-3695
8	School District, Upland Unified		390 N. Euclid Ave.	Upland, CA 91785-1239
8	School District, Val Verde Unified		975 E. Morgan Road	Perris, CA 92571-3103
8	School District, Westminster Elementary		14121 Cedarwood Ave.	Westminster, CA 92683-4482
8	School District, Yucaipa-Calimesa Jt. Unified		12797 Third St.	Yucaipa, CA 92399-4544
8	University of California	University of California, Irvine		Irvine, CA 92697
8	University of California	University of California, Riverside	900 University Avenue	Riverside, CA 92521
8	Veteran Affairs	Jerry L. Pettis Memorial VA Medical Center	11201 Benton Street	Loma Linda, CA 92357
9	Bureau of Prisons	MCC San Diego	808 Union Street	San Diego, CA 92101-6078
9	California Community Colleges	Cuyamaca College	900 Rancho San Diego Parkway	El Cajon, CA 92019-4304
9	California Community Colleges	Grossmont College	8800 Grossmont College Drive	El Cajon, CA 92020-1799
9	California Community Colleges	MiraCosta College	1 Barnard Drive	Oceanside, CA 92056-3899
9	California Community Colleges	Palomar College	1140 West Mission Road	San Marcos, CA 92069-1487

Region	Agency	Facility	Address	City, State, ZIP
9	California Community Colleges	Saddleback College	28000 Marguerite Parkway	Mission Viejo, CA 92692-3699
9	California Community Colleges	San Diego City College	1313 12th Avenue	San Diego, CA 92101-4787
9	California Community Colleges	San Diego Mesa College	7250 Mesa College Drive	San Diego, CA 92111-4996
9	California Community Colleges	San Diego Miramar College	10440 Black Mountain Road	San Diego, CA 92126-2999
9	California Community Colleges	Southwestern College	900 Otay Lakes Road	Chula Vista, CA 91910-7299
9	California State University	California State University San Marcos	333 S. Twin Oaks Valley Rd.	San Marcos, CA 92096
9	California State University	San Diego State University	5500 Campanile Drive	San Diego, CA 92182
9	Corrections, Dept of	R J Donovan Correctional Facility at Rock Mountain	480 Alta Road	San Diego, CA 92179
9	Defense, Department of	Camp Pendleton Marine Corps Base	PO Box 555010	Camp Pendleton, CA 92055-5010
9	Defense, Department of	Fleet & Industrial Supply Center, Pt. Loma	937 N Harbor Dr	San Diego, CA 92132-0002
9	Defense, Department of	Fleet and Industrial Supply Center, Broadway Complex	33000 Nixie Way Bldg 50, Suite 326	San Diego, CA 92147-5110
9	Defense, Department of	Fleet Anti-Submarine Warfare Training Center, Pacific	33000 Nixie Way Bldg 50, Suite 326	San Diego, CA 92147-5110
9	Defense, Department of	Fleet Combat Training Center, Pacific	33000 Nixie Way Bldg 50, Suite 326	San Diego, CA 92147-5110
9	Defense, Department of	Magnetic Silencing Facility	33000 Nixie Way Bldg 50, Suite 326	San Diego, CA 92147-5110
9	Defense, Department of	Miramar Marine Corps Air Station	PO Box 452013	San Diego, CA 92145
9	Defense, Department of	Mission Gorge Recreational Facility	33000 Nixie Way Bldg 50, Suite 326	San Diego, CA 92147-5110
9	Defense, Department of	Naval Air Station, North Island	33000 Nixie Way Bldg 50, Suite 326	San Diego, CA 92147-5110
9	Defense, Department of	Naval Amphibious Base, Coronado	33000 Nixie Way Bldg 50, Suite 326	San Diego, CA 92147-5110
9	Defense, Department of	Naval Medical Center, San Diego	34800 Bob Wilson Drive	San Diego, CA 92134
9	Defense, Department of	Naval Outlying Landing Field, Imperial Beach	33000 Nixie Way, Building 50, Suite 326	San Diego, CA 92147-5110
9	Defense, Department of	Naval Radio Receiving Facility	33000 Nixie Way, Building 50, Suite 326	San Diego, CA 92147-5110
9	Defense, Department of	Naval Station, San Diego	3455 Senn Rd	San Diego, CA 92136-5084
9	Defense, Department of	Naval Submarine Base, San Diego	140 Sylvester Rd	San Diego, CA 92106-5200
9	Defense, Department of	Naval Weapon Station, Fallbrook	700 Ammunition Rd	Fallbrook, CA 92028-3187
9	Defense, Department of	Navy Public Works Center, Taylor Street Facility	33000 Nixie Way Bldg 50, Suite 326	San Diego, CA 92147-5110
9	Defense, Department of	San Diego Marine Corps Recruit Depot	1600 Henderson Ave #120	San Diego, CA 92140-5001
9	Defense, Department of	Space and Naval Warfare Systems Center, Old Town Cam		San Diego, CA
9	Defense, Department of	Space and Naval Warfare Systems Center, Point Loma Ca		San Diego, CA
9	District Agricultural Association	San Diego County Fairgrounds	2260 Jimmy Durante Blvd	Del Mar, CA
9	School District, Alpine Union Elementary		1323 Administration Way	Alpine, CA 91901-2104
9	School District, Bonsall Union Elementary		31505 Old River Road	Bonsall, CA 92003-5112
9	School District, Cajon Valley Union Elementary		189 Roanoke Road	El Cajon, CA 92022-1007
9	School District, Capistrano Unified		32972 Calle Perfecto	San Juan Capistrano, CA 92675-4706
9	School District, Carlsbad Unified		801 Pine Ave.	Carlsbad, CA 92008-2430
9	School District, Chula Vista Elementary		84 East J St.	Chula Vista, CA 91910-6115
9	School District, Coronado Unified		555 D Ave.	Coronado, CA 92118-1714
9	School District, Dehesa Elementary		4612 Dehesa Road	El Cajon, CA 92019-2922
9	School District, Del Mar Union Elementary		225 Ninth St.	Del Mar, CA 92014-2716
9	School District, Encinitas Union Elementary		101 South Rancho Santa Fe Road	Encinitas, CA 92024-4308
9	School District, Escondido Union Elementary		1330 E. Grand Ave.	Escondido, CA 92027-3099
9	School District, Escondido Union High		302 N. Midway Dr.	Escondido, CA 92027-2741

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9	School District, Fallbrook Union Elementary		321 N. Iowa St.	Fallbrook, CA 92088-0698
9	School District, Fallbrook Union High		S. Mission Road & Stage Coach L	Fallbrook, CA 92088-0368
9	School District, Grossmont Union High		1100 Murray Dr.	La Mesa, CA 91944-1043
9	School District, Jamul-Dulzura Union Elementary		14581 Lyons Valley Road	Jamul, CA 91935-3324
9	School District, Julian Union Elementary		1704 Hwy. 78	Julian, CA 92036-0337
9	School District, Julian Union High		1656 Hwy. 78	Julian, CA 92036-0417
9	School District, La Mesa-Spring Valley		4750 Date Ave.	La Mesa, CA 91941-5214
9	School District, Laguna Beach Unified		550 Blumont St.	Laguna Beach, CA 92651-2356
9	School District, Lakeside Union Elementary		12335 Woodside Ave.	Lakeside, CA 92040-0578
9	School District, Lemon Grove Elementary		8025 Lincoln St.	Lemon Grove, CA 91945-2515
9	School District, Mountain Empire Unified		3291 Buckman Springs Road	Pine Valley, CA 91962-4003
9	School District, Murrieta Valley Unified		41870 McAlby ct	Murrieta, CA 92562-7021
9	School District, National Elementary		1500 N Ave.	National City, CA 91950-4827
9	School District, Oceanside Unified		2111 Mission Ave.	Oceanside, CA 92054-2326
9	School District, Poway Unified		13626 Twin Peaks Road	Poway, CA 92064-3034
9	School District, Ramona City Unified		720 Ninth St.	Ramona, CA 92065-2348
9	School District, Rancho Santa Fe Elementary		5927 la Granada	Rancho Santa Fe, CA 92067-0809
9	School District, Saddleback Valley Unified		25631 Peter A Hartman Way	Mission Viejo, CA 92691-
9	School District, San Diego City Unified		4100 Normal St.	San Diego, CA 92103-2653
9	School District, San Dieguito Union High		710 Encinitas Blvd.	Encinitas, CA 92024-3357
9	School District, San Marcos Unified		1 Civic Center Dr., Suite 300	San Marcos, CA 92069-
9	School District, San Pasqual Union Elementary		16666 San Pasqual Valley Road	Escondido, CA 92027-7001
9	School District, San Ysidro Elementary		4350 Otay Mesa Road	San Ysidro, CA 92173-1617
9	School District, Santee Elementary		9625 Cuyamaca St.	Santee, CA 92071-2674
9	School District, Solana Beach Elementary		309 N. Rios Ave.	Solana Beach, CA 92075-1241
9	School District, South Bay Union Elementary		601 Elm Ave.	Imperial Beach, CA 91932-2029
9	School District, Spencer Valley Elementary		4414 Hwys. 78 and 79	Santa Ysabel, CA 92070-0159
9	School District, Sweetwater Union High		1130 Fifth Ave.	Chula Vista, CA 91911-2812
9	School District, Temecula Valley Unified		31350 Rancho Vista Road	Temecula, CA 92592-6202
9	School District, Vallecitos Elementary		5211 Fifth St.	Fallbrook, CA 92028-9795
9	School District, Valley Center-Pauma Unified		28751 Cole Grade Rd.	Valley Center, CA 92082-6599
9	School District, Vista Unified		1234 Arcadia Ave.	Vista, CA 92084-3404
9	School District, Warner Unified		30951 Hwy. 79	Warner Springs, CA 92086-0008
9	University of California	University of California, San Diego	9500 Gilman Dr.	La Jolla, CA 92093
9	Veteran Affairs	VA San Diego Healthcare System	3350 La Jolla Village Drive	San Diego, CA 92161

Areas subject to high growth or serving a population of at least 50,000 must comply with the following provisions (for counties this threshold population applies to the population within the permit area).

A. RECEIVING WATER LIMITATIONS

1. Discharges shall not cause or contribute to an exceedance of water quality standards contained in a Statewide Water Quality Control Plan, the California Toxics Rule (CTR), or in the applicable RWQCB Basin Plan.

2. The permittees shall comply with Receiving Water Limitations A.1 through timely implementation of control measures and other actions to reduce pollutants in the discharges in accordance with the SWMP and other requirements of this permit including any modifications. The SWMP shall be designed to achieve compliance with Receiving Water Limitations A.1. If exceedance(s) of water quality objectives or water quality standards (collectively, WQS) persist notwithstanding implementation of the SWMP and other requirements of this permit, the permittees shall assure compliance with Receiving Water Limitations A.1 by complying with the following procedure:

   a. Upon a determination by either the permittees or the RWQCB that discharges are causing or contributing to an exceedance of an applicable WQS, the permittees shall promptly notify and thereafter submit a report to the RWQCB that describes 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 WQSs. The report may be incorporated in the annual update to the SWMP unless the RWQCB directs an earlier submittal. The report shall include an implementation schedule. The RWQCB may require modifications to the report.

   b. Submit any modifications to the report required by the RWQCB within 30 days of notification.

   c. Within 30 days following approval of the report described above by the RWQCB, the permittees shall revise the SWMP and monitoring program to incorporate the approved modified BMPs that have been and will be implemented, implementation schedule, and any additional monitoring required.

   d. Implement the revised SWMP and monitoring program in accordance with the approved schedule.

   So long as the permittees have complied with the procedures set forth above and are implementing the revised SWMP, the permittees do not have to repeat the same procedure for continuing or recurring exceedances of the same receiving water limitations unless directed by the RWQCB to develop additional BMPs.

B. DESIGN STANDARDS

Regulated Small MS4s subject to this requirement must adopt an ordinance or other document to ensure implementation of the Design Standards included herein or a functionally equivalent program that is acceptable to the appropriate RWQCB. The ordinance or other document must be adopted and effective prior to the expiration of this General Permit or, for Small MS4s designated subsequent to the Permit adoption, within five years of designation as a regulated Small MS4.

All discretionary development and redevelopment projects that fall into one of the following categories are subject to these Design Standards. These categories are:

- Single-Family Hillside Residences
- 100,000 Square Foot Commercial Developments
- Automotive Repair Shops
- Retail Gasoline Outlets
- Restaurants
- Home Subdivisions with 10 or more housing units
- Parking lots 5,000 square feet or more or with 25 or more parking spaces and potentially exposed to storm water runoff

1. Conflicts With Local Practices
   Where provisions of the Design Standards conflict with established local codes or other regulatory mechanism, (e.g., specific language of signage used on storm drain stenciling), the Permittee may continue the local practice and modify the Design Standards to be consistent with the code or other regulatory mechanism, except that to the extent that the standards in the Design Standards are more stringent than those under local codes or other regulatory mechanism, such more stringent standards shall apply.

2. Design Standards Applicable to All Categories

   a. Peak Storm Water Runoff Discharge Rates
      Post-development peak storm water runoff discharge rates shall not exceed the estimated pre-development rate for developments where the increased peak storm water discharge rate will result in increased potential for downstream erosion.

   b. Conserve Natural Areas
      If applicable, the following items are required and must be implemented in the site layout during the subdivision design and approval process, consistent with applicable General Plan and Local Area Plan policies:

      1) Concentrate or cluster Development on portions of a site while leaving the remaining land in a natural undisturbed condition.
      2) Limit clearing and grading of native vegetation at a site to the minimum amount needed to build lots, allow access, and provide fire protection.
      3) Maximize trees and other vegetation at each site by planting additional vegetation, clustering tree areas, and promoting the use of native and/or drought tolerant plants.

4) Promote natural vegetation by using parking lot islands and other landscaped areas.
5) Preserve riparian areas and wetlands.

c. Minimize Storm Water Pollutants of Concern
Storm water runoff from a site has the potential to contribute oil and grease, suspended solids, metals, gasoline, pesticides, and pathogens to the storm water conveyance system. The development must be designed so as to minimize, to the maximum extent practicable, the introduction of pollutants of concern that may result in significant impacts, generated from site runoff of directly connected impervious areas (DCIA), to the storm water conveyance system as approved by the building official. Pollutants of concern consist of any pollutants that exhibit one or more of the following characteristics: current loadings or historic deposits of the pollutant are impacting the beneficial uses of a receiving water, elevated levels of the pollutant are found in sediments of a receiving water and/or have the potential to bioaccumulate in organisms therein, or the detectable inputs of the pollutant are at concentrations or loads considered potentially toxic to humans and/or flora and fauna.

In meeting this specific requirement, "minimization of the pollutants of concern" will require the incorporation of a BMP or combination of BMPs best suited to maximize the reduction of pollutant loadings in that runoff to the Maximum Extent Practicable. Those BMPs best suited for that purpose are those listed in the *California Storm Water Best Management Practices Handbook*s; *Caltrans Storm Water Quality Handbook: Planning and Design Staff Guid*e; *Manual for Storm Water Management in Washington Stat*e; *The Maryland Stormwater Design Manua*l; *Florida Development Manual: A Guide to Sound Land and Water Managemen*t; Denver *Urban Storm Drainage Criteria Manual, Volume 3 – Best Management Practices* and *Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters* , USEPA Report No. EPA-840-B-92-002, as "likely to have significant impact" beneficial to water quality for targeted pollutants that are of concern at the site in question. However, it is possible that a combination of BMPs not so designated, may in a particular circumstance, be better suited to maximize the reduction of the pollutants.

d. Protect Slopes and Channels
Project plans must include BMPs consistent with local codes, ordinances, or other regulatory mechanism and the Design Standards to decrease the potential of slopes and/or channels from eroding and impacting storm water runoff:

1) Convey runoff safely from the tops of slopes and stabilize disturbed slopes.
2) Utilize natural drainage systems to the maximum extent practicable.
3) Stabilize permanent channel crossings.
4) Vegetate slopes with native or drought tolerant vegetation, as appropriate.
5) Install energy dissipaters, such as riprap, at the outlets of new storm drains, culverts, conduits, or channels that enter unlined channels in accordance with applicable specifications to minimize erosion, with the approval of all agencies

with jurisdiction, e.g., the U.S. Army Corps of Engineers and the California Department of Fish and Game.

e. Provide Storm Drain System Stenciling and Signage
Storm drain stencils are highly visible source controls that are typically placed directly adjacent to storm drain inlets. The stencil contains a brief statement that prohibits the dumping of improper materials into the storm water conveyance system. Graphical icons, either illustrating anti-dumping symbols or images of receiving water fauna, are effective supplements to the anti-dumping message. All storm drain inlets and catch basins within the project area must be stenciled with prohibitive language (such as: "NO DUMPING – DRAINS TO OCEAN") and/or graphical icons to discourage illegal dumping.· Signs and prohibitive language and/or graphical icons, which prohibit illegal dumping, must be posted at public access points along channels and creeks within the project area.· Legibility of stencils and signs must be maintained.

f. Properly Design Outdoor Material Storage Areas
Outdoor material storage areas refer to storage areas or storage facilities solely for the storage of materials. Improper storage of materials outdoors may provide an opportunity for toxic compounds, oil and grease, heavy metals, nutrients, suspended solids, and other pollutants to enter the storm water conveyance system. Where proposed project plans include outdoor areas for storage of materials that may contribute pollutants to the storm water conveyance system, the following Structural or Treatment BMPs are required:

1) Materials with the potential to contaminate storm water must be: (1) placed in an enclosure such as, but not limited to, a cabinet, shed, or similar structure that prevents contact with runoff or spillage to the storm water conveyance system; or (2) protected by secondary containment structures such as berms, dikes, or curbs.
2) The storage area must be paved and sufficiently impervious to contain leaks and spills.
3) The storage area must have a roof or awning to minimize collection of storm water within the secondary containment area.

g. Properly Design Trash Storage Areas
A trash storage area refers to an area where a trash receptacle or receptacles (dumpsters) are located for use as a repository for solid wastes. Loose trash and debris can be easily transported by the forces of water or wind into nearby storm drain inlets, channels, and/or creeks. All trash container areas must meet the following Structural or Treatment Control BMP requirements (individual single family residences are exempt from these requirements):

1) Trash container areas must have drainage from adjoining roofs and pavement diverted around the area(s).
2) Trash container areas must be screened or walled to prevent off-site transport of trash.

h. Provide Proof of Ongoing BMP Maintenance

Improper maintenance is one of the most common reasons why water quality controls will not function as designed or which may cause the system to fail entirely. It is important to consider who will be responsible for maintenance of a permanent BMP, and what equipment is required to perform the maintenance properly. As part of project review, if a project applicant has included or is required to include, Structural or Treatment Control BMPs in project plans, the Permittee shall require that the applicant provide verification of maintenance provisions through such means as may be appropriate, including, but not limited to legal agreements, covenants, CEQA mitigation requirements and/or Conditional Use Permits.

For all properties, the verification will include the developer's signed statement, as part of the project application, accepting responsibility for all structural and treatment control BMP maintenance until the time the property is transferred and, where applicable, a signed agreement from the public entity assuming responsibility for Structural or Treatment Control BMP maintenance. The transfer of property to a private or public owner must have conditions requiring the recipient to assume responsibility for maintenance of any Structural or Treatment Control BMP to be included in the sales or lease agreement for that property, and will be the owner's responsibility. The condition of transfer shall include a provision that the property owners conduct maintenance inspection of all Structural or Treatment Control BMPs at least once a year and retain proof of inspection. For residential properties where the Structural or Treatment Control BMPs are located within a common area which will be maintained by a homeowner's association, language regarding the responsibility for maintenance must be included in the project's conditions, covenants and restrictions (CC&Rs). Printed educational materials will be required to accompany the first deed transfer to highlight the existence of the requirement and to provide information on what storm water management facilities are present, signs that maintenance is needed, how the necessary maintenance can be performed, and assistance that the Permittee can provide. The transfer of this information shall also be required with any subsequent sale of the property.

If Structural or Treatment Control BMPs are located within a public area proposed for transfer, they will be the responsibility of the developer until they are accepted for transfer by the County or other appropriate public agency. Structural or Treatment Control BMPs proposed for transfer must meet design standards adopted by the public entity for the BMP installed and should be approved by the County or other appropriate public agency prior to its installation.

i. Design Standards for Structural or Treatment Control BMPs
The Permittees shall require that post-construction treatment control BMPs incorporate, at a minimum, either a volumetric or flow based treatment control design standard, or both, as identified below to mitigate (infiltrate, filter or treat) storm water runoff:

1) Volumetric Treatment Control BMP

a) The 85th percentile 24-hour runoff event determined as the maximized capture storm water volume for the area, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ ASCE Manual of Practice No. 87, (1998); or
b) The volume of annual runoff based on unit basin storage water quality volume, to achieve 80 percent or more volume treatment by the method recommended in California Stormwater Best Management Practices Handbook – Industrial/ Commercial, (2003); or
c) The volume of runoff produced from a historical-record based reference 24-hour rainfall criterion for "treatment" that achieves approximately the same reduction in pollutant loads achieved by the 85th percentile 24-hour runoff event.

2) Flow Based Treatment Control BMP
   a) The flow of runoff produced from a rain event equal to at least two times the 85th percentile hourly rainfall intensity for the area; or
   b) The flow of runoff produced from a rain event that will result in treatment of the same portion of runoff as treated using volumetric standards above.

Limited Exclusion
Restaurants and Retail Gasoline Outlets, where the land area for development or redevelopment is less than 5,000 square feet, are excluded from the numerical Structural or Treatment Control BMP design standard requirement only.

3. Provisions Applicable to Individual Priority Project Categories

   a. 100,000 Square Foot Commercial Developments

      1) Properly Design Loading/Unloading Dock Areas
      Loading/unloading dock areas have the potential for material spills to be quickly transported to the storm water conveyance system. To minimize this potential, the following design criteria are required:

         a) Cover loading dock areas or design drainage to minimize run-on and runoff of storm water.
         b) Direct connections to storm drains from depressed loading docks (truck wells) are prohibited.

      2) Properly Design Repair/Maintenance Bays
      Oil and grease, solvents, car battery acid, coolant and gasoline from the repair/maintenance bays can negatively impact storm water if allowed to come into contact with storm water runoff. Therefore, design plans for repair bays must include the following:

a) Repair/maintenance bays must be indoors or designed in such a way that doesn't allow storm water runon or contact with storm water runoff.
b) Design a repair/maintenance bay drainage system to capture all washwater, leaks and spills. Connect drains to a sump for collection and disposal. Direct connection of the repair/maintenance bays to the storm drain system is prohibited. If required by local jurisdiction, obtain an Industrial Waste Discharge Permit.

3) Properly Design Vehicle/Equipment Wash Areas
The activity of vehicle/equipment washing/steam cleaning has the potential to contribute metals, oil and grease, solvents, phosphates, and suspended solids to the storm water conveyance system. Include in the project plans an area for washing/steam cleaning of vehicles and equipment. The area in the site design must be:

a) Self-contained and/ or covered, equipped with a clarifier, or other pretreatment facility, and
b) Properly connected to a sanitary sewer or other appropriately permitted disposal facility.

b. Restaurants

1) Properly Design Equipment/Accessory Wash Areas
The activity of outdoor equipment/accessory washing/steam cleaning has the potential to contribute metals, oil and grease, solvents, phosphates, and suspended solids to the storm water conveyance system. Include in the project plans an area for the washing/steam cleaning of equipment and accessories. This area must be:

a) Self-contained, equipped with a grease trap, and properly connected to a sanitary sewer.
b) If the wash area is to be located outdoors, it must be covered, paved, have secondary containment, and be connected to the sanitary sewer or other appropriately permitted disposal facility.

c. Retail Gasoline Outlets

1) Properly Design Fueling Area
Fueling areas have the potential to contribute oil and grease, solvents, car battery acid, coolant and gasoline to the storm water conveyance system. The project plans must include the following BMPs:

a) The fuel dispensing area must be covered with an overhanging roof structure or canopy. The canopy's minimum dimensions must be equal to or greater than the area within the grade break. The canopy must not drain onto the fuel dispensing area, and the canopy downspouts must be routed to prevent drainage across the fueling area.

b) The fuel dispensing area must be paved with Portland cement concrete (or equivalent smooth impervious surface), and the use of asphalt concrete shall be prohibited.
c) The fuel dispensing area must have a 2% to 4% slope to prevent ponding, and must be separated from the rest of the site by a grade break that prevents run-on of storm water to the extent practicable.
d) At a minimum, the concrete fuel dispensing area must extend 6.5 feet (2.0 meters) from the corner of each fuel dispenser, or the length at which the hose and nozzle assembly may be operated plus 1 foot (0.3 meter), whichever is less.

d. Automotive Repair Shops

1) Properly Design Fueling Area
Fueling areas have the potential to contribute oil and grease, solvents, car battery acid, coolant and gasoline to the storm water conveyance system. Therefore, design plans, which include fueling areas, must contain the following BMPs:

a. The fuel dispensing area must be covered with an overhanging roof structure or canopy. The canopy's minimum dimensions must be equal to or greater than the area within the grade break. The canopy must not drain onto the fuel dispensing area, and the canopy downspouts must be routed to prevent drainage across the fueling area.
b. The fuel dispensing area must be paved with Portland cement concrete (or equivalent smooth impervious surface), and the use of asphalt concrete shall be prohibited.
c. The fuel dispensing area must have a 2% to 4% slope to prevent ponding, and must be separated from the rest of the site by a grade break that prevents run-on of storm water to the extent practicable.
d. At a minimum, the concrete fuel dispensing area must extend 6.5 feet (2.0 meters) from the corner of each fuel dispenser, or the length at which the hose and nozzle assembly may be operated plus 1 foot (0.3 meter), whichever is less.

2) Properly Design Repair/Maintenance Bays
Oil and grease, solvents, car battery acid, coolant and gasoline from the repair/maintenance bays can negatively impact storm water if allowed to come into contact with storm water runoff. Therefore, design plans for repair bays must include the following:

a) Repair/maintenance bays must be indoors or designed in such a way that doesn't allow storm water run-on or contact with storm water runoff.
b) Design a repair/maintenance bay drainage system to capture all wash-water, leaks and spills. Connect drains to a sump for collection and disposal. Direct connection of the repair/maintenance bays to the storm drain system is

prohibited. If required by local jurisdiction, obtain an Industrial Waste Discharge Permit.

3) Properly Design Vehicle/Equipment Wash Areas
The activity of vehicle/equipment washing/steam cleaning has the potential to contribute metals, oil and grease, solvents, phosphates, and suspended solids to the storm water conveyance system. Include in the project plans an area for washing/steam cleaning of vehicles and equipment. This area must be:

   a) Self-contained and/or covered, equipped with a clarifier, or other pretreatment facility, and properly connected to a sanitary sewer or other appropriately permitted disposal facility.

4) Properly Design Loading/Unloading Dock Areas
Loading/unloading dock areas have the potential for material spills to be quickly transported to the storm water conveyance system. To minimize this potential, the following design criteria are required:

   a) Cover loading dock areas or design drainage to minimize run-on and runoff of storm water.
   b) Direct connections to storm drains from depressed loading docks (truck wells) are prohibited.

e. Parking Lots

1) Properly Design Parking Area
Parking lots contain pollutants such as heavy metals, oil and grease, and polycyclic aromatic hydrocarbons that are deposited on parking lot surfaces by motor-vehicles. These pollutants are directly transported to surface waters. To minimize the offsite transport of pollutants, the following design criteria are required:

   a) Reduce impervious land coverage of parking areas.
   b) Infiltrate or treat runoff.

2) Properly Design To Limit Oil Contamination and Perform Maintenance
Parking lots may accumulate oil, grease, and water insoluble hydrocarbons from vehicle drippings and engine system leaks:

   a) Treat to remove oil and petroleum hydrocarbons at parking lots that are heavily used (e.g. fast food outlets, lots with 25 or more parking spaces , sports event parking lots, shopping malls, grocery stores, discount warehouse stores).
   b) Ensure adequate operation and maintenance of treatment systems particularly sludge and oil removal, and system fouling and plugging prevention control.

4. Waiver

A Permittee may, through adoption of an ordinance, code, or other regulatory mechanism incorporating the treatment requirements of the Design Standards, provide for a waiver from the requirement if impracticability for a specific property can be established. A waiver of impracticability shall be granted only when all other Structural or Treatment Control BMPs have been considered and rejected as infeasible. Recognized situations of impracticability include, (i) extreme limitations of space for treatment on a redevelopment project, (ii) unfavorable or unstable soil conditions at a site to attempt infiltration, and (iii) risk of ground water contamination because a known unconfined aquifer lies beneath the land surface or an existing or potential underground source of drinking water is less than 10 feet from the soil surface. Any other justification for impracticability must be separately petitioned by the Permittee and submitted to the appropriate RWQCB for consideration. The RWQCB may consider approval of the waiver justification or may delegate the authority to approve a class of waiver justifications to the RWQCB EO. The supplementary waiver justification becomes recognized and effective only after approval by the RWQCB or the RWQCB EO. A waiver granted by a Permittee to any development or redevelopment project may be revoked by the RWQCB EO for cause and with proper notice upon petition.

5. Limitation on Use of Infiltration BMPs

Three factors significantly influence the potential for storm water to contaminate ground water. They are (i) pollutant mobility, (ii) pollutant abundance in storm water, (iii) and soluble fraction of pollutant. The risk of contamination of groundwater may be reduced by pretreatment of storm water. A discussion of limitations and guidance for infiltration practices is contained in, *Potential Groundwater Contamination from Intentional and Non-Intentional Stormwater Infiltration, Report No. EPA/600/R-94/051, USEPA (1994).*

In addition, the distance of the groundwater table from the infiltration BMP may also be a factor determining the risk of contamination. A water table distance separation of ten feet depth in California presumptively poses negligible risk for storm water not associated with industrial activity or high vehicular traffic.

Site specific conditions must be evaluated when determining the most appropriate BMP. Additionally, monitoring and maintenance must be provided to ensure groundwater is protected and the infiltration BMP is not rendered ineffective by overload. This is especially important for infiltration BMPs for areas of industrial activity or areas subject to high vehicular traffic [25,000 or greater average daily traffic (ADT) on main roadway or 15,000 or more ADT on any intersecting roadway]. In some cases pretreatment may be necessary.

6. Alternative Certification for Storm Water Treatment Mitigation

In lieu of conducting detailed BMP review to verify Structural or Treatment Control BMP adequacy, a Permittee may elect to accept a signed certification from a Civil Engineer or a Licensed Architect registered in the State of California, that the plan meets

the criteria established herein. The Permittee is encouraged to verify that certifying person(s) have been trained on BMP design for water quality, not more than two years prior to the signature date. Training conducted by an organization with storm water BMP design expertise (e.g., a University, American Society of Civil Engineers, American Society of Landscape Architects, American Public Works Association, or the California Water Environment Association) may be considered qualifying.

Attachment 5
WQO# 2003 – 0005 – DWQ

Communities Anticipated to be Subject to Supplemental Provisions

RWQCB	Area	Reason/Population
1	Windsor	High Growth
2	Clayton	High Growth
2	Marin County	58563
2	Napa	72585
2	Petaluma	54548
2	San Francisco	776733
2	San Rafael	56063
3	Greenfield	High Growth
3	Hollister	High Growth
3	King City	High Growth
3	Morgan Hill	High Growth
3	Nipomo	High Growth
3	Prunedale	High Growth
3	Santa Barbara	92325
3	Santa Barbara County	140453
3	Santa Cruz	54593
3	Santa Cruz County	116783
3	Santa Maria	77423
3	Soledad	High Growth
3	Watsonville	High Growth
5F	Hanford	High Growth
5F	Lemoore	High Growth
5F	Los Banos	High Growth
5F	Madera	High Growth
5F	Merced	63893
5F	Visalia	91565
5R	Chico	59954
5R	Chico	High Growth
5R	Redding	80865
5S	Davis	60308
5S	Dixon	High Growth
5S	El Dorado Hills	High Growth
5S	Lathrop	High Growth
5S	Lincoln	High Growth
5S	Oakley	High Growth
5S	Placer County	75262
5S	Ripon	High Growth
5S	Riverbank	High Growth
5S	Rocklin	High Growth

RWQCB	Area	Reason/Population
5S	Roseville	79921
5S	Roseville	High Growth
5S	Salida	High Growth
5S	South Yuba City	High Growth
5S	Stanislaus County	67145
5S	Tracy	56929
5S	Tracy	High Growth
5S	Turlock	55810
5S	Vacaville	88625
6	Apple Valley	54239
6	Hesperia	62582
6	Lancaster	118718
6	Palmdale	116670
6	Victorville	64029
6B	Lake Los Angeles	High Growth
6B	Palmdale	High Growth
6B	Rosamond	High Growth
6B	Victorville	High Growth
7	Calexico	High Growth
7	Rancho Mirage	High Growth
5S	Lodi	56999

INSTRUCTIONS FOR COMPLETING THE NOTICE OF INTENT TO COMPLY WITH THE TERMS OF THE GENERAL PERMIT FOR STORM WATER DISCHARGES FROM SMALL MS4s (WATER QUALITY ORDER NO. 2003 – 0005 - DWQ)

I. NOI STATUS

Check box "1" if this is a new NOI submittal. Check box "2" if you are reporting changes to the NOI (e.g., new contact person, phone number, mailing address). Include the facility WDID number and highlight all the information that has been changed. The appropriate official must sign the form, certifying the changes.

II. AGENCY INFORMATION

A. Enter the name of the agency applying for coverage.
B. Enter the first and last name of the person familiar with the permit and responsible for permit compliance.
C. Enter the Title of the person listed in "B".
D. Enter the agency's mailing address.
E. Enter if necessary the 2nd address line.
F. Enter the agency's mailing address city.
G. Enter the agency's mailing address zip code.
H. Enter the county in which the agency is located. If the agency is located in more than one county, list all applicable counties. Attach additional sheets if necessary.
I. Enter the phone number where the contact person can be reached.
J. Enter the FAX number where the contact person can be reached.
K. Enter the email address where the contact person can be reached.
L. Check the box that corresponds to the agency owner.

III. Permit Area

General name of the permit area, such as the Sacramento Metropolitan Area

IV. Boundaries of Coverage

Describe the boundaries of the area to be permitted and include a site map. For a city, this would be the established city boundaries. For a county, unless the entire county is designated, the permitted area should be inclusive of the area of concern and rely on simplified boundaries for each general direction, such as rivers, major roads or highways, or an adjoining city's boundary. For non-traditional Small MS4s, in general, the property line shall serve as the permit boundary.

V. Billing Information

A. Enter the name of the agency applying for coverage.
B. Enter the first and last name of the person familiar with the permit and responsible for permit compliance.
C. Enter the Title of the person listed in "B".
D. Enter the agency's mailing address.
E. Enter if necessary the 2nd address line.
F. Enter the agency's mailing address city.

G. Enter the agency's mailing address zip code.
H. Enter the county in which the agency is located.
I. Enter the phone number where the contact person can be reached.
J. Enter the FAX number where the contact person can be reached.
K. Enter the email address where the contact person can be reached.
L. Enter the average daily-user population of the applicant's permitted area. This is not the combined permit area of co-permittees. Submit the amount indicated by the current fee schedule (California Code of Regulations, Title 23, Division 3, Chapter 9, Article 1.) with the NOI package to the Regional Board. The fee schedule may be found at www.swrcb.ca.gov/stormwtr/municipal.html. School districts are exempt from MS4 permit fees.

VI. Permit Type

Check the box that corresponds to the permitting option you wish to apply for:

Check box 1 if applying for individual general permit coverage.

Check box 2 if applying for a permit with one or more co-permittees. If you are applying to be a co-permittee, an appropriate official representing each agency who will participate in the area-wide permit must sign on the lines provided certifying the agency will be a co-permittee with the other agencies listed to implement a storm water program in the combined designated areas of each of the agency's jurisdiction. The agency to act as the Lead Agency (the entity responsible for being the main contact with the RWQCB for permit administration) shall start the list. If more than four agencies will act as co-permittees, continue the list on a separate page. The NOI must have original signatures.

Check box 3 if designating a Separate Implementing Entity and enter agency information.

A. Enter the name of the agency applying for coverage.
B. Enter the first and last name of the person familiar with the permit and responsible for permit compliance.
C. Enter the title of person in "B".
D. Enter the agency's mailing address phone number where the contact person can be reached.
E. Enter if necessary the 2nd address line.
F. Enter the agency's mailing address city.
G. Enter the agency's mailing address zip code.
H. Enter the county in which the agency is located. If the agency is located in more than one county, list all applicable counties. Attach additional sheets if necessary.
I. Enter the phone number where the contact person can be reached.
J. Enter the FAX number where the contact person can be reached.
K. Enter the email address where the contact person can be reached.
L. Check the box that corresponds to the agency owner.
M. List all of the Minimum Control Measure(s) that will be implemented by the SIE.
N. Certification by an appropriate SIE official that the SIE agrees to include the agency in implementing the SWMP. For a municipality, State, Federal, or other public agency the appropriate official would be a principal executive officer, ranking elected official or duly authorized representative. 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 Administrator of USEPA).

For multiple agencies implementing different Minimum Control Measures please use a separate form for each Minimum Control Measures. A photocopy of the 2nd page of the NOI is adequate, but must have original signatures.

VII. STORM WATER MANAGEMENT PROGRAM

The SWMP must be submitted with the NOI. Check the box if the SWMP is completed and attached to the NOI. If a SIE is implementing all of the Minimum Control Measures it is not necessary to submit a SWMP.

VIII. CERTIFICATION

A. Print the name of the appropriate official. For a municipality, State, Federal, or other public agency this would be a principal executive officer, ranking elected official, or duly authorized representative. 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 Administrator of USEPA).
B. Enter the professional title of the person signing the NOI.
C. The person whose name is printed in box IV.A must sign the NOI.
D. Provide the date on which the Information Sheet was signed.

State Water Resources Control Board
NOTICE OF INTENT
TO COMPLY WITH THE TERMS OF THE GENERAL PERMIT FOR
STORM WATER DISCHARGES FROM
SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS
(WATER QUALITY ORDER NO. 2003 – 0005 - DWQ)

I. NOI Status

Mark Only One Item 1. [ ]New Permittee 2. [ ]Change of Information WDID #:_____

II. Agency Information

A. Agency			
B. Contact Person		C. Title	
D. Mailing Address		E. Address (Line 2)	
F. City	State **CA**	G. Zip	H. County
I. Phone	J. FAX	K. Email Address	
L. Operator Type (check one) 1. [ ] City 2. [ ] County 3. [ ] State 4. [ ] Federal 5. [ ] Special District 6. [ ] Government Combination			

III. Permit Area

_____

IV. Boundaries of Coverage (include a site map with the submittal)

_____

_____

_____

_____

V. Billing Information

A. Agency			
B. Contact Person		C. Title	
D. Mailing Address		E. Address (Line 2)	
F. City	State **CA**	G. Zip	H. County
I. Phone	J. FAX	K. Email Address	

Fees are based on the daily population served by the Small MS4. To determine your fee, consult the current fee schedule (California Code of Regulations, Title 23, Division 3, Chapter 9 Article 1), which can be viewed at www.swrcb.ca.gov/stormwtr/municipal.html.

L. Population_____

Fee _____

Check(s) should be made payable to the SWRCB and submitted to the appropriate RWQCB.

SWRCB Tax ID is: 68-0281986

VI. Discharger Information (check applicable box(es) and complete corresponding information)

1. [ ] Applying for Individual General Permit Coverage

2. [ ] Applying for a permit with one or more co-permittees

The undersigned agree to work as co-permittees in implementing a complete small MS4 storm water program. The program must comply with the requirements found in Title 40 of the Code of Federal Regulations, parts 122.32. Attach additional sheets if necessary. Each co-permittee must complete an NOI.	
Lead Agency	Signature
Agency	Signature
Agency	Signature
Agency	Signature

3. [ ] Separate Implementing Entity (SIE)

A. Agency			
B. Contact Person	C. Title		
D. Mailing Address	E. Address (Line 2)		
F. City	State **CA**	G. Zip	H. County
I. Phone	J. FAX	K. Email Address	

H. Operator Type (check one)

1. [ ] City 2. [ ] County 3. [ ] State 4. [ ] Federal 5. [ ] Special District 6. [ ] Government Combination

Minimum Control Measures being implemented by the SIE (check all that apply)

[ ] Public Education [ ] Public Involvement [ ] Illicit Discharge/Elimination
[ ] Construction [ ] Post Construction [ ] Good Housekeeping

"I agree to coordinate with the agency identified in Section III of this form and comply with its qualifying storm water program. 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, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. Additionally, I certify that the provisions of the permit, including the development and implementation of a Storm Water Management Program, will be complied with."

_____ _____

N. Signature of Official Date

VII. Storm Water Management Plan (check box)

[ ] As per section A.2. of this General Permit, the SWMP is attached.

VIII. 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, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. Additionally, I certify that the provisions of the permit, including the development and implementation of a Storm Water Management Program, will be complied with."

A. Printed Name:_____

B. Title:_____

C. Signature:_____ D. Date: _____

STATE WATER RESOURCES CONTROL BOARD

Division of Water Quality
Attention: Storm Water Section
P.O. Box 1977
Sacramento, CA 95812-1977
(916) 341-5539 FAX: (916) 341-5543
Web Page: http://www.swrcb.ca.gov/stormwtr/index.html
Email: stormwater@dwq.swrcb.ca.gov

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARDS

NORTH COAST REGION (1)
5550 Skylane Blvd., Ste. A
Santa Rosa, CA 95403
(707) 576-2220 FAX: (707) 523-0135
Web Page: http://www.swrcb.ca.gov/rwqcb1

SAN FRANCISCO BAY REGION (2)
1515 Clay Street, Ste. 1400
Oakland, CA 94612
(510) 622-2300 FAX: (510) 622-2460
Web Page: http://www.swrcb.ca.gov/rwqcb2

CENTRAL COAST REGION (3)
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401
(805) 549-3147 FAX: (805) 543-0397
Web Page: http://www.swrcb.ca.gov/rwqcb3

LOS ANGELES REGION (4)
320 W. 4th Street, Ste. 200
Los Angeles, CA 90013
(213) 576-6600 FAX: (213) 576-6640
Web Page: http://www.swrcb.ca.gov/rwqcb4

CENTRAL VALLEY REGION (5S)
3443 Routier Road, Ste. A
Sacramento, CA 95827-3098
(916) 255-3000 FAX: (916) 255-3015
Web Page: http:// www.swrcb.ca.gov/rwqcb5

FRESNO BRANCH OFFICE (5F)
1685 "E" Street
Fresno, CA 93706-2020
(559) 445-5116 FAX: (559) 445-5910
Web Page: http:// www.swrcb.ca.gov/rwqcb5

REDDING BRANCH OFFICE (5R)
415 Knollcrest Drive, Ste. 100
Redding, CA 96002
(530) 224-4845 FAX: (530) 224-4857
Web Page: http:// www.swrcb.ca.gov/rwqcb5

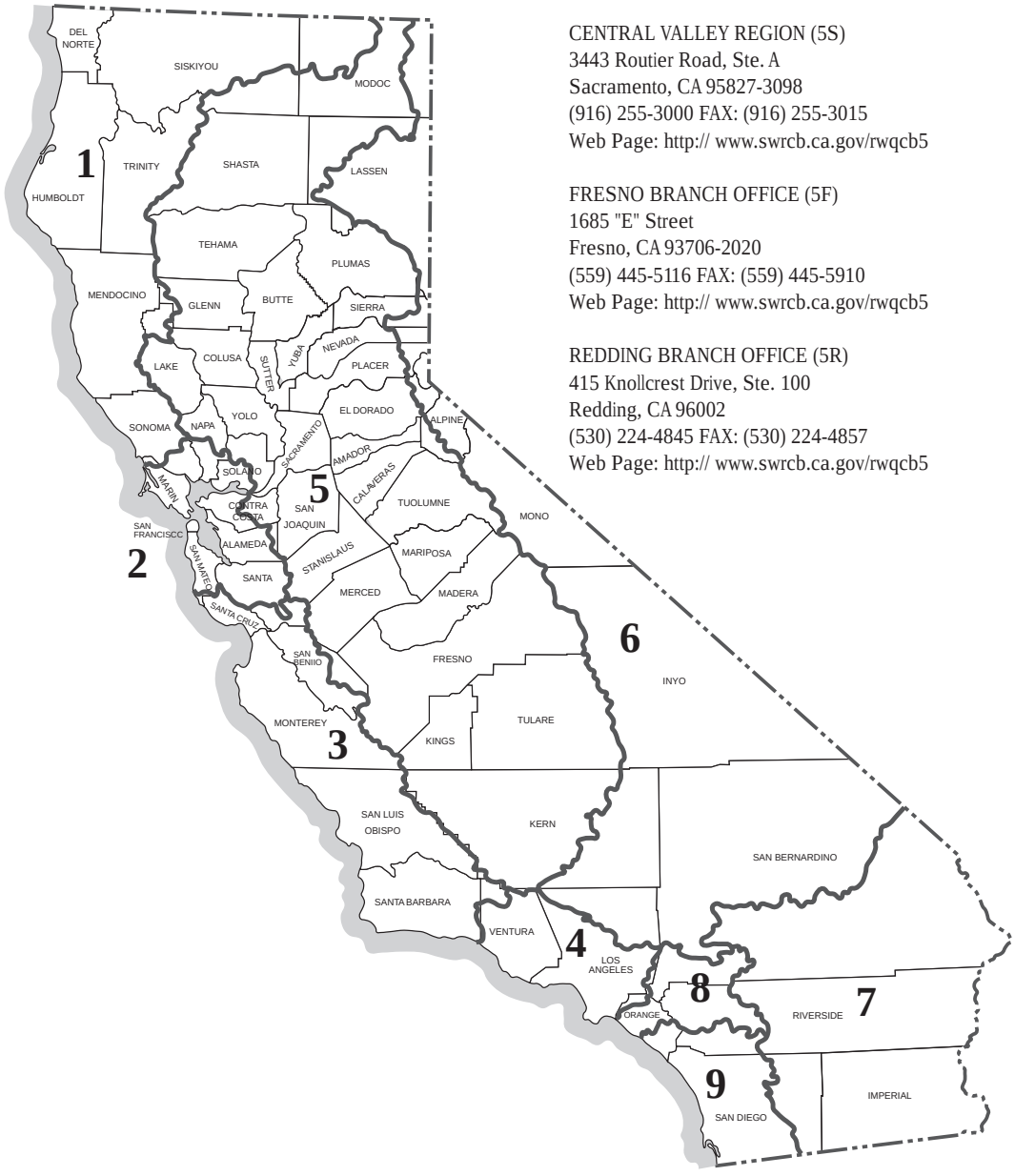
LAHONTAN REGION (6 SLT)
2501 Lake Tahoe Blvd.
South Lake Tahoe, CA 96150
(530) 542-5400 FAX: (530) 544-2271
Web Page: http:// www.swrcb.ca.gov/rwqcb6

VICTORVILLE BRANCH OFFICE (6V)
15428 Civic Drive, Ste. 100
Victorville, CA 92392-2383
(760) 241-6583 FAX: (760) 241-7308
Web Page: http:// www.swrcb.ca.gov/rwqcb6

COLORADO RIVER BASIN REGION (7)
73-720 Fred Waring Dr., Ste. 100
Palm Desert, CA 92260
(760) 346-7491 FAX: (760) 341-6820
Web Page: http:// www.swrcb.ca.gov/rwqcb7

SANTA ANA REGION (8)
California Tower
3737 Main Street, Ste. 500
Riverside, CA 92501-3339
(909) 782-4130 FAX: (909) 781-6288
Web Page: http://www.swrcb.ca.gov/rwqcb8

SAN DIEGO REGION (9)
9174 Sky Park Court, Suite 100
San Diego, CA 92123
(858) 467-2952 FAX: (858) 571-6972
Web Page: http://www.swrcb.ca.gov/rwqcb9



STATE OF CALIFORNIA
Gray Davis, Governor

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
Winston H. Hickox, Secretary

STATE WATER RESOURCES CONTROL BOARD
Arthur Baggett Jr., Chair

Attachment 9
To WQO 2003-0005-DWQ

Definition of Terms

1. **100,000 Square Foot Commercial Development** - 100,000 Square Foot Commercial Development means any commercial development that creates at least 100,000 square feet of impermeable area, including parking areas.

2. **Automotive Repair Shop** - Automotive Repair Shop means a facility that is categorized in any one of the following Standard Industrial Classification (SIC) codes: 5013, 5014, 5541, 7532-7534, or 7536-7539.

3. **Authorized Non-Storm Water Discharges** – Authorized non-storm water discharges are certain categories of discharges that are not composed entirely of storm water but are not found to pose a threat to water quality. They include: water line flushing; landscape irrigation; diverted stream flows; rising ground waters; uncontaminated ground water infiltration (as defined at 40 CFR §35.2005(20)) to separate storm sewers; uncontaminated pumped ground water; discharges from potable water sources; foundation drains; air conditioning condensate; irrigation water; springs; water from crawl space pumps; footing drains; lawn watering; individual residential car washing; flows from riparian habitats and wetlands; dechlorinated swimming pool discharges; and discharges or flows from emergency fire fighting activities. If any of the above authorized non-storm water discharges (except flows from fire fighting activities) are found to cause or contribute to an exceedance of water quality standards or cause or threaten to cause a condition of nuisance or pollution, the category of discharge must be prohibited.

4. **Best Management Practices (BMPs)** – Best management practices 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 requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. (40 CFR §122.2)

5. **Commercial Development** - Commercial Development means any development on private land that is not heavy industrial or residential. The category includes, but is not limited to: hospitals, laboratories and other medical facilities, educational institutions, recreational facilities, plant nurseries, multi-apartment buildings, car wash facilities, mini-malls and other business complexes, shopping malls, hotels, office buildings, public warehouses and other light industrial complexes.

6. **Directly Connected Impervious Area (DCIA)** - DCIA is the acronym for directly connected impervious areas and means the area covered by a building, impermeable pavement, and/ or other impervious surfaces, which drains directly into the storm drain without first flowing across permeable land area (e.g. lawns).

7. **Discretionary Project** - Discretionary Project means a project which requires the exercise of judgement or deliberation when the public agency or public body decides to approve or disapprove a particular activity, as distinguished from situations where the public agency or body merely has to determine whether there has been conformity with applicable statutes, ordinances, or regulations.

8. **Greater than (>) 9 unit home subdivision** - Greater than 9 unit home subdivision means any subdivision being developed for 10 or more single-family or multi-family dwelling units.

9. **Hillside** - Hillside means property located in an area with known erosive soil conditions, where the development contemplates grading on any natural slope that is twenty-five percent or greater.

10. **Infiltration** - Infiltration means the downward entry of water into the surface of the soil.

11. **Measurable Goal** – Measurable goals are definable tasks or accomplishments that are associated with implementing best management practices.

12. **Minimum Control Measure** – A minimum control measure is a storm water program area that must be addressed (best management practices implemented to accomplish the program goal) by all regulated Small MS4s. The following six minimum control measures are required to be addressed by the regulated Small MS4s: Public Education and Outreach on storm Water Impacts, Public Involvement/Participation, Illicit Discharge Detection and Elimination, construction Site Storm Water Runoff Control, Post-Construction Storm Water Management in New Development and Redevelopment, and Pollution Prevention/Good Housekeeping for Municipal Operations.

13. **New Development** - New Development means land disturbing activities; structural development, including construction or installation of a building or structure, creation of impervious surfaces; and land subdivision.

14. **Offsite Facility** - An offsite facility is a geographically non-adjacent or discontinuous site that serves, or is secondary to, the primary facility and has the same owner as the primary facility. Storm water discharges from an offsite facility must be permitted if it meets the definition of a regulated Small MS4 itself. The offsite facility may satisfy this permitting requirement if the SWMP of the primary facility addresses the offsite facility, such that the permitted area of the primary facility includes the offsite area.

15. **Outfall** – A point source at the point where a municipal separate storm sewer discharges to waters of the United States and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States. (40 CFR §122.26(b)(9))

16. **Parking Lot** - Parking Lot means land area or facility for the temporary parking or storage of motor vehicles used personally, for business or for commerce with a lot size of 5,000 square feet or more, or with 25 or more parking spaces.

17. **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 operation, landfill leachate collection system, 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. (40 CFR §122.2)

18. **Regulated Small MS4** – A regulated Small MS4 is a Small MS4 that is required to be permitted for discharging storm water through its MS4 to waters of the U.S. and is designated either automatically by the U.S. EPA because it is located within an urbanized area, or designated by the SWRCB or RWQCB in accordance with the designation criteria listed at Finding 11 of the General Permit.

19. **Redevelopment** - Redevelopment means, on an already developed site, the creation or addition of at least 5,000 square feet of impervious area. Redevelopment includes, but is not limited to: the expansion of a building footprint or addition of a structure; structural development including an increase in gross floor area and/ or exterior construction or remodeling; and land disturbing activities related with structural or impervious surfaces. 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 these Design Standards, the Design Standards apply only to the addition, and not to the entire development.

20. **Restaurant** - Restaurant means a stand-alone 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).

21. **Retail Gasoline Outlet** - Retail Gasoline Outlet means any facility engaged in selling gasoline and lubricating oils.

22. **Small Municipal Separate Storm Sewer System (Small 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) that are:
    (i) Owned or operated by the United States, a State, city, town, boroughs, 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) Not defined as "large" or "medium" municipal separate storm sewer systems
    (iii) This term includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings. (40 CFR §122.26(b)(16))

23. **Separate Implementing Entity (SIE)** – A Separate Implementing Entity is an entity, such as a municipality, agency, or special district, other than the entity in question, that implements parts or all of a storm water program for a Permittee. The SIE may also be permitted under 40 CFR Part 122. Arrangements of one entity implementing a program for another entity is subject to approval by the Regional Water Quality Control Board Executive Officer.

24. **Source Control BMP** - Source Control BMP means any schedules of activities, prohibitions of practices, maintenance procedures, managerial practices or operational practices that aim to prevent storm water pollution by reducing the potential for contamination at the source of pollution.

25. **Storm Event** - Storm Event means a rainfall event that produces more than 0.1 inch of precipitation and that, which is separated from the previous storm event by at least 72 hours of dry weather.

26. **Structural BMP** - Structural BMP means any structural facility designed and constructed to mitigate the adverse impacts of storm water and urban runoff pollution (e.g. canopy, structural enclosure). The category may include both Treatment Control BMPs and Source Control BMPs.

27. **Treatment** - Treatment means the application of engineered systems that use physical, chemical, or biological processes to remove pollutants. Such processes include, but are not limited to, filtration, gravity settling, media adsorption, biodegradation, biological uptake, chemical oxidation and UV radiation.

28. **Treatment Control BMP** - Treatment Control BMP means any engineered system designed to remove pollutants by simple gravity settling of particulate pollutants, filtration, biological uptake, media adsorption or any other physical, biological, or chemical process.

APPENDIX B

SAN DIEGO RWQCB CORRESPONDENCES

Linda S. Adams
Secretary for
Environmental Protection

California Regional Water Quality Control Board

San Diego Region

Over 50 Years Serving San Diego, Orange, and Riverside Counties
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Arnold Schwarzenegger
Governor

9174 Sky Park Court, Suite 100, San Diego, California 92123-4353
(858) 467-2952 • Fax (858) 571-6972
http:// www.waterboards.ca.gov/sandiego

October 15, 2007

In reply refer to:
CWU:10-3029152:peurp

Gary Reist
Chief Plant Operations
Del Mar Fairgrounds
22nd District Agricultural Association
2260 Jimmy Durante Boulevard
Del Mar, CA 92014-2216

SUBJECT: Enrollment of the Del Mar Fairgrounds and Horsepark Under National Pollutant Discharge Elimination System (NPDES) Permit No. CA000004, Waste Discharge Requirements (WDRs) for Storm Water Discharges From Small Municipal Separate Storm Water Systems (MS4s)

Recently (on October 2, 2007) during a meeting that was held between the San Diego Regional Water Quality Control Board (Regional Board) and the 22nd District Agricultural Association (District) you stated your interest enrolling the Del Mar Fairgrounds and Horsepark under the General Permit for Small Municipal Separate Storm Water Systems (Phase II Permit). This letter is written to provide further direction on actions that should be taken in order to enroll. Please note that enrollment under the Phase II Permit will apply to requirements dealing with storm water issues, while waste discharge issues pertaining to confined animals at your facilities must be handled through a Confined Animal Feeding Operation (CAFO) permit that must be applied for separately. Please consult with Whitney Ghoram of the Southern Core Regulatory Unit of the Regional Board regarding CAFO requirements.

The following steps should be taken to apply for coverage under the Phase II Permit.

1. A completed Notice of Intent (NOI) must be submitted to the Regional Board (NOI form attached).

2. A fee must be paid to the State Water Resources Control Board. The appropriate fee, which is based on the daily population present at your facilities, can be determined by consulting the fee schedule in the California Code of Regulations, Title 23, Division 3, Waste Discharge Reports and Requirements, Article 1. Fees. The fee schedule can be accessed at www.swrcb.ca.gov/stormwtr/municipal.html.

3. A Storm Water Management Plan (SWMP) must be submitted to the Regional Board. The SWMP must be prepared in accordance with Section D of the Phase II Permit. The SWMP must be approved by the Regional Board prior to Permit coverage being in effect.

Please contact me at (858) 637-7137 or ppeuron@waterboards.ca.gov if you have any questions concerning this matter.

The heading portion of this letter includes a Regional Board code number noted after "In reply refer to:" In order to assist us in the processing of your correspondence please include this code number in the heading or subject line portion of all correspondence and reports to the Regional Board pertaining to this matter.

Sincerely,

Peter Peuron

Peter Peuron
Environmental Scientist

Pmp :cmc :pmp

Attachment: Notice of Intent

cc: Joe Kuhn, Fuscoe Engineering, 6390 Greenwich Dr., # 170, San Diego, CA 92122

State Water Resources Control Board
NOTICE OF INTENT
TO COMPLY WITH THE TERMS OF THE GENERAL PERMIT FOR
STORM WATER DISCHARGES FROM
SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS
(WATER QUALITY ORDER NO. 2003 – 0005 - DWQ)

I. NOI Status

Mark Only One Item 1. [ ]New Permittee 2. [ ]Change of Information WDID #:_____

II. Agency Information

A. Agency			
B. Contact Person		C. Title	
D. Mailing Address		E. Address (Line 2)	
F. City	State **CA**	G. Zip	H. County
I. Phone	J. FAX	K. Email Address	
L. Operator Type (check one) 1. [ ] City 2. [ ] County 3. [ ] State 4. [ ] Federal 5. [ ] Special District 6. [ ] Government Combination			

III. Permit Area

_____

IV. Boundaries of Coverage (include a site map with the submittal)

_____

_____

_____

_____

V. Billing Information

A. Agency			
B. Contact Person		C. Title	
D. Mailing Address		E. Address (Line 2)	
F. City	State **CA**	G. Zip	H. County
I. Phone	J. FAX	K. Email Address	

Fees are based on the daily population served by the Small MS4. To determine your fee, consult the current fee schedule (California Code of Regulations, Title 23, Division 3, Chapter 9 Article 1), which can be viewed at www.swrcb.ca.gov/stormwtr/municipal.html.

L. Population_____

Fee _____

Check(s) should be made payable to the SWRCB and submitted to the appropriate RWQCB.

SWRCB Tax ID is: 68-0281986

VI. Discharger Information (check applicable box(es) and complete corresponding information)

1. [ ] Applying for Individual General Permit Coverage

2. [ ] Applying for a permit with one or more co-permittees

The undersigned agree to work as co-permittees in implementing a complete small MS4 storm water program. The program must comply with the requirements found in Title 40 of the Code of Federal Regulations, parts 122.32. Attach additional sheets if necessary. Each co-permittee must complete an NOI.	
Lead Agency	Signature
Agency	Signature
Agency	Signature
Agency	Signature

3. [ ] Separate Implementing Entity (SIE)

A. Agency			
B. Contact Person		C. Title	
D. Mailing Address		E. Address (Line 2)	
F. City	State **CA**	G. Zip	H. County
I. Phone	J. FAX	K. Email Address	

H. Operator Type (check one)

1. [ ] City 2. [ ] County 3. [ ] State 4. [ ] Federal 5. [ ] Special District 6. [ ] Government Combination

Minimum Control Measures being implemented by the SIE (check all that apply)

[ ] Public Education [ ] Public Involvement [ ] Illicit Discharge/Elimination
[ ] Construction [ ] Post Construction [ ] Good Housekeeping

"I agree to coordinate with the agency identified in Section III of this form and comply with its qualifying storm water program. 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, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. Additionally, I certify that the provisions of the permit, including the development and implementation of a Storm Water Management Program, will be complied with."

N. Signature of Official _____ Date _____

VII. Storm Water Management Plan (check box)

[ ] As per section A.2. of this General Permit, the SWMP is attached.

VIII. 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, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. Additionally, I certify that the provisions of the permit, including the development and implementation of a Storm Water Management Program, will be complied with."

A. Printed Name: _____

B. Title: _____

C. Signature: _____ D. Date: _____

California Regional Water Quality Control Board

San Diego Region

Over 50 Years Serving San Diego, Orange, and Riverside Counties

Recipient of the 2004 Environmental Award for Outstanding Achievement from USEPA

Matt Rodriquez
Acting Secretary for Environmental Protection

Edmund G. Brown, Jr.
Governor

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(858) 467-2952 • Fax (858) 571-6972
http:// www.waterboards.ca.gov/sandiego

July 15, 2011

In reply refer to:
CWSU:219452:jcraft

Gary Reist
Chief Plant Operations
2260 Jimmy Durante Boulevard
Del Mar, CA 92014-2216

SUBJECT: Storm Water Management Plan (SWMP) Dated October 2008 Submitted Pursuant to General Permit No. CAS000004, Waste Discharge Requirements (WDRs) for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) by the 22nd District Agricultural Association (WDID No. 9 37S001942)

Dear Mr. Reist:

On January 9, 2009, the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) received an application for coverage under the Phase II Permit for Small MS4s (Phase II Storm Water Permit) from the 22nd District Agricultural Association (22nd DAA). The application and SWMP was submitted in response to our October 15, 2007 letter designating the 22nd DAA as a Phase II MS4. The Phase II Storm Water Permit will cover the Del Mar Fairgrounds located at 2260 Jimmy Durante Boulevard and the Del Mar Horse Park located at 14550 El Camino Real in San Diego County.

The Del Mar Fairgrounds and Del Mar Horse Park are located adjacent to and discharge to an environmentally sensitive area, the San Dieguito River Estuary. In addition, these facilities discharge to the San Dieguito Lagoon Mouth which is a Clean Water Act Section 303(d)-listed waterbody impaired by bacteria. The Del Mar Fairgrounds and Del Mar Horse Park are also surrounded by the cities of Del Mar, Solana Beach and San Diego, all of which are already enrolled as Copermittees in the San Diego County Municipal Storm Water Permit (a Phase I Storm Water Permit). This Phase I Storm Water Permit specifies minimum requirements for monitoring, Low Impact Development, Hydromodification, source control Best Management Practices (BMPs), and treatment controls BMPs to protect and restore surface water quality. Since the facilities are located within an environmentally sensitive area, to prevent further degradation of the San Dieguito Lagoon Mouth, and to be consistent with the other MS4s in the area, it is appropriate that 22nd DAA's SWMP meet some of the Phase I Storm Water Permit requirements.

The San Diego Water Board reviewed the SWMP and met with the 22nd DAA On May 17, 2011 to discuss comments and needed revisions to the SWMP. To meet the

requirements of the Phase II Storm Water Permit and protect water quality, the 22nd DAA agreed to revise the SWMP to address the following comments. Additional, more specific comments are provided in Enclosure 1.

Monitoring Program

1. In order to inform the effectiveness of the iterative process, the SWMP shall include a monitoring framework that characterize effluents at the outfalls, and receiving waters, and incorporates the following:

    a. Dry Weather Monitoring – shall select dry weather field screening and analytical monitoring stations within its jurisdiction to detect and eliminate illicit discharges to the MS4. Stations should be selected to ensure adequate coverage of the entire MS4 system;
    b. Wet Weather Monitoring – include proposed locations for collecting and analyzing water samples at 22nd DAA. The SWMP shall propose appropriate chemical and physical parameters to be analyzed;
    c. Develop benchmark concentration levels for dry weather field screening and analytical monitoring results whereby exceedance of the benchmark will require follow-up investigations to be conducted to identify and eliminate the source causing the exceedance of the benchmark.[1]

Dry Weather Discharge Prohibition

2. The San Diego Water Board has determined that discharges from landscape irrigation, irrigation water, and lawn watering are a significant source of pollution to waters of the U.S., and shall therefore be prohibited from discharging into and from the MS4. The SWMP must address these three prohibited discharges through a program, and any necessary ordinance or regulations. Other categories of authorized non-storm water discharges are also prohibited that cause or contribute pollutants into and from the MS4.

Construction Site Runoff Control

3. State and enforce an environmental policy that controls runoff from all construction sites on 22nd DAA property and stated language in subcontractor agreements for managing runoff from construction related activities.

4. Enforce measures that will be implemented to assure that adequate sediment and erosion controls are implemented and maintained, including a schedule for periodic inspection and maintenance of construction BMPs.

---

[1] EPA MS4 Permit Improvement Guide, April 2010

Post Construction Site Runoff Control

5. Any new development should be designed to conform to the storm water treatment standards listed in the County of San Diego Standard Urban Storm Water Mitigation Plan (SUSMP) including:

    a. Hydromodification Management Plan (HMP) requirements, where applicable;
    b. Low Impact Development (LID) requirements that must be observed at Priority Development Project and redevelopment project sites as described in section D.1.d of Order No. R9-2007-0001;
    c. Measures that will be implemented to assure that post-construction BMPs will be properly inventoried, monitored, and maintained, including a schedule for maintenance and agreements that include provisions for periodic inspection of BMPs.

Program Effectiveness Assessment

6. The SWMP shall clearly indicate how records are maintained for site inspections, procedures, training of personal and any other quantitative assessment as measurable goals. The SWMP shall track this assessment and report on this, along with the effectiveness assessment, in the Annual Reports.

Confined Animal Feeding Operations

7. Under separate coverage, the 22nd DAA has provided a Report of Waste Discharge for on-site activities related to Confined Animal Feeding Operations (CAFO). Until further guidance is provided with regards to regulating CAFO activities, the San Diego Water Board intends to regulate the 22nd DAA's CAFO activities through Phase II coverage by incorporating the required Nutrient Management Plan into the 22nd DAA's SWMP.

Industrial and Construction Sites

8. Select portions of the 22nd DAA facilities are also currently subject to regulation through the Industrial Storm Water General Permit Order 97-03-DWQ [2] (ISP). Upon obtaining Phase II coverage, the 22nd DAA should revise their ISP coverage to only reflect those areas with SIC codes triggering ISP coverage. Construction activities that exceed one acre of disturbed soil will still be subject to Statewide General

[2] http://www.waterboards.ca.gov/water_issues/programs/stormwater/industrial.shtml

Construction Storm Water Permit Order No. 2009-0009-DWQ requirements[3]. All of these activities, and compliance with their respective requirements, and discharges from other activities on 22nd DAA property, will be overseen through the umbrella of the Phase II SWMP.

Please submit the revised SWMP **prior to August 8, 2011.** For questions pertaining to this subject matter, please contact me (858) 467-2359, email at CClemente@waterboards.ca.gov or James Craft at (858) 467-2979, email at jcraft@waterboards.ca.gov.

The heading portion of this letter includes a San Diego Water Board code number noted after "In reply refer to:" In order to assist us in the processing of your correspondence please include this code number in the heading or subject line portion of all correspondence and reports to the San Diego Water Board pertaining to this matter.

Sincerely,

James G. Smith
Assistant Executive Officer

Enclosure 1: Specific Comments for 22nd DAA SWMP Revisions

[3] http://www.waterboards.ca.gov/water_issues/programs/stormwater/

Revisions Needed and Comments for SWMP - Del Mar Fairgrounds/ HorsePark Oct 2008			
No.	Section Reference	Issue	Recommendation
1	1.1, Para 2	Nothern street reference: Villa de la Valle	Correct street name is Via De La Valle. Recommend changing all references to this street name with the correct street name.
2	Section 1.1, Page 4, Del Mar Fairground section last paragraph	Discussion on permit coverage for Horse Park tells reader to "See Exhibit 2 for delineation of permit coverage areas."	Exhibit 2 is for the Fairgrounds and Exhibit 3 is for Horse Park. Quoted text needs to refer reader to Exhibit 3 for the Horsepark Map. Only Exhibit 2 shows the delineation of CAFO and Phase II coverage.
3	1.2.2, last sentence	Reference made to a letter from SD RWQCB issuing further guidance direction on actions that should be taken in order to enroll. "This letter is located in Appendix B."	The letter is not found in Appendix B. Add letter to the Appendix B
4	1.3.1	"More specifically, persons within the operations department will implement and execute the MCMs and BMPs prescribed within this SWMP, when applicable."	To really be specific, the SWMP needs to list a table of departments and/or individual positions identified as responsible for each part of the SWMP. List names, titles, departments and phone numbers of the people who manage this SWMP and incorporate into this section.
5	1.3.5, last sentence	No reference to Figure 1 which is the diagram refered to in section "The following diagram outlines this process framework."	Adjust sentence to read: "The following diagram, Figure 1, outlines this process framework."
6	1.3.7	"Results of information collected and analyzed, if any, including monitoring data;"	The SWMP must have a monitoring plan for the Fairgrounds. Include a detailed monitoring plan that characterizes outfalls, effluent and receiving water quality in order to determine the effectiveness of measurable goals.
7	2.1, last sentence	No reference to Table 4.	Suggest changing sentence to, "Proper storm water management protocols for these areas are are shown in Table 4."
8	2.3, last sentence	No reference to Table 6.	Suggest changing sentence to, "Proper storm water management protocols for these areas are are shown in Table 6."
9	2.9, paragraph after Table 9	No reference to Table 10.	Include Table 10 in the disscusion about the 303(d) impaired water body.
10	4.1.1.	"It will consist of all pertinent and new information regarding environmental/storm water issues on the Fairgrounds site,"...site or website?	Stay consistent when refering to the Fairgrounds website as it is mentioned in the table Minimum Control Measure #1: Public Education and Outreach.
11	End of 4.1	No reference to Figure 2	Incorporate referencing Figure 2 in Section 4 discussion.
12	End of 4.1	No Table reference to Minimum Control Measure #1: Public Education and Outreach	Suggest referencing the table with a number and how information in Section 4 is explained in more detail in this table titled Minimum Control Measure #1: Public Education and Outreach.
13	End of 4.1	No Table reference to Minimum Control Measure #1: Public Education and Outreach	The word "Option" is misleading in this table. The "Option a" refers to the letter outline a,b, and c in section 4.1.1. Remove the word "Option a", "Option b", and "Option c" from the category title in the table and just list as "a", "b", "c".
14	Section 4.2	Public Invovlement	It is recommended that public participation information also be distributed to citizen's groups that are already involved in promoting environmental awareness. The SWMP should be revised to indicate that groups such as the San Dieguito River Valley Conservancy, the Friends of the San Dieguito River Valley, the San Dieguito Lagoon Preservation Committee, San Dieguito River Valley Park and San Diego Coast Keeper are also notified regarding the 22nd DAA's efforts to promote involvement in environmental issues in the San Dieguito River/Lagoon.
15	General Comment	Include the newsletter, flyer and "Reader Board" displays in the Annual Report	Evaluates the effectivness of the program.
16	4.3	Documenting illicit discharges	The SWMP should indicate that all investigations of illicit discharges will be documented and all such investigations will be summarized in Annual Reports.
17	4.3.3, page 46	Non-Storm Water Discharge Prevention - it is indicated that, " 22nd DAA security staff monitors the site continuously for illegal behavior. If they see anyone dumping or illegally washing, action will be taken."	The SWMP should include a description of training that will be provided to staff members to ensure that they are aware of what discharges are prohibited. The training should also include 1) A discussion of the sensitivity of the environment surrounding the Fairgrounds and Horse Park. 2) Specific actions that they should take when encountering a non-storm water discharge.

18	4.3.6	"There are currently no non-storm water discharges or flows that have been identified or listed by the San Diego RWQCB as a significant source of pollutants to waters of the U.S..."	San Diego RWQCB Executive Officer prohibits discharges from landscape irrigation, irrigation water, and lawn watering into waters of the U.S. as these are considered a significant source of pollution. SWMP must address these three discharges and demonstrate through program or ordinance, which it does on page 65, Section 4.5.1, h. Employ Efficient Irrigation Systems.
19	4.4.3, page 55	It is indicated that, "a minimum inspection frequency (i.e., once per month) will be established for active construction sites during the rainy season."	Please note that the San Diego Municipal Storm Water Permit requires that construction sites that discharge into 303(d) listed water bodies or are near environmentally sensitive areas be inspected by the municipality on a biweekly basis during the rainy season. This same criterion should be applied in the SWMP. The number of inspections should be reported in Annual Reports.
20	4.5	No reference to table titled Near-Term** Projects -Potential Treatment Control BMPs	How current are the projects listed in this table? What is the current Master Plan for these upcoming projects? Update table with current Master Plan project and give table a number and reference it in the discussion.
21	4.5	Future Project Atmosphere - On Page 61, it is indicated that, "Future projects which are being considered for development contain preliminary plans for post-construction BMPs, as specified in the Master Plan EIR prepared for the Del Mar Fairgrounds site. All future Post Construction Water Quality Design will follow the guidance set forth in this EIR."	The guidance being referred to must conform to the Phase II Storm Water Permit and therefore, this guidance should be presented in this SWMP. The revised SWMP should include this guidance.
22	4.5.1	In section 4.5.1, design standards for post-construction BMPs are discussed. The "pollutants of concern" to be addressed by these BMPs are defined as 303(d)-listed pollutants in downstream water (i.e., indicator bacteria which causes the impairment of the San Dieguito Lagoon Mouth).	It is not appropriate to limit "pollutants of concern" to indicator bacteria. Note that the San Diego County Municipal Permit directs Co-permittees to, "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." The SWMP should be revised to include a procedure for identifying pollutants of concern based on this protocol.
23	Page 71-?	Page number and section missing in footer from page 71 until page 84.	List the page number and section as done on previous pages.
24	4.6.3.1	It is indicated that street sweeping will be conducted as needed and "at least once per year."	The San Diego County Municipal Permit (section D.3.a.(5) requires street sweeping to be conducted at least twice per year in high trash volume areas, at least once per month for moderate trash volume areas and at least yearly for low trash volume areas. The SWMP should be revised to address the sweeping criteria of the Phase I Municipal Permit.
25	4.6.7	In section 4.6.7 of the SWMP, there is a discussion of open channel maintenance.	A statement should be included in this section to the effect that appropriate permits will be obtained, as necessary, when such maintenance activities involve waters of the U.S. and/or waters of the State. The SWMP should also specifically point out that future maintenance dredging of Stevens Creek must be performed under a 401 Permit and 401 certification by the Regional Board.
26	4.6.7	It is indicated on Page 82 again in section 4.6.7) that "Catch basins observed to exceed the one-third depth standard should be cleaned more frequently."	In order to be consistent with the San Diego County Municipal Permit (i.e., section D.3.a.(3) (b)), this statement should indicate that catch basins observed to contain trash in excess of one-third of their capacity should be cleaned up as soon as possible.
27	Minimum Control Measure #3 - Non Storm water discharge prevention	In the task description for BMP Non-Storm Water Discharge Prevention, "N/A" is listed but has a task defined.	Why is N/A listed in description?
28	Appendix D	Review forms from this 2008 SWMP version.	Are forms still applicable and relevant since 2008?
29	EXHIBIT 6	SAN DIEGUITO SUBWATERSHED MAP	Map is not referenced in the document. Why include the map if not used?
30	Exhibit 4	Map should be updated to include the Arena Roof in Basin 11 and Basin 12 to properly reflect drainage from the south west side to Basin 11 and the north east side to Basin 12.	

City of Del Mar

October 18, 2011
Via e-mail

Chiara Clemente, Senior Environmental Specialist
California Regional Water Quality Control Board
San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4340

City of Del Mar Comments on 22nd District Agricultural Association (22nd DAA) Small Municipal Separate Storm Sewer System (MS4) Phase II Storm Water Management Plan (SWMP) for Del Mar Fairgrounds and Horse Park

Dear Ms. Clemente:

The City of Del Mar (City) appreciates the opportunity to provide comments on the 22nd District Agricultural Association (22nd DAA) Small Municipal Separate Storm Sewer System (MS4) Phase II Storm Water Management Plan (SWMP) for Del Mar Fairgrounds and Horse Park. The City understands the implications of this SWMP to our local waterbodies and looks forward to cooperating with the 22nd DAA to protect water quality in our City.

The SWMP as prepared by the 22nd DAA lists standard Best Management Practices (BMPs) that are to be employed for use as part of the Minimum Control Measures (MCMs) required by the Municipal Phase II Permit. The City has concerns about the approaches taken in the proposed SWMP. As such, the City is submitting the following comments for consideration by the Regional Board and its staff.

1. Per the proposed SWMP, "The 22nd DAA will provide written information included with promoter and vendor contracts regarding event functions. This written information will be in the form of a flyer and will include pertinent information regarding the impacts of storm water discharge on local water bodies, such as the San Dieguito River and the Pacific Ocean, as well as methods the vendors and promoters can take to reduce pollutants in storm water runoff" (p.39, §4.2.1). Historically, vendors and participants in major events hosted on properties controlled by the 22nd DAA (i.e. the San Diego County Fair and Del Mar Horse Racing Season) have been a major source of trash and pollutants that impacts the City and San Dieguito River. The City finds the proposed written materials (flyer) described to be insufficient and suggests additional controls and potential sanctions be specified for vendors to limit pollutants from entering the receiving waters. Within the City of Del Mar, such controls and enforcement measures typically include, but are not limited to:

    a. Providing additional trash receptacles in high pedestrian traffic areas used by vendors and promoters
    b. Covering and cleaning out litter receptacles frequently to prevent spillage
    c. Providing accessible spill kits
    d. Posting "No Littering" signs and enforcing anti-litter rules and regulations
    e. Routinely inspecting high traffic areas for trash and other potential pollutants

2. The measurable goals for compliance with the Public Education and Outreach and the Public Involvement/Participation components (pp.42-45, 49 Tables MCM #1 and MCM #2) are inadequate to fully implement the program as intended to lead to the best possible result. In order to produce measurable goals for MCM #1 (Public Education and Outreach) and MCM #2 (Public Involvement/Participation), the City suggests the SWMP establish targeted outcomes for the number of public activities such as clean-up events or quantifying trash collection; these examples would lead to a quantifiable load reduction in addition to estimating the effectiveness of impressions made using educational outreach materials.

3. The City of Del Mar has an active Standard Urban Stormwater Mitigation Plan (SUSMP). The most up to date version became effective on January 14, 2011. The City suggests the 22nd DAA reference and utilize the local City of Del Mar SUSMP in the SWMP and not the Regional Model SUSMP as proposed. Per the SWMP, "the Del Mar Fairgrounds property will implement all applicable requirements in the County of San Diego Model Standard Urban Storm Water Mitigation Plan (SUSMP), approved for San Diego Region Phase I MS4 permittees on January 2011" (p.64, §4.5). The Regional Model SUSMP is a model for which local agencies, including the City of Del Mar, used to develop local SUSMPs.

   Additionally, it is unclear that the 22nd DAA intends to utilize the SUSMP as criteria for developing Priority Development Projects (PDPs). The City recommends the prioritization process (e.g. SUSMP PDP criteria) for development projects should be explicitly stated in the SWMP.

4. The City recommends additional language be added or modified for the BMPs listed in the Pollution Prevention/Good Housekeeping for Onsite Operations component in the SWMP (pp.74-86, §4.6). These recommended changes are based on the BMP application standards, such as those presented in the California Stormwater Quality Association (CASQA) BMP Sheets:

   a. Herbicide and pesticide should not be applied within 24 hours of forecasted precipitation. Herbicide and pesticide use should also be limited during high winds (§4.6.2.3)
   b. Concrete washout areas should be contained in a bermed area using visqueen or plastic sheeting (§4.6.3.2)
   c. Concrete dust and debris with the potential to enter the MS4 and the receiving waters must be cleaned to the maximum extent practicable (§4.6.4)
   d. Water from power washing activities should not be allowed to enter the MS4 and be collected using a wet vacuum and properly disposed (§4.6.4)

5. The City supports the Municipal Phase II Permit "Hotspot" requirements:
   "Quarterly Hotspot comprehensive inspections – At least once per quarter, a comprehensive inspection of hotspot facilities, including all storm water BMPs, shall be performed, with specific attention paid to the following, but not limited to waste storage areas, dumpsters, vehicle and equipment maintenance/fueling areas, material handling areas, and similar potential pollutant-generating areas. The quarterly inspection results shall be documented and records kept with the SWPPP. This inspection shall be performed in accordance with the developed standard operating procedures. The inspection report shall also include any identified deficiencies and the corrective actions taken to correct deficiencies" (pp.48-49, §E.9.e).

Per the proposed SWMP, "Vehicle maintenance facilities are considered storm water 'hot-spots' where significant amounts of hydrocarbons, heavy metals, and other toxic pollutants can be produced and impact the quality of storm water runoff" (p.82, §4.6.5.1). Further the SWMP states that, "Inspections will be performed annually to ensure proper procedures are employed to prevent storm water runoff pollution" (p.83, §4.6.5.1).

The SWMP is not meeting the requirements of the Phase II Permit by performing less than quarterly inspections of designated "hotspots." Additionally, the 22nd DAA facilities and activities are tributary to a waterbody that is impaired (via 303(d) listing) for indicator bacteria. The City suggests the SWMP designate all areas and activities related to potential bacteria generation as "hotspots."

6. Per the proposed SWMP, the 22nd DAA is obligated to, "submit and implement a Sewer System Management Plan (SSMP)." The primary goal of this SSMP is to provide a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer system and identify individual goals related SSMP implementation" (p.11, §1.3.3.III). A Memorandum of Understanding (MOU) has been developed between the City and the 22nd DAA where the sanitary sewer from the portion of the Fairgrounds located west and north of Jimmy Durante Boulevard discharges to the sanitary sewer system operated by the City of Del Mar Public Works.

   Inputs from the 22nd DAA sanitary sewer have the potential to clog the sewer system without proper maintenance and BMPs to prevent fats, oils, and grease (FOG) from entering the sanitary sewer. These clogs can result in sanitary sewer overflows (SSOs) that have the potential to impact the City and receiving waters. The City recommends the SWMP address BMPs to prevent FOG and other materials with the potential to cause SSOs from entering the sanitary sewer system.

7. Additional items that are issues related to the Del Mar Fairgrounds and Horse Park are not discussed in the SWMP, particularly in the Pollution Prevention/Good Housekeeping for Onsite Operations (§4.6). These include the following:

   a. The proposed SWMP outlines the existing operations for concentrated animal feeding operations (CAFO) activities. Similar to the existing CAFO Site Operations (§2.0) and BMPs discussed regarding the Del Mar Thoroughbred Club, San Diego County Fair, and Del Mar Arena, the SWMP should address activities and BMPs with the potential to discharge bacteria from the Horse Park property (designated a non-CAFO area in the SWMP). This includes, but is not limited to, the following areas and activities:

      i. **Manure Management**: The appropriate management of manure and other fecal matter from animals needs to be addressed. Manure has the potential to elevate bacteria levels in the receiving waters if allowed to be discharged from the property. The SWMP must specify effective BMPs for containing the pollutants associated with manure. The City recognizes that the portion of the Del Mar Fairgrounds that houses animals is classified as a "CAFO production area" and thus is subject to coverage by the industrial permit. Per the SWMP, this designation does not apply to the Horse Park, and some language regarding the manure management should be included in the document.

With its close proximity to the San Dieguito River, the Horse Park is a high risk area with the potential to discharge to a waterbody that is impaired for indicator bacteria. The SWMP does not adequately specify BMPs for addressing manure management in this area. Moreover, the SWMP shows no dry weather flow controls for the Horse Park Swale, a surface storm drain conveyance that discharges directly into the San Dieguito River (p.95, Table 14). The City suggests adding language to address the management of manure at the Horse Park year round.

ii. **Hay and Feed Management**: Stockpiles of hay and other types of animal feed also have the potential to discharge pollutants to the MS4 and receiving waters, including deliveries received for feed and other materials. Hay has the potential to clog portions of the MS4, leading to water ponding in the storm drain system and creating ideal conditions for bacteria growth. The City suggests some language be added to the SWMP to discuss BMPs for hay and feed stockpiles and usage.

iii. **Horse Wash Racks**: The City recommends additional language be included in the SWMP to include details on wash rack BMPs, especially due to the high potential to discharge bacteria to the receiving waters. The proximity of the Horse Park property to the San Dieguito River should require controls be in place during such activities. The City suggests the SWMP designate the locations and procedures where washing will occur on the Horse Park property. For all 22nd DAA properties, animal washing should be confined to areas appropriately protected with BMPs. These activities should not be permitted in other informal areas that are not designated in the SWMP and inadequately protected without appropriate BMPs.

b. **Pervious Parking Lots**: Pervious parking lots on the 22nd DAA properties have the potential to discharge pollutants including sediment, heavy metals, and hydrocarbons. The City suggests some discussion should be required in the SWMP in order to outline BMPs to control these areas. Significant amounts of dust have been a persistent issue from these dirt lots during the dry season, specifically from vehicular traffic and winds. Vehicles also track sediment onto Jimmy Durante Blvd when the lots are in use. The proposed SWMP should identify BMPs to address all of these issues related to pollutants from the pervious lots.

c. **Materials Delivery**: Delivery areas on the 22nd DAA properties have the potential to discharge pollutants including sediment, trash, heavy metals, and oil and grease. Vehicular traffic to and from the properties occurs year round and at different site locations. The City recommends some discussion be required in the SWMP outlining controls for materials delivery, where BMPs are identified to address all potential pollutants related to the activity.

If you should have any questions regarding these comments please contact me directly at (619) 994-7074, or by email at mikhail@mogawaeng.com.

Sincerely,

Mikhail Ogawa
Clean Water Manager
City of Del Mar

cc: City Council, City of Del Mar
Mark Ochenduszko, Interim City Manager
Kathleen Garcia, Planning and Community Development Director

22ND DISTRICT AGRICULTURAL ASSOCIATION
State of California

RESPONSE TO COMMENTS CWSU: 219452:jcraft

January 27, 2012

Chiara Clemente, Senior Environmental Specialist
California Regional Water Quality Control Board
San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4340

Response to City of Del Mar Comments on 22nd District Agricultural Association (22nd DAA) Small Municipal Separate Storm Sewer System (MS4) Phase II Storm Water Management Plan (SWMP) for Del Mar Fairgrounds and Horse Park

Dear Ms. Clemente:

In response to City of Del Mar Comments received regarding the 22nd District Agricultural Association (22nd DAA) Small Municipal Separate Storm Sewer System (MS4) Phase II Storm Water Management Plan (SWMP) for Del Mar Fairgrounds and Horse Park, dated October 18, 2011, this letter was developed to address those comments therein.

Comment#1:
"...*The City Finds the proposed written materials (flyer) described to be insufficient and suggests additional controls and potential sanctions be specified for vendors to limit pollutants from entering receiving waters...*"

Response:
Comment noted. The methods that the City recommends for the 22nd DAA, such as providing additional trash receptacles during vendor and promoter events, providing accessible spill kits, posting "No Littering" signs, and inspecting high traffic areas for trash and other pollutants is an existing policy implemented at the Fairgrounds as part of standard operating procedures. The 22nd DAA strives to maintain a litter free environment at all times, and litter control is enhanced in accordance to the magnitude of the events scheduled. Overall, the 22nd DAA diverts over 90% of the solid waste/trash annually. During scheduled events, such as the San Diego County Fair, the 22nd DAA deploys staff 24-hours a day to maintain the facility and to provide litter patrol. Additional trash and recycling receptacles are positioned throughout the

fairgrounds during these events. Ride on sweepers and commercial street sweeping is performed on a daily basis. All storm water discharge points are closed and locked down to prevent accidental non-authorized discharges. Spill kits are made available and maintenance staff and security are radio dispatched to respond to any reported spills. These measures are largely focused on source reduction through mitigation measures, which the 22nd DAA Operations feels meets the City of Del Mar comment's intent, whereas, the referenced activity proposed in the SWMP is primarily focused on source reduction through better education and outreach to event vendors and promoters.

Comment #2:
"*...the City suggests the SWMP establish targeted outcomes for the number of public activities such as clean-up events or quantifying trash collection; these examples would lead to a quantifiable load reduction in addition to estimating the effectiveness of impressions made using educational outreach materials.*"

Response:
The 22nd DAA will incorporate targeted outcomes for its Public Education and Outreach program. With regards to outreach events, the 22nd DAA will participate in at least 2 events per year as a targeted outcome. The 22nd DAA has an existing partnership with Think Blue, the education and outreach arm of the City of San Diego Storm Water Department, and will continue to coordinate with the agency for outreach event opportunities. Trash collection quantities are already recorded each year by the 22nd DAA and these quantities will be reported in its Annual Report to the Regional Board.

Comment #3a:
"*The City suggests the 22nd DAA reference and utilize the local City of Del Mar SUSMP in the SWMP and not the Regional Model SUSMP as proposed...The Regional Model SUSMP is a model for which local agencies, including the City of Del Mar, used to develop local SUSMPs.*"

Response:
The Del Mar Fairgrounds and Horse Park SWMP will be revised to reference the City of Del Mar SUSMP instead of the Regional Model SUSMP, and will implement all current and future applicable land development provisions therein, where applicable. Due to inherent differences in City and the 22nd DAA approval processes for development

projects, some requirements in the City of Del Mar SUSMP will not apply to the Fairgrounds and Horse Park.

Comment #3b:
"*...it is unclear that the 22nd DAA intends to utilize the SUSMP as criteria for developing Priority Development Projects (PDPs). The City recommends the prioritization process (e.g. SUSMP PDP criteria) for development projects should be explicitly stated in the SWMP.*"

Response:
The SUSMP PDPs do not need to be explicitly stated in the Del Mar Fairgrounds and Horse Park SWMP. By adopting the Regional Model SUSMP or the City of Del Mar SUSMP, the SUSMP PDP criteria are land development provisions that must be implemented by the 22nd DAA for the Del Mar Fairgrounds and Horse Park.

Comment #4:
"The City recommends additional language be added or modified for the BMPs listed in the Pollution Prevention/Good Housekeeping for Onsite Operations component in the SWMP...These recommended changes are based on the BMP application standards, such as those presented in the California Storm Water Quality Association (CASQA) BMP Sheets:

a. Herbicide and pesticide use should not be applied within 24 hours of forecasted precipitation. Herbicide and pesticide use should also be limited during high winds (§ 4.6.3.2).
b. Concrete washout areas should be contained in a bermed area using visqueen or plastic sheeting (§ 4.6.3.2).
c. Concrete dust and debris with the potential to enter the MS4 and the receiving waters must be cleaned to the maximum extent practicable (§ 4.6.4).
d. Water from power washing activities should not be allowed to enter the MS4 and be collected using a wet vacuum and properly disposed (§ 4.6.4).

Response:
The above listed activities are a subset of activities to be implemented within the seven identified categories of Pollution Prevention/Good Housekeeping for Onsite Operations component of the SWMP: (1) Liquid Materials Storage & Management, (2) Landscaping and Grounds Maintenance, (3) Hardscape and Maintenance Repair, (4)

Building Maintenance and Repair, (5) Vehicle Maintenance, Repair, Washing & Fueling, (6) Construction and Land Disturbance, and (7) Flood Management and Storm Water Conveyance System Maintenance . The SWMP will be revised to more explicitly state these BMP application standards. It is also worth noting that all of the City recommended BMPs are already carried out at the Fairgrounds and Horse Park.

Comment #5:
"The SWMP is not meeting the requirements of the Phase II Permit by performing less than quarterly inspections of designated 'hotspots.' Additionally, the 22nd DAA facilities and activities are tributary to a water body that is impaired (via 303(d) listing) for indicator bacteria. The City suggests the SWMP designate all areas and activities related to potential bacteria generation as 'hotspots.'"

Response:
The SWMP will be revised to prescribe quarterly inspections to be performed at hotspot areas, such as vehicle maintenance facilities. Furthermore, the SWMP will be revised to include potential bacteria generation areas as "hotspots", thereby requiring quarterly inspections of those areas.

Comment #6:
"The City recommends the SWMP address BMPs to prevent FOG and other materials with the potential to cause SSOs from entering the sanitary sewer system."

Response:
SSOs and the FOG program requirements are covered under a separate Statewide General NPDES Permit obtained by the 22nd DAA for the Fairgrounds and Horse Park. Those program components should remain separate from the SWMP, as they are covered in the facility's Sewer System Management Plan.

Comment #7:
"Additional items that are issues related to the Del Mar Fairgrounds and Horse Park are not discussed in the SWMP, particularly in the Pollution Prevention/Good Housekeeping for Onsite Operations (§ 4.6). These include the following:"

a. Horse Park Property (manure management, hay and feed management, horse wash racks)
b. Pervious Parking Lots

c. Materials Delivery

Response:
The SWMP will be revised to include BMPs for the Horse Park Property, to be included in Section 4.8 of the report. In regards to the Pervious Parking Lot, it is maintained on a regular basis and tracking controls are in place, as well as street sweeping activities along Jimmy Durante, if and when tracking occurs. Materials delivery areas are also maintained regularly as part of standard operating procedures. These BMPs will be specified in the SWMP.

The 22nd DAA will revise the SWMP for Del Mar Fairgrounds and Horse Park as described in the responses herein and resubmit to the San Diego Regional Water Quality Control Board for further review. If you have any questions regarding this letter, please do not hesitate to contact me.

Sincerely,

Gary Reist
Chief Plant Operations
Del Mar Fairgrounds
22nd DISTRICT AGRICULTURAL ASSOCIATION
2260 Jimmy Durante Boulevard
Del Mar, California 92014-2216
O: 858 792-4272
Fax: 858 794-1032
greist@sdfair.com

APPENDIX C

ANNUAL REPORT FORM

ANNUAL REPORT

General Permit for the Discharger of Storm Water from Small Municipal Separate Storm Sewer Systems (General Permit)

(See Small MS4 Annual Report Guidance for additional guidance on completing this Annual Report Form)

Check box if this is a new name, address, etc.

A. Permittee Information

1. Permittee (Agency Name): _____ ☐
2. Contact Person: _____ ☐
3. Mailing Address: _____ ☐
4. City, State and Zip Code: _____ ☐
5. Contact Phone Number: _____ ☐
6.. WDID # _____
7. Have any areas been added to the MS4 due to annexation or other legal means? ☐ YES ☐ NO

If YES

Outfall	Has map been updated?		Has SWMP been updated?		Receiving Water Name
	YES	NO	YES	NO	

8. Are you subject to the Design Standards contained in Attachment 4 of the General Permit? ☐ YES ☐ NO

If yes, report on the implementation of the Design Standards in section D.5 of this Annual Report Form.

B. Reporting Period (check one): ☐ Coverage Commencement ( )to June 30, 2004 **-or-**

☐ July 1, 2004 to June 30, 2005

(Report is due by September 15 each year)

☐ July 1, 2005 to June 30, 2006

☐ July 1, 2006 to June 30, 2007

☐ July 1, 2007 to June 30, 2008

C. Executive Summary

D. Minimum Control Measures

Report on the status and effectiveness of BMPs and measurable goals by completely answering the following questions. Include any proposed modifications to the SWMP and anticipated changes to the schedule. You may use the tables provided and use narrative sections to highlight information. Alternatively, you may wish to only provide information in a narrative format. If the "Status of Measurable Goals" question is completely addressed by the table, you may write "see table" in that narrative section.

1. Public Education and Outreach

BMP	***Description***	***Status***					
		Implemented	**Not Applicable**	**Modlfied**	**Effective**	**Unknown**	**Not Effective**

a. BMPs

i. General summary

ii. Status of Measurable Goals

iii. Appropriateness

iv. Effectiveness

v. Proposed Modifications

b. Present results of information collected and analyzed, if any, during the reporting period, including any monitoring data used to assess the success of the program at reducing the discharge of pollutants to the MEP.

c. Briefly summarize the storm water activities you plan to undertake during the next reporting cycle (including an implementation schedule). If you propose activities that differ from those originally proposed in the approved SWMP, provide justification.

BMP	**Proposed Measurable Goal**	**Modified?**		**Schedule**	
		YES	NO	Complete this year	Ongoing Implementation

2. Public Involvement and Participation

BMP	***Description***	***Status***					
		Implemented	**Not Applicable**	**Modified**[1]	**Effective**	**Unknown**	**Not Effective**

a. BMPs

i. General summary

ii. Status of Measurable Goals

iii. Appropriateness

iv. Effectiveness

v. Proposed Modifications

b. Results of information collected and analyzed, if any, during the reporting period, including any monitoring data used to assess the success of the program at reducing the discharge of pollutants to the MEP.

c. Briefly summarize the storm water activities you plan to undertake during the next reporting cycle (including an implementation schedule). If you propose activities that differ from those originally proposed in the approved SWMP, provide justification.

BMP	**Proposed Measurable Goal**	**Modified?**		**Schedule**	
		YES	NO	Complete this year	Ongoing Implementation

3. Illicit Discharge Detection and Elimination

BMP	***Description***	***Status***					
		Implemented	**Not Applicable**	**Modified**[1]	**Effective**	**Unknown**	**Not Effective**

a. BMPs

i. General summary

ii. Status of Measurable Goals

iii. Appropriateness

iv. Effectiveness

v. Proposed Modifications

b. Results of information collected and analyzed, if any, during the reporting period, including any monitoring data used to assess the success of the program at reducing the discharge of pollutants to the MEP.

c. Briefly summarize the storm water activities you plan to undertake during the next reporting cycle (including an implementation schedule). If you propose activities that differ from those originally proposed in the approved SWMP, provide justification.

BMP	**Proposed Measurable Goal**	**Modified?**		**Schedule**	
		YES	NO	Complete this year	Ongoing Implementation

4. Construction Site Storm Water Control

BMP	*Description*	*Status*					
		Implemented	Not Applicable	Modified[1]	Effective	Unknown	Not Effective

a. BMPs

i. General summary

ii. Status of Measurable Goals

iii. Appropriateness

iv. Effectiveness

v. Proposed Modifications

b. Results of information collected and analyzed, if any, during the reporting period, including any monitoring data used to assess the success of the program at reducing the discharge of pollutants to the MEP.

c. Briefly summarize the storm water activities you plan to undertake during the next reporting cycle (including an implementation schedule). If you propose activities that differ from those originally proposed in the approved SWMP, provide justification.

BMP	Proposed Measurable Goal	Modified?		Schedule	
		YES	NO	Complete this year	Ongoing Implementation

5. Post-Construction Storm Water Management

If your community is subject to Attachment 4 (Supplemental Provisions) of the General Permit, note your compliance with and progress implementing the Design Standards in this section, if applicable.

BMP	***Description***	***Status***					
		Implemented	**Not Applicable**	**Modified[1]**	**Effective**	**Unknown**	**Not Effective**

a. BMPs

i. General summary

ii. Status of Measurable Goals

iii. Appropriateness

iv. Effectiveness

v. Proposed Modifications

b. Results of information collected and analyzed, if any, during the reporting period, including any monitoring data used to assess the success of the program at reducing the discharge of pollutants to the

MEP.

c. Briefly summarize the storm water activities you plan to undertake during the next reporting cycle (including an implementation schedule). If you propose activities that differ from those originally proposed in the approved SWMP, provide justification.

BMP	**Proposed Measurable Goal**	**Modified?**		**Schedule**	
		YES	NO	Complete this year	Ongoing Implementation

6. Pollution Prevention and Good Housekeeping for Municipal Operations

BMP	***Description***	***Status***					
		Implemented	**Not Applicable**	**Modified**[1]	**Effective**	**Unknown**	**Not Effective**

a. BMPs

i. General summary

ii. Status of Measurable Goals

iii. Appropriateness

iv. Effectiveness

v. Proposed Modifications

b. Results of information collected and analyzed, if any, during the reporting period, including any monitoring data used to assess the success of the program at reducing the discharge of pollutants to the MEP.

c. Briefly summarize the storm water activities you plan to undertake during the next reporting cycle (including an implementation schedule). If you propose activities that differ from those originally proposed in the approved SWMP, provide justification.

BMP	**Proposed Measurable Goal**	**Modified?**		**Schedule**	
		YES	NO	Complete this year	Ongoing Implementation

E. 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."

Signature of Permittee (legally responsible person) Date Signed

---

Name (printed) Title

APPENDIX D

ANNUAL REPORT GUIDANCE DOCUMENT

Small MS4 Annual Report Guidance

This annual report guidance (Guidance) is intended to assist dischargers permitted under the Small Municipal Separate Storm Sewer System General Permit (General Permit) with evaluating their storm water program and preparing a report of the status of measurable goals, as required by the General Permit. While it addresses the suggested Annual Report Form provided by the state, you are not required to use the form and may submit an annual report in a different format. Use of this form does not guarantee compliance with the General Permit's annual reporting requirements, nor does it in any way establish new regulatory requirements, or change existing regulatory requirements.

This document begins with general notes, then provides specific guidance on completing the suggested Annual Report Form, and finally provides a series of "brainstorming" questions meant to initiate the program evaluation process and to suggest features of your program to discuss in an annual report.

General Notes

The General Permit requires an annual evaluation of program effectiveness. It is important to evaluate your program's strengths and weaknesses so that it may evolve to become more effective over time. Effectiveness is a measure of how well your program is working and has two components: Best Management Practice (BMP) selection and BMP implementation.

Use of Assessment Parameters

Assessment parameters are quantifiable measurements that indicate or reflect BMP or minimum control measure (MCM) effectiveness. Once a permittee chooses an assessment parameter, the permittee can then record data over time and use the data, as a yard-stick associated with BMP or MCM effectiveness.

Assessment parameters should not be confused with "measurable goals." Even though both are quantifiable, an assessment parameter serves a different purpose from a measurable goal. A measurable goal indicates effort (i.e. miles of roads swept, number of storm water brochures distributed, etc.), while an assessment parameter is related to effectiveness.

As an example of an assessment parameter, "Number of Illicit Discharge Hotline Calls Received from the Public" is one because it is a yard-stick that can indicate or reflects effectiveness. It could quantitatively indicate (directly or indirectly) that the public education MCM is working, as more members of the public know of the hotline number and are using it to protect water quality. It could also reflect a need to improve the Illicit Discharge MCM, as the ordinances may not be deterring illicit discharges. In any event, it is useful to keep track of that parameter, as the data sheds light on historical trends, and allows the permittee to compare its own efforts with real world indicators. You may discuss your use of assessment parameters in Section D.b. of the Annual Report Form.

Completing the Annual Report Form

The following provides assistance for completing the Annual Report Form provided by the State Water Resources Control Board (SWRCB). Using the Form is not a requirement, as you may choose to comply with the General Permit's annual report requirements by using your own format.

Section A: Permittee Information

Provide the requested information. Check the boxes if the information being provided has changed since previous submittals.

Section B: Reporting Period

Check the box that corresponds to the appropriate reporting period. If this is the first reporting period, also write the date that you received permit coverage within the parentheses.

Section C: Executive Summary

The Executive Summary briefly covers all of the major sections of the annual report. In completing the Executive Summary, the preparer should answer the following questions:

- How effective was your program at reducing pollutants in your storm water discharge?
- Were you in compliance with the General Permit?
- What was the most successful part of the program?
- What was the most challenging?

This section will likely comprise about half of a page, but could be longer or shorter, depending on the scope of your SWMP.

Section D: Minimum Control Measures

The table provided may be used to list your BMPs and whether they were effective, not effective, or of unknown effectiveness. Also, indicate whether each associated measurable goal was completed, not completed, or modified. Use the narrative to justify measurable goals that were not completed and to discuss assessing effectiveness.

a. BMPs

In addressing the following sections, it may be helpful to draw from the thoughts, discussions, and results of your brain storming session.

i. Give a general summary of the BMPs implemented for this minimum control measure. How much did the success of the particular BMP have on the overall minimum control measure?

ii. Describe whether each measurable goal was completed within the time proposed in the SWMP. If they were not completed, provide justification.

iii. Assess the appropriateness of each identified BMP. Factors to consider in determining appropriateness include, but are not limited to, appropriate for local population, pollution sources, receiving water concerns, and integration with local management procedures.

iv. Discuss the effectiveness of your individual BMPs and their effectiveness when implemented together under one minimum control measure. Describe your progress towards achieving the statutory goal of reducing the discharge of pollutants to the Maximum Extent Practicable (MEP). What indicators (assessment parameters) have you used to determine this?

v. Summarize any proposed change(s) to the SWMP. Because opportunities for improvement often become apparent during periodic evaluation, you should propose any necessary SWMP modifications (accompanied by justification) during the annual reporting process. Proposed SWMP modifications must follow the same formal approval procedure as the initial SWMP application, and do not become effective until a modified SWMP is approved.

b. Results of Information Collected, If Any

Water Quality monitoring is not a requirement under the permit. However, if you did collect any water quality monitoring data for storm water discharges within your jurisdiction, you must summarize your results here. Additionally, if any program elements included data collection, you must submit a short summary of the information and any analysis completed. For example, you may report your assessment parameter data (miles of riverbank cleaned up, number of hits on a website before and after a public education campaign, survey/polling results, etc.). Data listed under Item 1.c, Measurable Goals, does not need to be repeated here.

c. Upcoming Activities

Provide a short summary based on your existing SWMP implementation schedule of upcoming activities. If the upcoming activities are already fully described in the SWMP, it is not necessary to repeat the information in the annual report. If any changes to the descriptions provided in the application or previous reports are proposed, they should be summarized along with an explanation as to why the change is necessary or appropriate. Proposed changes do not become effective unless a modified SWMP is formally approved.

Brain Storming Questions

These questions are meant to be used as a tool by the preparer of the annual report. The questions can generate discussion or thoughts on what the results of BMP implementation indicate and ways that program progress can be tracked or conveyed over time. The answers to the questions are not required in the annual report; furthermore, some of the questions may not be applicable to your SWMP. However, this is by no means an exhaustive list. Additional questions and answers pertinent to the specific program should be generated.

<u>General</u>

What informal relationships exist in regards to implementing your SWMP? Are informal relationships proving to be helpful? Can they be utilized in other areas? Can they be improved upon?

In terms of program coordination, what parts are working particularly well? Which aspects need improvements?

Do you have regularly scheduled storm water workgroup meetings? If yes, what are the participants' affiliations?

Is implementation of the SWMP multi-departmental? Is there a particular department that is not as cooperative? What may be some reasons for this and how might the issues be resolved?

What staff training was conducted over the last reporting year? How does this compare with past years? What staff were targeted for which program areas? How were positions targeted for certain training? Was the training effective? How did do you measure the training effectiveness? Do you propose to change things? If yes, how will the training be changed and why will it be changed?

The following chart may be used to summarize training activities and training trends.

Class	Date	Department(s) in Attendance	Effectiveness	Number of Participants	Number of Participants – Previous Year
Other	-	-	-	-	
Total					

Have there been any instances in which a storm water ordinance did not provide the authority necessary to stop unauthorized discharges and/or enforce storm water requirements? Why? What is being done to correct this deficiency?

How does the quality of your water resources compare with other communities? How does your storm water program compare with other communities' programs?

Was there a particular focus of your program this year? Why? Will that change over the next five years?

Has your program reduced pollutant loadings from your storm water discharges?

Does your program utilize community resources (natural resources as well as existing organizations, infrastructure, etc.)? For example, does your education program explain the connection between storm water quality and the quality of *local* waterbodies? Do you encourage Girl and Boy Scout troops to participate in creek clean-ups? Do you use pre-treatment or CUPA inspectors to look for storm water violations?

How often are policies revisited?

What Minimum Control Measure requires the most resources (staff time, contract money, capital expenditures, maintenance, etc.)? What Minimum Control Measure requires the least? What BMP requires the most resources? What BMP requires the least? In general, are the BMPs that require more resources also the ones that are most effective?

<u>Public Education and Outreach</u>

Have you or are you planning to provide storm water education and outreach material in multiple languages?

Are certain community demographics more receptive to environmental issues? How might you reach out to those that do not appear to be as receptive?

What types of business outreach activities have been conducted?

What percentage of the population do you estimate you have reached with your different types of outreach?

How much time is dedicated to public inquires and requests for additional information?

Has awareness regarding storm water pollution increased in your community? How was this measured?

How did you seek survey participation? Was it difficult to get enough participants?

Has the program led to or will it lead to behavioral changes? How is this evaluated?

Public Involvement and Participation

Is the public participating in your storm water program? Are the meeting times or locations hindering participation?

How many people or community groups have gotten involved in your storm water program? Is there any correlation with your storm water education campaigns?

How does involvement in the storm water program compare to involvement in other similar programs in the community?

If you have a storm water hotline, has the number of calls increased or decreased?

Illicit Discharge Detection and Elimination

If you have a storm water hotline, has the number of calls increased or decreased? Are legitimate storm water issues reported? Is the hotline being abused (i.e. used as a weapon between quarreling neighbors)? Are there any trends in the calls (e.g. recurring neighborhoods, same types of discharges)? Do you ask how people learned about the hotline? Do you track that information?

Do you receive public complaints directly from the internet?

How much time is spent detecting illicit discharges? Are you able to effectively trace the illicit discharge back to its source? How much time is spent identifying the sources of illicit discharges? Describe the process for taking enforcement actions for illicit discharges, including the types of actions that are taken and the procedures for resolving them. Are the enforcement actions appropriate for the violations? Are they too harsh to typically be invoked or too lenient to provide deterrence?

How does the amount of resources spent on education compare to the amount spent on enforcement? How has this changed over time?

Did you prioritize certain areas of the community (e.g. geographic, types of businesses, types or land use, etc.) for illicit discharge detection activities? Has this prioritization enabled you to leverage and stretch your resources to reduce more storm water pollution at a lesser cost?

The following chart can be used to track illicit discharge detection and elimination results over time.

	Issue	This Reporting Period	Previous Reporting Period	Comments (such as type/source, geographic location, time, etc.)
1)	How many non-storm water discharges were detected during the reporting year			
2)	How many of these were "illicit" (i.e. not authorized)?			
3)	How many illicit dischargers were fined or otherwise penalized?			

Construction Site Storm Water Management

Do you require an erosion and sediment control plan? If yes, how are they reviewed and approved? Do you require the preparation, submittal, approval, and implementation of a Storm Water Pollution Prevention Plan (SWPPP) or equivalent prior to the issuance of a grading permit?

How do site plans and erosion and sediment control plans compare to conditions in the field?

How many plans included adequate erosion and sediment controls/storm water BMPs upon the first submittal? In general, are multiple re-submittals required before storm water management controls are adequate?

Describe the process for taking enforcement actions for construction site violations, including the types of actions that are taken and the procedures for resolving them. Are the enforcement actions appropriate for the violations? Are they too harsh to typically be invoked or too lenient to provide deterrence?

How does the amount of resources spent on education compare to the amount spent on enforcement? How has this changed over time?

Describe how you track the issuance of grading permits, building permits, and other construction-related permits.

The following table can be used to track your construction program activities.

	Issue	This Reporting Period	Last Reporting Period	Comments
1)	How many erosion and sediment control plans were reviewed?			
2)	How many construction sites were			

	inspected to determine compliance with your construction storm water requirements?			
3)	At how many construction sites were violations noted?			
4)	At these sites, how many site owners or operators were penalized through a formal enforcement action?			

Post-Construction Storm Water Management

Have you modified your planning procedures? In preparing and reviewing CEQA documents, do you consider potential storm water quality impacts and provide for appropriate mitigation? Can you provide examples showing how storm water quality impacts were addressed in CEQA documents for projects over the reporting period?

Have you implemented a system (such as a database) to track the type and location of installed post-construction BMPs?

What mechanism is used to require proper operation and maintenance of post-construction BMPs? Do inspections or complaints verify that this mechanism works?

How many plans included adequate post-construction BMPs upon the first submittal?

The following table can be used to summarize results of your post-construction program.

	Issue	This Reporting Period	Last Reporting Period	Comments (ex. frequently seen project types, types of BMPs)
1)	How many post-construction plans were reviewed?			
2)	How many plans included post-construction BMPs?			
3)	How many sites were inspected to verify installation of post-construction BMPs?			
4)	How many sites were inspected to verify the proper operation and maintenance of post-construction BMPs?			

Pollution Prevention and Good Housekeeping for Municipal Operations

How are municipal programs and activities reviewed? How many changes were implemented?

How much debris is collected during street sweeping? Is this a decrease? Is more debris collected from certain streets in your jurisdiction than from others? Have you experimented with increasing frequencies? What were the results? Are parked cars a problem?

Have the number of flood events increased or decreased during program implementation?

Have there been changes in uses of landscaping fertilizers, pesticides, and herbicides?

APPENDIX E

2006-2010 STORM WATER SAMPLING DATA

SITE 1

pump station at Discharge Point #1

Sampling Event

Parameter ↓	Units	2/28/2006	*2/11/2005*	*12/28/2004*	2/23/2004	12/27/2007	1/30/2007	12/7/2007	2/14/2008	12/7/2009	4/1/2010	Min	Max	Mean	#ND	n	WQO	# Exceed WQO
Hexavalent Chromium	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8	8		
Chloride	mg/l	100	170	180	120	**530**	**400**	220	130	**740**	**520**	100	**740**	287.77778	0	8	250*	2
Fluoride	mg/l	ND	0.76	0.58	0.26	ND	ND	ND	ND	0.14	ND	ND	0.76	0.2	5	8	1*	0
Nitrogen, Nitrite	mg/l	ND	ND	ND	ND	ND	**8.7**	ND	ND	ND	ND	ND	**8.7**	**1.09**	7	8	0.68***	1
Nitrogen, Nitrate (as N)	mg/l	1.6	1.6	1.6	1.6	1.3	3.1	1.7	1.8	2.4	2.9	1.3	3.1	1.96	0	8		
Sulfate	mg/l	110	190	120	73	**260**	200	220	130	190	92	73	**260**	158.5	0	8	250*	1
Specific Conductance	mmhos/cm	670	970	880	560	2300	2000	1300	870	3000	2000	560	3000	1455	0	8		
pH		7.6	7.43	7.84	7.99	7.5	7.2	7.6	7.2	7.56	7.6	7.2	7.99	7.55	0	8	6.5-8.5*	0
Suspended Solids	mg/l	**240**	**200**	**380**	**500**	**420**	**360**	**280**	**760**	**900**	**630**	**200**	**900**	**467**	0	8	100***	8
Biochemical Oxygen Demand (BOD)	mg/l	ND	6.9	26	ND	ND	11.6	7.8	ND	12.2	ND	6.9	26	6.54	4	8	30***	0
Oil & Grease	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8	8	15***	0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8	8		
Phosphorus, Total (as P)	mg/l	0.56	0.45	0.74	0.79	0.64	0.9	0.79	0.51	1.6	0.93	0.45	1.6	0.791	0	8	2***	0
Nitrogen, Ammonia (as N)	mg/l	**0.17**	**0.96**	**0.52**	**0.34**	**0.63**	**1**	**0.38**	**0.47**	**3.2**	**0.7**	**0.17**	**3.2**	**0.837**	0	8	0.025*	8
Phenolics, Total Recoverable	mg/l	ND	ND	0.13	0.075	ND	ND	ND	0.06	0.031	ND	0.06	0.13	0.033	5	8	****	
Total Organic Carbon (TOC)	mg/l	8	7.7	7.3	4.9	10	13	9.9	21	20	14	4.9	21	11.58	0	8		
Chemical Oxygen Demand (COD)	mg/l	68	91	250	52	67	49	140	150	220	140	49	250	122.70	0	8		
SVOCs	µg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8	8	****	
Antimony	mg/l	ND	ND	ND	0.0058	ND	ND	ND	ND	ND	ND	ND	0.0058	0.0007	7	8	****	
Arsenic	mg/l	ND	ND	ND	0.011	0.034	ND	ND	ND	ND	ND	ND	0.034	0.0056	6	8	****	
Beryllium	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8	8	****	
Cadmium	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8	8	****	
Chromium	mg/l	0.003	0.015	0.023	0.015	0.016	0.0039	0.01	ND	0.0078	0.018	0.003	0.023	0.011	1	8	****	
Copper	mg/l	0.021	0.036	0.048	0.059	0.043	0.027	0.038	0.026	0.05	0.077	0.021	0.077	0.0425	0	8	****	
Lead	mg/l	0.0099	ND	0.0054	0.013	0.0094	0.0074	ND	0.0054	0.015	0.014	ND	0.013	0.0063	2	8	****	
Nickel	mg/l	0.0067	0.0086	0.011	0.0096	0.0085	0.0057	0.0077	ND	0.0099	0.012	0.0057	0.011	0.0072	1	8	****	
Selenium	mg/l	ND	0.014	0.02	ND	ND	0.014	ND	ND	ND	ND	ND	0.02	0.006	5	8	****	
Silver	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8	8	****	
Thallium	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8	8	****	
Zinc	mg/l	0.22	0.15	0.18	0.46	0.32	0.5	0.54	0.24	1.9	0.37	0.15	1.9	0.4880	0	8	****	
Mercury	µg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8	8	****	
VOCs	µg/l	ND	ND	ND	ND		ND	ND	ND		ND	ND	ND	ND	7	7		
Toluene	µg/l									11								
Ethylene Glycol MBE	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8	8		
GRO	mg/l	ND	ND	ND	ND	ND	ND					ND	ND	ND	6	6		
DRO	mg/l	0.32	ND	0.21	0.21	ND	ND					ND	0.32	0.123	3	6		
PCBs EPA 3510C	µg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8	8		
Cyanide	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8	8	****	
Fecal Coliforms	MPN/100 mL		**>1600**	**1600**		**>1600**	**>16000**	**4600**	11	**1100**	**4000**	11	**>16000**	**4235**	0	6	400**	5
Total Coliforms	MPN/100 mL		>1600	1600		>1600	3000	**37000**	50	**30000**	**16000**	50	**37000**	7475	0	6	10000**	1

* Basin Plan Limit. Tables 3-2 & C-1

** California Ocean Plan Limit

*** USEPA Industrial Permit

**** Basin plan objective applies only to surface waters with MUN beneficial use. Fairgrounds is located in area excepted from MUN.

SITE 2

Grandstand and main track drainage area

Sampling Event

Parameter ↓	Units	2/28/2006	2/11/2005	12/28/2004	1/27/2006	12/7/2007	2/14/2008	12/7/2009	4/1/2010	MIN	MAX	MEAN	#ND	n	WQO	# Exceed WQO
Hexavalent Chromium	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6		
Chloride	mg/l	30	25	25	120	34	58	38	23	23	120	44.13	0	6	250*	0
Fluoride	mg/l	0.28	0.19	0.12	ND	ND	ND	ND	ND	ND	0.28	0.10	3	6	1*	0
Nitrogen, Nitrite	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	0.68***	0
Nitrogen, Nitrate (as N)	mg/l	0.84	0.81	0.62	0.37	0.34	0.94	0.47	0.28	0.28	0.94	0.58	0	6		
Sulfate	mg/l	17	22	12	29	12	26	19	8	8	29	18.13	0	6	250*	0
Specific Conductance	mmhos/cm	140	220	110	210	190	300	250	130	110	300	193.75	0	6		
pH		7.5	7.44	7.14	7.7	7.9	6.6	**8.55**	7.3	6.6	8.55	7.52	0	6	6.5-8.5*	0
Suspended Solids	mg/l	37	**230**	72	65	21	**150**	69	55	37	**230**	**101**	0	6	100***	2
Biochemical Oxygen Demand (BOD)	mg/l	ND	ND	ND	ND	8.8	ND	5.93	5.91	ND	8.8	1.47	5	6	30***	0
Oil & Grease	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	15***	0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6		
Phosphorus, Total (as P)	mg/l	0.2	0.47	0.19	0.37	0.18	0.29	0.43	0.2	0.18	0.47	0.29	0	6	2***	0
Nitrogen, Ammonia (as N)	mg/l	**0.21**	**0.45**	**0.28**	**0.37**	**0.54**	**0.29**	**0.58**	**0.25**	**0.21**	**0.58**	**0.37**	0	6	0.025*	6
Phenolics, Total Recoverable	mg/l	ND	0.15	0.52	ND	ND	ND	0.068	ND	ND	0.52	0.11	4	6	****	
Total Organic Carbon (TOC)	mg/l	8.8	5.7	3.9	9	7.1	ND	18	11	ND	9	5.75	1	6		
Chemical Oxygen Demand (COD)	mg/l	42	220	44	44	50	77	78	47	42	220	71.56	0	6		
SVOCs	µg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	****	
Antimony	mg/l	ND	ND	ND	ND	0.011	0.01	0.0098	ND	ND	0.011	0.0035	4	6	****	
Arsenic	mg/l	ND	ND	ND	0.012	ND	ND	ND	ND	ND	0.012	0.002	5	6	****	
Beryllium	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	****	
Cadmium	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	****	
Chromium	mg/l	0.0033	0.016	0.0057	0.0042	ND	0.0047	0.0044	0.0047	ND	0.016	0.0057	1	6	****	
Copper	mg/l	0.011	0.016	0.01	0.017	0.011	0.015	0.032	0.021	0.01	0.032	0.017	0	6	****	
Lead	mg/l	0.0062	ND	ND	ND	ND	0.0055	0.0053	ND	ND	0.0062	0.002	4	6	****	
Nickel	mg/l	ND	0.0068	ND	ND	ND	ND	0.06	ND	ND	0.0068	0.0011	5	6	****	
Selenium	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	****	
Silver	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	****	
Thallium	mg/l	ND	ND	ND	ND	ND	ND	0.015	ND	ND	ND	ND	6	6	****	
Zinc	mg/l	0.075	0.072	0.072	0.08	0.066	0.2	0.13	0.11	0.066	0.2	0.101	0	6	****	
Mercury	µg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	****	
VOCs	µg/l	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	5	5		
Ethylene Glycol MBE	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6		
GRO	mg/l	ND	ND	ND	ND					ND	ND	ND	4	4		
DRO	mg/l	0.6	ND	ND	0.24					ND	0.6	0.21	2	4		
PCBs EPA 3510C	µg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6		
Cyanide	mg/l	ND	ND	ND	ND	ND	ND	0.015	ND	ND	ND	ND	6	6	****	
Fecal Coliforms	MPN/100 mL		**500**	70	**>1600**	200	60	**500**	110	70	**>1600**	**486**	0	5	400**	2
Total Coliforms	MPN/100 mL		>1600	1600	>1600	7300	21	**17000**	7000	21	7300	2424	0	5	10000**	0

* Basin Plan Limit. Tables 3-2 & C-1

** California Ocean Plan Limit

*** USEPA Industrial Permit

**** Basin plan objective applies only to surface waters with MUN beneficial use. Fairgrounds is located in area excepted from MUN.

SITE 3

West parking lot at Discharge Point #3

Sampling Event

Parameter ↓	units	*2/28/2006*	*2/11/2005*	*12/28/2004*	*11/12/2003*	*12/27/2006*	*1/30/2007*	*12/7/2007*	*2/14/2008*	*12/7/2009*	*4/1/2010*	MIN	MAX	MEAN	#ND	n	WQO	# Exceed WQO
Hexavalent Chromium	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8	8		
Chloride	mg/l	15	9.8	17	150	41	51	25	31	66	91	9.8	150	49.68	0	8	250*	0
Fluoride	mg/l	0.35	0.13	0.15	0.71	0.1	0.44	ND	ND	0.14	ND	ND	0.71	0.24	2	8	1*	0
Nitrogen, Nitrite	mg/l	ND	0.1	ND	ND	ND	**1**	ND	ND	ND	ND	ND	**1**	0.138	6	8	0.68***	1
Nitrogen, Nitrate (as N)	mg/l	0.64	0.52	0.77	3.3	0.48	0.95	0.44	0.85	0.58	0.88	0.44	3.3	0.941	0	8		
Sulfate	mg/l	6.9	4.8	ND	47	33	19	9.3	11	22	30	ND	47	16.38	1	8	250*	0
Specific Conductance	mmhos/cm	82	32	79	780	530	290	150	180	330	430	32	780	288.30	0	8		
pH		7.2	7.21	7.14	7	7.4	7.2	7.6	6.8	7.8	7.5	6.8	7.8	7.29	0	8	6.5-8.5*	0
Suspended Solids	mg/l	42	32	74	**110**	49	38	49	**210**	**120**	86	32	**210**	81	0	8	100***	2
Biochemical Oxygen Demand (BOD)	mg/l	ND	ND	ND	13	ND	11.5	8	ND	11	**18.6**	ND	13	4.06	5	8	30***	0
Oil & Grease	mg/l	ND	ND	ND	4.5	ND	ND	ND	ND	ND	ND	ND	4.5	0.56	7	8	15***	0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8	8		
Phosphorus, Total (as P)	mg/l	0.28	0.03	0.17	0.8	0.26	0.553	0.23	0.19	0.53	0.11	0.03	0.8	0.32	0	8	2***	0
Nitrogen, Ammonia (as N)	mg/l	**0.18**	**1.6**	**0.35**	**0.78**	**0.26**	**0.73**	ND	**0.27**	**0.91**	**1.1**	0.18	1.6	0.52	1	8	0.025*	7
Phenolics, Total Recoverable	mg/l	ND	0.55	0.031	0.17	0.37	ND	ND	0.052	ND	0.039	ND	0.55	0.147	3	8	****	
Total Organic Carbon (TOC)	mg/l	8.8	ND	6.1	39	18	24	9.1	12	23	33	ND	39	14.63	1	8		
Chemical Oxygen Demand (COD)	mg/l	55	200	42	170	63	80	52	65	93	120	42	200	94.00	0	8		
SVOCs	µg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	8	****	
Antimony	mg/l	ND	0.0065	ND	ND	ND	0.044	ND	0.012	ND	ND	ND	0.044	0.0078	5	8	****	
Arsenic	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8	8	****	
Beryllium	mg/l	ND	ND	ND	ND	ND	ND	ND	0.11	ND	ND	ND	0.11	0.014	7	8	****	
Cadmium	mg/l	ND	ND	ND	ND	ND	ND	ND	0.11	ND	ND	ND	0.11	0.014	7	8	****	
Chromium	mg/l	0.018	0.0049	0.0054	0.01	0.0053	0.0041	ND	0.018	0.0062	0.0033	0.0041	0.018	0.0082	1	8	****	
Copper	mg/l	0.013	0.011	0.018	0.06	0.022	0.057	0.013	0.031	0.034	0.036	0.011	0.06	0.030	0	8	****	
Lead	mg/l	0.0067	ND	ND	0.0058	ND	ND	ND	0.016	0.0071	0.0052	ND	0.016	0.0036	5	8	****	
Nickel	mg/l	0.011	ND	ND	0.01	ND	0.0056	ND	0.015	0.0064	0.0063	ND	0.015	0.0052	4	8	****	
Selenium	mg/l	ND	ND	ND	ND	ND	ND	ND	0.013	ND	ND	ND	0.013	0.002	7	8	****	
Silver	mg/l	ND	ND	ND	ND	ND	ND	ND	0.011	ND	ND	ND	0.011	0.001	7	8	****	
Thallium	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8	8	****	
Zinc	mg/l	0.13	0.062	0.086	0.22	0.089	0.44	0.078	0.15	0.19	0.16	0.062	0.44	0.161	0	8	****	
Mercury	µg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8	8	****	
VOCs	µg/l	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	7	8		
Ethylene Glycol MBE	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8	8		
GRO	mg/l	ND	ND	ND	ND	ND	ND					ND	ND	ND	6	6		
DRO	mg/l	0.9	ND	ND	1.6	0.53	0.39					ND	1.6	0.57	2	6		
PCBs EPA 3510C	µg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8	8		
Cyanide	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8	8	****	
Fecal Coliforms	MPN/100 mL		**900**	300		**>1600**	**>16000**	**500**	140	**900**	300	140	**>16000**	**3240**	0	6	400**	4
Total Coliforms	MPN/100 mL		>1600	300		>1600	300	**52000**	130	**350000**	4000	130	**52000**	9322	0	6	10000**	1

blue font denotes replacement sample

* Basin Plan Limit. Tables 3-2 & C-1

** California Ocean Plan Limit

*** USEPA Industrial Permit

**** Basin plan objective applies only to surface waters with MUN beneficial use. Fairgrounds is located in area excepted from MUN.

SITE 4

Discharge Point #4 behind exhibit halls

Sampling Event

Parameter ↓	units	*2/28/2006*	*11/12/2003*	*12/27/2006*	*1/30/2007*	*12/7/2007*	*12/14/2008*	*12/7/2009*	*4/1/2010*	MIN	MAX	MEAN	#ND	n	WQO	# Exceed WQO
Hexavalent Chromium	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6		
Chloride	mg/l	85	**990**	**450**	17	82	140	240	**370**	17	990	296.75	0	6	250*	2
Fluoride	mg/l	0.55	ND	ND	0.18	ND	ND	0.15	0.13	ND	0.55	0.12	4	6	1*	0
Nitrogen, Nitrite	mg/l	ND	ND	ND	0.45	ND	ND	ND	ND	ND	0.45	0.056	5	6	0.68***	0
Nitrogen, Nitrate (as N)	mg/l	1.3	2.9	0.4	0.32	0.81	1.7	1.4	2.7	0.32	2.9	1.44	0	6		
Sulfate	mg/l	43	210	99	5.2	47	72	98	70	5.2	210	80.53	0	6	250*	0
Specific Conductance	mmhos/cm	440	2700	1800	130	450	660	1100	1400	130	2700	1085	0	6		
pH		7.7	7.48	7.5	7.3	7.5	7.1	7.8	7.6	7.1	7.8	7.4975	0	6	6.5-8.5*	0
Suspended Solids	mg/l	**470**	**100**	54	**120**	**200**	**530**	**380**	**210**	54	**530**	**258.00**	0	6	100***	5
Biochemical Oxygen Demand (BOD)	mg/l	6.2	15	ND	11.2	8.1	ND	12.1	9.09	ND	15	6.75	2	6	30***	0
Oil & Grease	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	15***	0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6		
Phosphorus, Total (as P)	mg/l	0.72	0.54	0.26	0.44	0.48	0.84	0.83	0.31	0.26	0.84	0.55	0	6	2***	0
Nitrogen, Ammonia (as N)	mg/l	**0.44**	**0.67**	**0.52**	**0.27**	**0.2**	**0.85**	**0.91**	**0.73**	**0.2**	**0.91**	**0.57**	0	6	0.025*	6
Phenolics, Total Recoverable	mg/l	ND	0.066	ND	ND	ND	0.12	ND	0.063	ND	0.12	0.031	4	6	****	
Total Organic Carbon (TOC)	mg/l	22	41	12	18	12	12	28	22	12	41	20.875	0	6		
Chemical Oxygen Demand (COD)	mg/l	180	230	50	52	110	84	140	150	50	230	124.50	0	6		
SVOCs	µg/l	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	5	5	****	
Antimony	mg/l	ND	ND	ND	ND	0.012	ND	0.011	0.0061	ND	0.012	0.002	5	6	****	
Arsenic	mg/l	0.017	ND	0.021	ND	ND	ND	ND	ND	0.017	0.021	0.006	4	6	****	
Beryllium	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	****	
Cadmium	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	****	
Chromium	mg/l	0.029	0.01	0.0053	0.0065	0.011	0.0056	0.0078	0.0058	0.0053	0.029	0.0101	0	6	****	
Copper	mg/l	0.05	0.02	0.02	0.023	0.038	0.026	0.063	0.041	0.02	0.063	0.035125	0	6	****	
Lead	mg/l	0.024	0.0061	ND	0.0081	0.0093	0.01	0.012	0.0073	ND	0.024	0.0096	1	6	****	
Nickel	mg/l	0.018	0.0063	ND	0.0062	0.0074	0.0065	0.0087	0.0055	ND	0.018	0.0074	1	6	****	
Selenium	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	****	
Silver	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	****	
Thallium	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	****	
Zinc	mg/l	0.32	0.54	0.14	0.4	ND	0.21	0.37	0.17	0.14	0.54	0.27	0	6	****	
Mercury	µg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	****	
VOCs	µg/l	?	ND		ND	ND	ND	ND	ND				4	4		
Ethylene Glycol MBE	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6		
GRO	mg/l	ND	ND	ND	ND					ND	ND	ND	4	4		
DRO	mg/l	0.69	0.97	0.31	0.45					0.31	0.97	0.605	0	4		
PCBs EPA 3510C	µg/l	ND	ND	ND	ND	ND	ND	ND	ND				6	6		
Cyanide	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	****	
Fecal Coliforms	MPN/100 mL			**1100**	**9000**	**700**	170	**900**	400	170	**9000**	**2743**	0	4	400**	3
Total Coliforms	MPN/100 mL			>1600	50	**56000**	80	**30000**	2000	50	**56000**	**14433**	0	4	10000**	1

* Basin Plan Limit. Tables 3-2 & C-1

** California Ocean Plan Limit

*** USEPA Industrial Permit

**** Basin plan objective applies only to surface waters with MUN beneficial use. Fairgrounds is located in area excepted from MUN.

SITE 5

Manhole in parking lot near Jimmy Durante Bridge

Sampling Event

Parameter ↓	Units	*2/28/2006*	*2/11/2006*	*12/28/2004*	*11.12.03*	*12/27/2006*	*1/30/2007*	*12/7/2007*	*2/14/2008*	*12/7/2009*	*4/1/2010*	MIN	MAX	MEAN	#ND	n	WQO	# Exceed WQO
Hexavalent Chromium	mg/l	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7	7		
Chloride	mg/l	140	27	51	29	150	17	38	29	50	10	10	150	54.1	0	8	250*	0
Fluoride	mg/l	0.71	0.17	0.19	0.5	**1.8**	0.32	ND	ND	0.11	ND	0.17	**1.8**	0.46	2	8	1*	1
Nitrogen, Nitrite	mg/l	ND	ND	ND	ND	ND	0.37	ND	ND	ND	ND	ND	0.37	0.046	7	8	0.68***	0
Nitrogen, Nitrate (as N)		1	0.82	0.95	2	0.26	0.42	0.59	0.62	0.9	0.16	0.16	2	0.772	0	8		
Sulfate	mg/l	63	30	46	18	66	7.2	28	42	40	5.7	5.7	66	34.59	0	8	250*	0
Specific Conductance	mmhos/cm	690	160	280	270	820	130	260	260	320	75	75	820	326.50	0	8		
pH		6.9	8.05	7.78	7.35	7.6	7.2	7.7	7.5	7.4	7.3	6.9	8.05	7.48	0	8	6.5-8.5*	0
Suspended Solids	mg/l	52	**190**	**280**	72	**710**	**130**	74	**330**	**250**	28	28	**710**	211.6	0	8	100***	5
Biochemical Oxygen Demand (BOD)	mg/l	5.2	ND	29	9.5	ND	6.86	5.3	ND	11	5.16	ND	29	6.982	3	8	30***	0
Oil & Grease	mg/l	ND	ND	ND	ND	4.7	ND	ND	ND	ND	ND	ND	4.7	0.588	6	8	15***	0
Total Petroleum Hydrocarbons	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7	8		
Phosphorus, Total (as P)	mg/l	0.22	0.37	0.44	0.56	0.89	0.33	0.23	0.41	0.53	0.2	0.2	0.89	0.418	0	8	2***	0
Nitrogen, Ammonia (as N)	mg/l	**0.39**	**0.39**	**0.55**	**0.72**	**0.51**	**0.22**	**0.24**	**1.4**	**0.82**	**1.1**	**0.22**	**1.4**	**0.634**	0	8	0.025*	8
Phenolics, Total Recoverable	mg/l	ND	0.086	0.043	0.056	ND	ND	ND	ND	0.036	0.055	ND	0.086	0.023	5	8	****	
Total Organic Carbon (TOC)	mg/l	13	4.9	6.2	20	14	11	8.8	14	21	12	4.9	21	12.49	0	8		
Chemical Oxygen Demand (COD)	mg/l	74	94	130	110	130	32	44	96	130	39	32	130	87.90	0	8		
SVOC	µg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8	8	****	
Antimony	mg/l	ND	ND	ND	0.01	ND	ND	0.0051	ND	0.01	ND	ND	0.01	0.0019	6	8	****	
Arsenic	mg/l	ND	ND	ND	0.0086	0.018	ND	ND	ND	ND	ND	ND	0.018	0.0033	6	8	****	
Beryllium	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8	8	****	
Cadmium	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8	8	****	
Chromium	mg/l	0.0057	0.015	0.021	0.0074	0.021	0.0077	0.0042	0.0042	0.0066	ND	0.0042	0.021	0.010	0	8	****	
Copper	mg/l	0.015	0.022	0.03	0.03	0.049	0.028	0.014	0.018	0.067	0.032	0.014	0.067	0.031	0	8	****	
Lead	mg/l	ND	0.0069	0.0069	0.0054	0.014	0.0063	ND	ND	0.022	ND	ND	0.014	0.0049	3	8	****	
Nickel	mg/l	0.0077	0.0073	0.0088	0.0096	0.013	ND	ND	ND	0.0062	0.012	ND	0.013	0.0058	3	8	****	
Selenium	mg/l	ND	ND	0.018	ND	ND	ND	ND	ND	ND	ND	ND	0.018	0.0023	7	8	****	
Silver	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8	8	****	
Thallium	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8	8	****	
Zinc	mg/l	0.12	0.13	0.14	0.13	0.24	0.55	0.082	0.14	0.39	0.11	0.082	0.55	0.203	0	8	****	
Mercury	µg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8	8	****	
VOC	µg/l	ND	ND	ND	ND		ND	ND	ND	ND	ND				5	7		
Ethylene Glycol MBE	mg/l	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7	7		
GRO	mg/l	ND	ND		ND	ND	ND					ND	ND	ND	5	5		
DRO	mg/l	1.3	ND		0.71	1.1	0.37					ND	1.3	0.7	1	5		
PCBs EPA 3510C	µg/l	ND	ND		ND	ND	ND	ND	ND	ND		ND	ND	ND	7	7		
Cyanide	mg/l	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7	7	****	
Fecal Coliforms	MPN/100 mL		**1600**	220		**>1600**	**>16000**	**600**	**1600**	**1100**	200	220	**>16000**	**3603**	0	6	400**	5
Total Coliforms	MPN/100 mL		>1600	900		>1600	3000	**31000**	500	**90000**	**17000**	900	**31000**	6433	0	6	10000**	1

blue font denotes replacement sample

* Basin Plan Limit. Tables 3-2 & C-1

** California Ocean Plan Limit

*** USEPA Industrial Permit

**** Basin plan objective applies only to surface waters with MUN beneficial use. Fairgrounds is located in area excepted from MUN.

SITE 6

in between grandstand and bing crosby hall

Sampling Event

Parameter ↓	Units	*2/11/2006*	*12/28/2004*	*11/12/2003*	MIN	MAX	MEAN	#ND	n	WQO	# Exceed WQO
Hexavalent Chromium	mg/l	ND	ND	ND	ND	ND	ND	3	3		
Chloride	mg/l	11	24	36	11	36	23.67	0	3	250*	0
Fluoride	mg/l	0.32	0.19	0.57	0.19	0.57	0.36	0	3	1*	0
Nitrite	mg/l	ND	ND	ND	ND	ND	ND	3	3	0.68***	0
Nitrate	mg/l	0.57	1.2	2.5	0.57	2.5	1.42	0	3		
Sulfate	mg/l	7.5	21	41	7.5	41	23.17	0	3	250*	0
Specific Conductance	mmhos/cm	54	160	400	54	400	204.67	0	3		
pH		7.2	7.15	7.45	7.15	7.45	7.27	0	3	6.5-8.5*	0
Suspended Solids	mg/l	52	26	**190**	26	**190**	89.33	0	3	100***	1
BOD	mg/l	ND	ND	11	ND	11	3.66	2	3	30***	0
Oil & Grease	mg/l	ND	ND	ND	ND	ND	ND	3	3	15***	0
Total Pet. Hydrocarbons	mg/l	ND	ND	ND	ND	ND	ND	3	3		
Phosphorus	mg/l	0.23	0.57	1.3	0.23	1.3	0.7	0	3	2***	0
Nitrogen, Ammonia	mg/l	**0.29**	**0.71**	**0.63**	**0.29**	**0.71**	**0.54**	0	3	0.025*	3
Phenolics	mg/l	ND	0.06	0.055	ND	0.06	0.038	1	3	****	
TOC	mg/l	4.9	13	31	4.9	31	16.3	0	3		
COD	mg/l	44	46	170	44	170	86.67	0	3		
SVOCs	µg/l	ND	ND	ND	ND	ND	ND	3	3	****	
Antimony	mg/l	0.039	0.1	0.07	0.039	0.1	0.070	0	3	****	
Arsenic	mg/l	ND	ND	0.0078	ND	0.0078	0.0026	2	3	****	
Beryllium	mg/l	ND	ND	ND	ND	ND	ND	3	3	****	
Cadmium	mg/l	ND	ND	ND	ND	ND	ND	3	3	****	
Chromium	mg/l	0.0036	0.0032	0.0084	0.0032	0.0084	0.005	0	3	****	
Copper	mg/l	0.016	0.022	0.2	0.016	0.2	0.079	0	3	****	
Lead	mg/l	ND	ND	0.01	ND	0.01	0.003	2	3	****	
Nickel	mg/l	0.0079	ND	0.0085	ND	0.0085	0.0054	1	3	****	
Selenium	mg/l	ND	ND	ND	ND	ND	ND	3	3	****	
Silver	mg/l	ND	ND	ND	ND	ND	ND	3	3	****	
Thallium	mg/l	ND	ND	ND	ND	ND	ND	3	3	****	
Zinc	mg/l	0.12	0.17	0.54	0.12	0.54	0.277	0	3	****	
Mercury	µg/l	ND	ND	ND	ND	ND	ND	3	3	****	
VOCs	µg/l	ND	ND	ND	ND	ND	ND	3	3		
Ethylene Glycol MBE	mg/l	ND	ND	ND	ND	ND	ND	3	3		
GRO	mg/l	ND	ND	ND	ND	ND	ND	3	3		
DRO	mg/l	0.28	ND	0.41	ND	0.41	0.23	1	3		
PCBs EPA 3510C	µg/l	ND	ND	ND	ND	ND	ND	3	3		
Cyanide	mg/l	ND	ND	ND	ND	ND	ND	3	3	****	
Fecal Coliforms	MPN/100 mL	**500**	80		80	**500**	290	0	2	400**	1
Total Coliforms	MPN/100 mL	>1600	1600		1600	1600	1600	0	2	10000**	0

* Basin Plan Limit. Tables 3-2 & C-1

** California Ocean Plan Limit

*** USEPA Industrial Permit

**** Basin plan objective applies only to surface waters with MUN beneficial use. Fairgrounds is located in area excepted from MUN.

SITE 7

parking lot at end of race track

Parameter ↓	Units	*2/11/2005*	MIN	MAX	MEAN	#ND	n	WQO	# Exceed WQO
Hexavalent Chromium	mg/l	ND			ND	1	1		
Chloride	mg/l	24			24	0	1	250*	0
Fluoride	mg/l	0.16			0.16	0	1	1*	0
Nitrite	mg/l	ND			ND	1	1	0.68***	0
Nitrate	mg/l	0.78			0.78	0	1		
Sulfate	mg/l	22			22	0	1	250*	0
Specific Conductance	mmhos/cm	120			120	0	1		
pH		7.01			7.01	0	1	6.5-8.5*	0
Suspended Solids	mg/l	63			63	0	1	100***	0
BOD	mg/l	ND			ND	1	1	30***	0
Oil & Grease	mg/l	ND			ND	1	1	15***	0
Total Pet. Hydrocarbons	mg/l	ND			ND	1	1		
Phosphorus	mg/l	0.1			0.1	0	1	2***	0
Nitrogen, Ammonia	mg/l	**1**			**1**	0	1	0.025*	1
Phenolics	mg/l	ND			ND	1	1	****	
TOC	mg/l	3.1			3.1	0	1		
COD	mg/l	120			120	0	1		
SVOCs	µg/l	ND			ND	1	1	****	
Antimony	mg/l	ND			ND	1	1	****	
Arsenic	mg/l	ND			ND	1	1	****	
Beryllium	mg/l	ND			ND	1	1	****	
Cadmium	mg/l	ND			ND	1	1	****	
Chromium	mg/l	0.0047			0.0047	0	1	****	
Copper	mg/l	0.0072			0.0072	0	1	****	
Lead	mg/l	ND			ND	1	1	****	
Nickel	mg/l	ND			ND	1	1	****	
Selenium	mg/l	ND			ND	1	1	****	
Silver	mg/l	ND			ND	1	1	****	
Thallium	mg/l	ND			ND	1	1	****	
Zinc	mg/l	0.048			0.048	0	1	****	
Mercury	µg/l	ND			ND	1	1	****	
VOCs	µg/l	ND			ND	1	1		
Ethylene Glycol MBE	mg/l	ND			ND	1	1		
GRO	mg/l	ND			ND	1	1		
DRO	mg/l	ND			ND	1	1		
PCBs EPA 3510C	µg/l	ND			ND	1	1		
Cyanide	mg/l	ND			ND	1	1	****	
Fecal Coliforms	MPN/100 mL	110			110	0	1	400**	0
Total Coliforms	MPN/100 mL	900			900	0	1	10000**	0

* Basin Plan Limit. Tables 3-2 & C-1

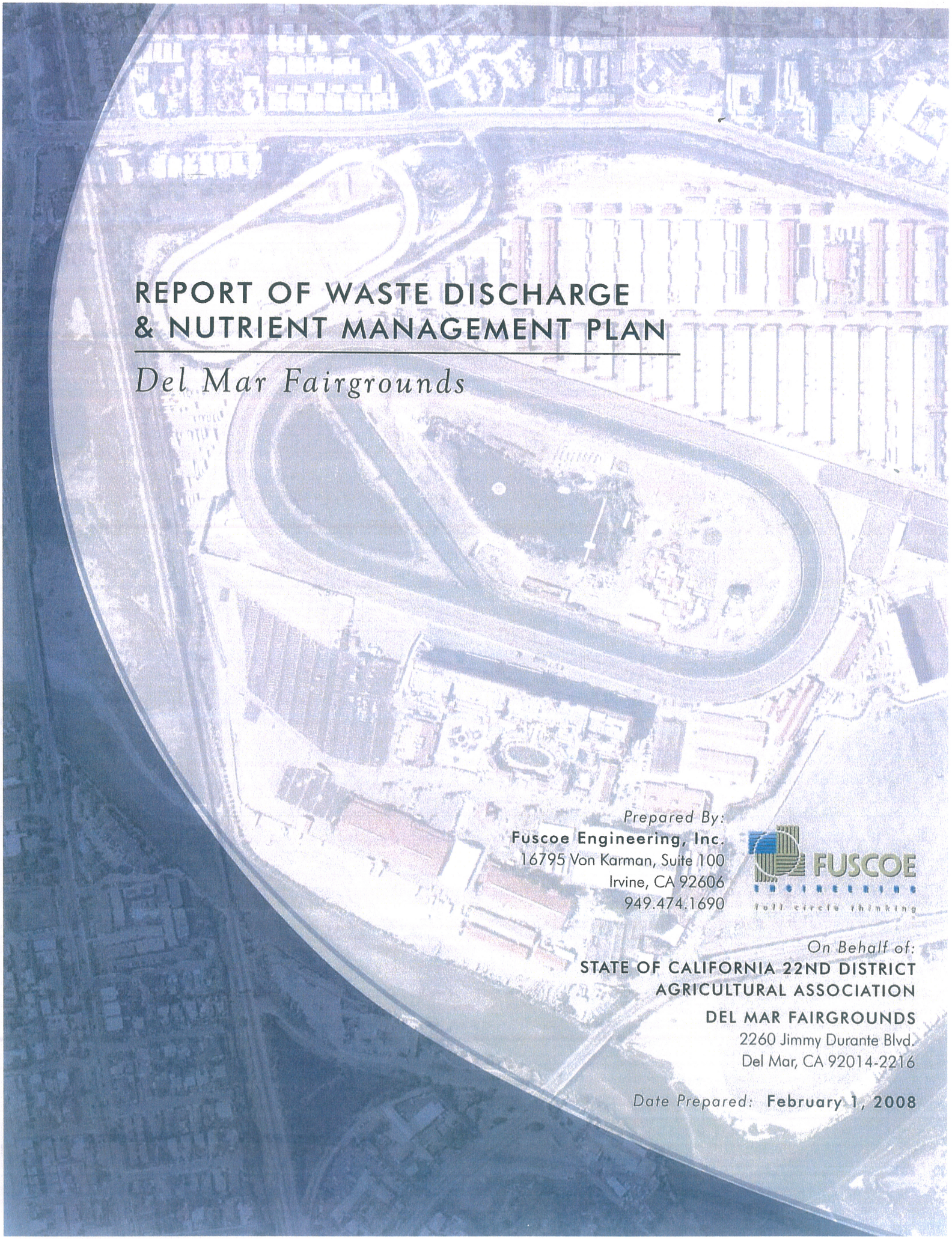
** California Ocean Plan Limit

*** USEPA Industrial Permit

**** Basin plan objective applies only to surface waters with MUN beneficial use. Fairgrounds is located in area excepted from MUN.

ATTACHMENT 1

REPORT OF WASTE DISCHARGE & NUTRIENT MANAGEMENT PLAN



REPORT OF WASTE DISCHARGE & NUTRIENT MANAGEMENT PLAN

Del Mar Fairgrounds

Prepared By:
Fuscoe Engineering, Inc.
16795 Von Karman, Suite 100
Irvine, CA 92606
949.474.1690

FUSCOE ENGINEERING
full circle thinking

On Behalf of:
STATE OF CALIFORNIA 22ND DISTRICT AGRICULTURAL ASSOCIATION
DEL MAR FAIRGROUNDS
2260 Jimmy Durante Blvd.
Del Mar, CA 92014-2216

Date Prepared: **February 1, 2008**

DEL MAR FAIRGROUNDS

REPORT OF WASTE DISCHARGE

&

NUTRIENT MANAGEMENT PLAN

Prepared For:

SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4340
858.467.2952

For the purpose of obtaining Waste Discharge Requirements (WDRs) specific to Concentrated Animal Feeding Operations at the Del Mar Fairgrounds.

Prepared By:

FUSCOE ENGINEERING, INC.
16795 Von Karman Suite 100
Irvine, CA 92606
949.474.1960

On Behalf Of:

STATE OF CALIFORNIA 22ND DISTRICT AGRICULTURAL ASSOCIATION
DEL MAR FAIRGROUNDS
2260 Jimmy Durante Blvd.
Del Mar, CA 92014-2216

Date Prepared: February 1, 2008

NPDES PERMIT APPLICATION FORMS

- RWQCB Form 200
- US EPA Application Form 1
- US EPA Application Form 2B
- Contributions Disclosure Statement
- Signatory and Certification Statement

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

State of California
Regional Water Quality Control Board

APPLICATION/REPORT OF WASTE DISCHARGE
GENERAL INFORMATION FORM FOR
WASTE DISCHARGE REQUIREMENTS OR NPDES PERMIT

I. FACILITY INFORMATION

A. Facility:

Name: Del Mar Fairgrounds			
Address: 2260 Jimmy Durante Boulevard			
City: Del Mar	County: San Diego	State: CA	Zip Code: 92014
Contact Person: Gary Reist		Telephone Number: 858-792-4272	

B. Facility Owner:

Name: 22nd District Agricultural Association			Owner Type (Check One) 1. ☐ Individual 2. ☐ Corporation
Address: 2260 Jimmy Durante Boulevard			3. ☑ Governmental Agency 4. ☐ Partnership
City: Del Mar	State: CA	Zip Code: 92014	5. ☐ Other:
Contact Person: Gary Reist		Telephone Number: 858-792-4272	Federal Tax ID:

C. Facility Operator (The agency or business, not the person):

Name: 22nd District Agricultural Association			Operator Type (Check One) 1. ☐ Individual 2. ☐ Corporation
Address: 2260 Jimmy Durante Boulevard			3. ☑ Governmental Agency 4. ☐ Partnership
City: Del Mar	State: CA	Zip Code: 92014	5. ☐ Other:
Contact Person: Gary Reist		Telephone Number: 858-792-4272	

D. Owner of the Land:

Name: 22nd District Agricultural Association			Owner Type (Check One) 1. ☐ Individual 2. ☐ Corporation
Address: 2260 Jimmy Durante Boulevard			3. ☑ Governmental Agency 4. ☐ Partnership
City: Del Mar	State: CA	Zip Code: 92014	5. ☐ Other:
Contact Person: Gary Reist		Telephone Number: 858-792-4272	

E. Address Where Legal Notice May Be Served:

Address: 2260 Jimmy Durante Boulevard		
City: Del Mar	State: CA	Zip Code: 92014
Contact Person: Gary Reist	Telephone Number: 858-792-4272	

F. Billing Address:

Address: 2260 Jimmy Durante Boulevard		
City: Del Mar	State: CA	Zip Code: 92014
Contact Person: Gary Reist	Telephone Number: 858-792-4272	

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

State of California
Regional Water Quality Control Board

APPLICATION/REPORT OF WASTE DISCHARGE GENERAL INFORMATION FORM FOR WASTE DISCHARGE REQUIREMENTS OR NPDES PERMIT

II. TYPE OF DISCHARGE

Check Type of Discharge(s) Described in this Application (A or B):

☐ **A. WASTE DISCHARGE TO LAND** ☑ **B. WASTE DISCHARGE TO SURFACE WATER**

Check all that apply:

- ☐ Domestic/Municipal Wastewater Treatment and Disposal
- ☐ Cooling Water
- ☐ Mining
- ☐ Waste Pile
- ☐ Wastewater Reclamation
- ☐ Other, please describe: _____
- ☐ Animal Waste Solids
- ☐ Land Treatment Unit
- ☐ Dredge Material Disposal
- ☐ Surface Impoundment
- ☐ Industrial Process Wastewater
- ☐ Animal or Aquacultural Wastewater
- ☐ Biosolids/Residual
- ☐ Hazardous Waste (see instructions)
- ☐ Landfill (see instructions)
- ☑ Storm Water

III. LOCATION OF THE FACILITY

Describe the physical location of the facility.

1. Assessor's Parcel Number(s)	2. Latitude	3. Longitude
Facility: 298-271-03	**Facility:** 32.9782	**Facility:** -117.2601
Discharge Point:	**Discharge Point:** 32.9785	**Discharge Point:** -117.2678

IV. REASON FOR FILING

- ☐ New Discharge or Facility
- ☐ Changes in Ownership/Operator (see instructions)
- ☐ Change in Design or Operation
- ☐ Waste Discharge Requirements Update or NPDES Permit Reissuance
- ☐ Change in Quantity/Type of Discharge
- ☑ Other: RWQCB Determination That Site Must Enroll

V. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Name of Lead Agency: Regional Water Quality Control Board

Has a public agency determined that the proposed project is exempt from CEQA? ☑ **Yes** ☐ **No**

If Yes, state the basis for the exemption and the name of the agency supplying the exemption on the line below.

Basis for Exemption/Agency: California Water Code 13389, Not a New Source

Has a "Notice of Determination" been filed under CEQA? ☐ **Yes** ☑ **No**

If Yes, enclose a copy of the CEQA document, Environmental Impact Report, or Negative Declaration. If no, identify the expected type of CEQA document and expected date of completion.

Expected CEQA Documents:

☐ **EIR** ☐ **Negative Declaration** **Expected CEQA Completion Date:** N/A

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

State of California
Regional Water Quality Control Board

APPLICATION/REPORT OF WASTE DISCHARGE GENERAL INFORMATION FORM FOR WASTE DISCHARGE REQUIREMENTS OR NPDES PERMIT

VI. OTHER REQUIRED INFORMATION

Please provide a COMPLETE characterization of your discharge. A complete characterization includes, but is not limited to, design and actual flows, a list of constituents and the discharge concentration of each constituent, a list of other appropriate waste discharge characteristics, a description and schematic drawing of all treatment processes, a description of any Best Management Practices (BMPs) used, and a description of disposal methods.

Also include a site map showing the location of the facility and, if you are submitting this application for an NPDES permit, identify the surface water to which you propose to discharge. Please try to limit your maps to a scale of 1:24,000 (7.5' USGS Quadrangle) or a street map, if more appropriate.

VII. OTHER

Attach additional sheets to explain any responses which need clarification. List attachments with titles and dates below:

Vicinity Map

You will be notified by a representative of the RWQCB within 30 days of receipt of your application. The notice will state if your application is complete or if there is additional information you must submit to complete your Application/Report of Waste Discharge, pursuant to Division 7, Section 13260 of the California Water Code.

VIII. CERTIFICATION

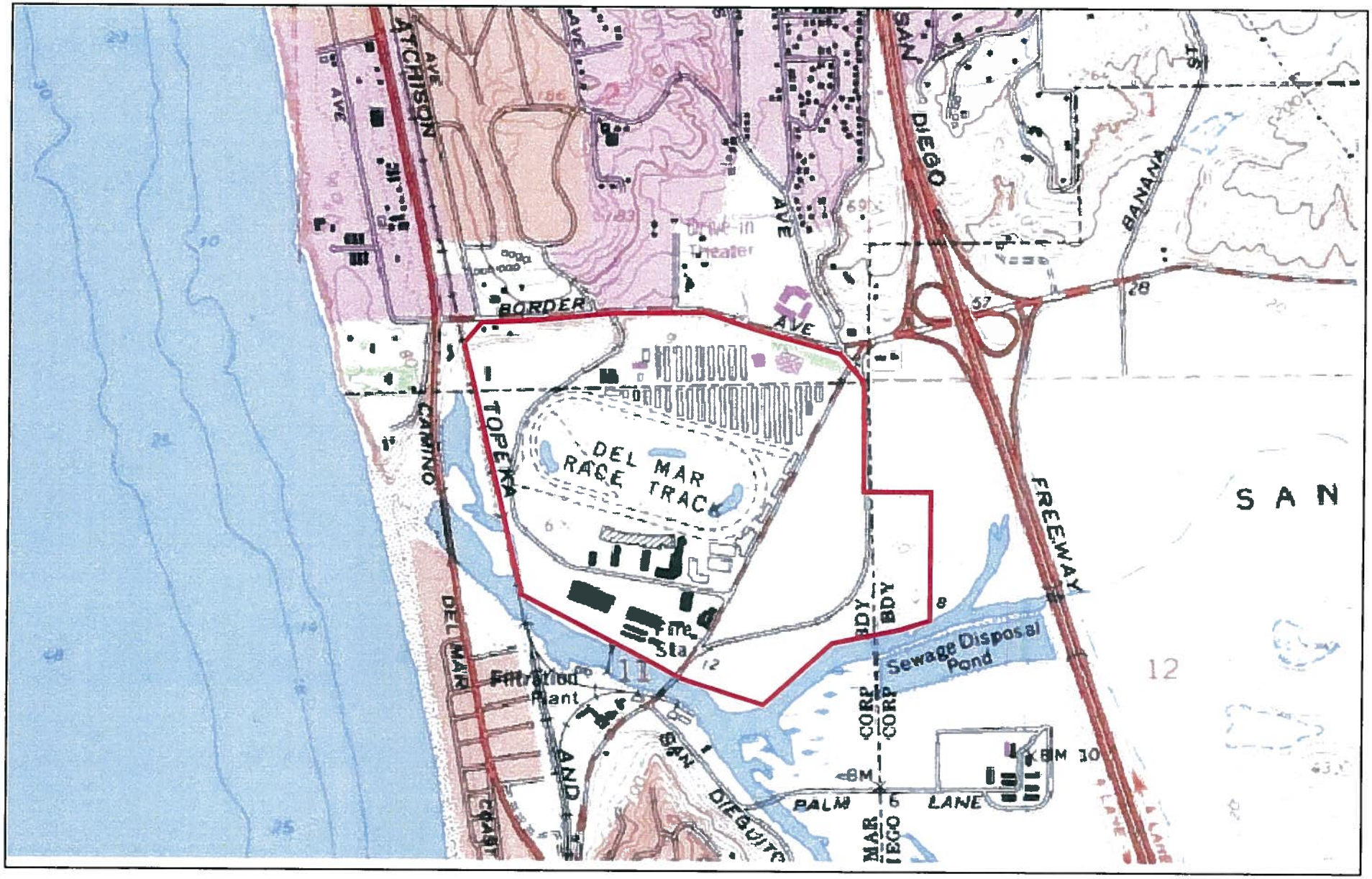
"I certify under penalty of law that this document, including all attachments and supplemental information, were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry 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."

Print Name: Gary Reist **Title:** Chief Plant Operations

Signature: Gary Reist **Date:** 2/1/08

FOR OFFICE USE ONLY

Date Form 200 Received:	Letter to Discharger:	Fee Amount Received:	Check #:



SCALE: 1" = 1300'

DEL MAR FAIRGROUNDS
APPROXIMATE BOUNDARY

VICINITY MAP
USGS 7.5 MIN QUAD MAP
DEL MAR FAIRGROUNDS
DEL MAR, CA
SCALE: 1" = 1300'

Please print or type in the unshaded areas only.

Form Approved. OMB No. 2040-0086.

FORM 1 GENERAL

U.S. ENVIRONMENTAL PROTECTION AGENCY
GENERAL INFORMATION
Consolidated Permits Program
(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER

S		T/A	C
F			D
1	2 — 13	14	15

LABEL ITEMS	
I.	EPA I.D. NUMBER
III.	FACILITY NAME
V.	FACILITY MAILING ADDRESS
VI.	FACILITY LOCATION

PLEASE PLACE LABEL IN THIS SPACE

GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent *(the area to the left of the label space lists the information that should appear)*, please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI *(except VI-B which must be completed regardless)*. Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of **bold-faced terms**.

SPECIFIC QUESTIONS	Mark "X" YES	NO	FORM ATTACHED	SPECIFIC QUESTIONS	Mark "X" YES	NO	FORM ATTACHED
A. Is this facility a **publicly owned treatment works** which results in a **discharge** to **waters of the U.S.**? (FORM 2A)		X		B. Does or will this facility *(either existing or proposed)* include a **concentrated animal feeding operation** or **aquatic animal production facility** which results in a **discharge** to **waters of the U.S.**? (FORM 2B)	X		X
	16	17	18		19	20	21
C. Is this a facility which currently results in **discharges** to **waters of the U.S.** other than those described in A or B above? (FORM 2C)		X		D. Is this a proposed facility *(other than those described in A or B above)* which will result in a **discharge** to **waters of the U.S.**? (FORM 2D)		X	
	22	23	24		25	26	27
E. Does or will this facility treat, store, or dispose of **hazardous wastes**? (FORM 3)		X		F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
	28	29	30		31	32	33
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X		H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
	34	35	36		37	38	39
I. Is this facility a proposed **stationary source** which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X		J. Is this facility a proposed **stationary source** which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an **attainment area**? (FORM 5)		X	
	40	41	42		43	44	45

III. NAME OF FACILITY

C 1 SKIP: DEL MAR FAIRGROUNDS

15 | 16 – 29 | 30 — 69

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & title)*	B. PHONE *(area code & no.)*
C 2 REIST, GARY CHIEF PLANT OPERATIONS	(858) 792-4272
15 | 16 — 45	46 — 48 | 49 — 51 | 52 — 55

V. FACILTY MAILING ADDRESS

A. STREET OR P.O. BOX

C 3 2260 JIMMY DURANTE BOuLEVARD

15 | 16 — 45

B. CITY OR TOWN	C. STATE	D. ZIP CODE
C 4 DEL MAR	CA	92014
15 | 16 — 40	41 — 42	47 — 51

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER

C 5 2260 JIMMY DURANTE BOULEVARD

15 | 16 — 45

B. COUNTY NAME

SAN DIEGO

46 — 70

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE *(if known)*
C 6 DEL MAR	CA	92014	
15 | 16 — 40	41 — 42	47 — 51	52 — 54

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

VII. SIC CODES *(4-digit, in order of priority)*

A. FIRST	B. SECOND
9900 — *(specify)* The category "Unclassified" corresponds to SIC code 9900 and other non-classified aggregated load.	*(specify)*
C. THIRD	**D. FOURTH**
(specify)	*(specify)*

VIII. OPERATOR INFORMATION

A. NAME

22ND DISTRICT AGRICULTURAL ASSOCIATION

B. Is the name listed in Item VIII-A also the owner? ☑ YES ☐ NO

C. STATUS OF OPERATOR *(Enter the appropriate letter into the answer box: if "Other," specify.)*

F = FEDERAL
S = STATE
P = PRIVATE
M = PUBLIC *(other than federal or state)*
O = OTHER *(specify)*

S — *(specify)*

D. PHONE *(area code & no.)*

A — (858) 755-1161

E. STREET OR P.O. BOX

2260 JIMMY DURANTE BOULEVARD

F. CITY OR TOWN	G. STATE	H. ZIP CODE	IX. INDIAN LAND
DEL MAR	CA	92014	Is the facility located on Indian lands? ☐ YES ☑ NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES *(Discharges to Surface Water)*	D. PSD *(Air Emissions from Proposed Sources)*
N — CAS000001	P
B. UIC *(Underground Injection of Fluids)*	**E. OTHER** *(specify)*
U	*(specify)*
C. RCRA *(Hazardous Wastes)*	**E. OTHER** *(specify)*
R	*(specify)*

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers, and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS *(provide a brief description)*

THE DEL MAR FAIRGROUNDS IS 300 ACRE STATE OWNED MULTI USE FACILITIY WHICH HOLDS MANY LARGE AND SMALL EVENTS THROUGHOUT THE YEAR. THE DEL MAR FAIRGROUNDS IS HOME TO THE DEL MAR THOROUGHBRED HORSE RACE MEET, THE SAN DIEGO COUNTY FAIR, LIVE MUSIC EVENTS, HOLIDAY EVENTS AND FESTIVITIES, TRADE SHOWS AND DISPLAYS, SPORTS AND HORSE SHOW EVENTS, AND OTHER. THE FACILITY HOLDS EVENTS YEAR ROUND, HOWEVER THE TWO LARGEST EVENTS, THE RACE MEET AND THE FAIR, ARE HELD IN THE SUMMER.

THE 22ND DISTRICT AGRICULTURAL ASSOCIATION A THE STATE OF CALIFORNIA AGENCY WHICH OWNS AND MANAGES THE ENTIRE PROPERTY. THE RACING OPERATIONS ARE OPERATED BY A LEASER, THE DEL MAR THOROUGHBRED CLUB, WHO HAS MANAGED THE RACE MEET FOR DECADES. OTHER GROUPS THROUGHOUT THE YEAR RENT OR LEASE FACILITIES ON THE PROPERTY AS WELL.

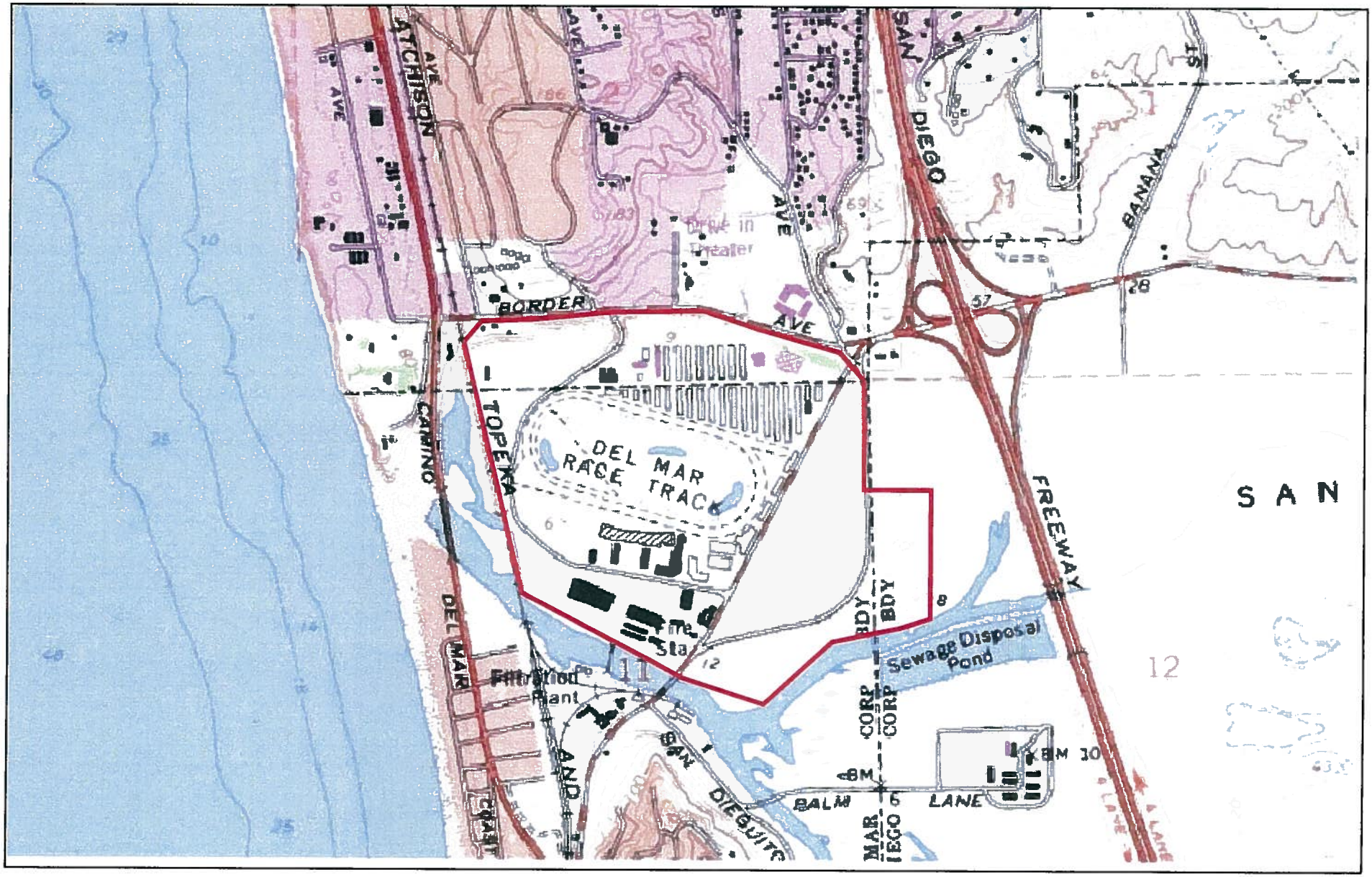
XIII. CERTIFICATION *(see instructions)*

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE *(type or print)*	B. SIGNATURE	C. DATE SIGNED
GARY REIST	Gary Reist	2/1/08

COMMENTS FOR OFFICIAL USE ONLY

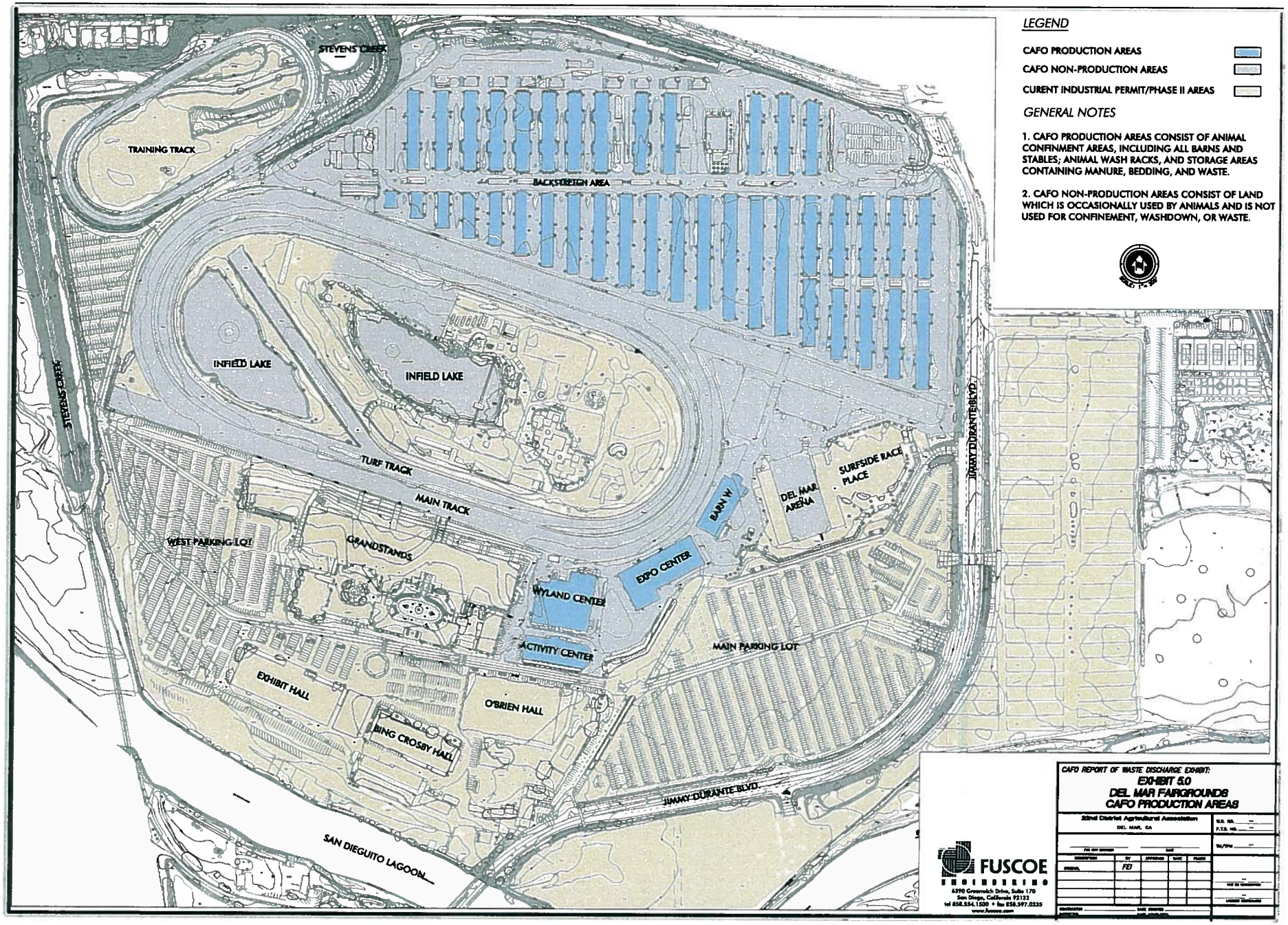
C



SCALE: 1" = 1300'

DEL MAR FAIRGROUNDS
APPROXIMATE BOUNDARY

VICINITY MAP
USGS 7.5 MIN QUAD MAP
DEL MAR FAIRGROUNDS
DEL MAR, CA
SCALE: 1" = 1300'


STEVENS CREEK
TRAINING TRACK
BACKSTRETCH AREA
INFIELD LAKE
INFIELD LAKE
JIMMY DURANTE BLVD.
TURF TRACK
MAIN TRACK
WEST PARKING LOT
GRANDSTANDS
BARN W
DEL MAR ARENA
SURFSIDE RACE PLACE
EXPO CENTER
WYLAND CENTER
ACTIVITY CENTER
MAIN PARKING LOT
EXHIBIT HALL
O'BRIEN HALL
BING CROSBY HALL
JIMMY DURANTE BLVD.
SAN DIEGUITO LAGOON
LEGEND
CAFO PRODUCTION AREAS
CAFO NON-PRODUCTION AREAS
CURENT INDUSTRIAL PERMIT/PHASE II AREAS
GENERAL NOTES
1. CAFO PRODUCTION AREAS CONSIST OF ANIMAL CONFINMENT AREAS, INCLUDING ALL BARNS AND STABLES; ANIMAL WASH RACKS, AND STORAGE AREAS CONTAINING MANURE, BEDDING, AND WASTE.
2. CAFO NON-PRODUCTION AREAS CONSIST OF LAND WHICH IS OCCASIONALLY USED BY ANIMALS AND IS NOT USED FOR CONFINEMENT, WASHDOWN, OR WASTE.
FUSCOE ENGINEERING
6390 Greenwich Drive, Suite 170
San Diego, California 92122
tel 858.554.1500 • fax 858.597.0335
www.fuscoe.com
CAFO REPORT OF WASTE DISCHARGE EXHIBIT:
EXHIBIT 5.0
DEL MAR FAIRGROUNDS
CAFO PRODUCTION AREAS
22nd District Agricultural Association
DEL MAR, CA
FEI

Form Approved
OMB No. 2040-0250
Approval expires 12-15-05

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)

FORM 2B NPDES

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY
APPLICATIONS FOR PERMIT TO DISCHARGE WASTEWATER
CONCENTRATED ANIMAL FEEDING OPERATIONS AND AQUATIC ANIMAL PRODUCTION FACILITIES

I. GENERAL INFORMATION

Applying for: Individual Permit ☒ Coverage Under General Permit ☐

A. TYPE OF BUSINESS	B. CONTACT INFORMATION	C. FACILITY OPERATION STATUS
☒ 1. Concentrated Animal Feeding Operation (complete items B, C, D, and Section II)	Owner/or Operator Name: 22ND DISTRICT AGRICULTURAL ASSOC.	☒ 1. Existing Facility
☐ 2. Concentrated Aquatic Animal Production Facility (complete items B, C, and section III)	Telephone: (858) 755-1161	☐ 2. Proposed Facility
	Address: 2260 JIMMY DURANTE BLVD	
	Facsimile: (858) 755-7820	
	City: DEL MAR State: CA Zip Code: 92014	

D. FACILITY INFORMATION

Name: DEL MAR FAIRGROUNDS Telephone: (858) 755-1161
Address: 2260 JIMMY DURANTE BLVD Facsimile: (858) 755-7820
City: DEL MAR State: CA Zip Code: 92104
County: SAN DIEGO Latitude: 32.975 Longitude: -117.263

If contract operation: Name of Integrator: _____
Address of Integrator: _____

II. CONCENTRATED ANIMAL FEEDING OPERATION CHARACTERISTICS

A. TYPE AND NUMBER OF ANIMALS

1. TYPE	2. ANIMALS: NO. IN OPEN CONFINEMENT	2. ANIMALS: NO. HOUSED UNDER ROOF
☐ Mature Dairy Cows		
☐ Dairy Heifers		
☐ Veal Calves		
☐ Cattle (not dairy or veal)		
☐ Swine (55 lbs. or over)		
☐ Swine (under 55 lbs.)		
☒ Horses		2130
☐ Sheep or Lambs		
☐ Turkeys		

B. Manure, Litter and/or Wastewater Production and Use

a) How much manure, litter and wastewater is generated annually by the facility? 67,790 tons _____ gallons

b) If land applied how many acres of land under the control of the applicant are available for applying the CAFOs manure/litter/wastewater? 0 acres

c) How many tons of manure or litter, or gallons of wastewater produced by the CAFO will be transferred annually to other persons? (tons)/gallons (*circle one*) 67,790 tons

[redacted]

☐ Chickens (Broilers)			[redacted]
☐ Chickens (Layers)			
☐ Ducks			
☐ Other Specify _____			
3. TOTAL ANIMALS		2130	

C. ☒ TOPOGRAPHIC MAP

D. TYPE OF CONTAINMENT, STORAGE AND CAPACITY

1. Type of Containment	Total Capacity (in gallons)	
☐ Lagoon		[redacted]
☐ Holding Pond		
☐ Evaporation Pond		
☒ Other: Specify Sanitary Sewer Diversion	Approx. 630 gal. per minute	

2. Report the total number of acres contributing drainage: 48.46 acres

3. Type of Storage	Total Number of Days	Total Capacity (gallons/tons)	
☐ Anaerobic Lagoon			[redacted]
☐ Storage Lagoon			
☐ Evaporation Pond			
☐ Aboveground Storage Tanks			
☐ Belowground Storage Tanks			
☐ Roofed Storage Shed			
☐ Concrete Pad			
☐ Impervious Soil Pad			
☒ Other: Specify Stockpiling for Haul-off	Approx. 1 days	Approx. 1500	

E. NUTRIENT MANAGEMENT PLAN

A. Has a nutrient management plan been developed? ☒ Yes ☐ No

B. Is a nutrient management plan being implemented for the facility? ☒ Yes ☐ No

C. If no, when will the nutrient management plan be developed? Date: _____

D. The date of the last review or revision of the nutrient management plan. Date: Jan 2008

E. If not land applying, describe alternative use(s) of manure, litter and or wastewater: Manure and bedding made of straw or wood shavings is hauled offsite for recycling. 100 % of material is disposed in this fashion. Wastewater is sent to sanitary sewer.

Form Approved
OMB No. 2040-0250
Approval expires 12-15-05

F. LAND APPLICATION BEST MANAGEMENT PRACTICES
Please check any of the following best management practices that are being implemented at the facility to control runoff and protect water quality:

☑ Buffers ☐ Setbacks ☐ Conservation tillage ☐ Constructed wetlands ☐ Infiltration field ☐ Grass filter ☐ Terrace

III. CONCENTRATED AQUATIC ANIMAL PRODUCTION FACILITY CHARACTERISTICS

A. For each outfall give the maximum daily flow, maximum 30-day flow, and the long-term average flow.

1. Outfall No.	2. Flow (*gallons per day*)		
	a. Maximum Daily	b. Maximum 30 Day	c. Long Term Average

B. Indicate the total number of ponds, raceways, and similar structures in your facility.

1. Ponds	2. Raceways	3. Other

C. Provide the name of the receiving water and the source of water used by your facility.

1. Receiving Water	2. Water Source

D. List the species of fish or aquatic animals held and fed at your facility. For each species, give the total weight produced by your facility per year in pounds of harvestable weight, and also give the maximum weight present at any one time.

1. Cold Water Species			2. Warm Water Species		
a. Species	b. Harvestable Weight (*pounds*)		a. Species	b. Harvestable Weight (*pounds*)	
	(1) Total Yearly	(2) Maximum		(1) Total Yearly	(2) Maximum

E. Report the total pounds of food during the calendar month of maximum feeding.

1. Month	2. Pounds of Food

IV. CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. Name and Official Title (*print or type*)	B. Phone No. ( )
GARY REIST CHIEF PLANT OPERATIONS	858 792-4272
C. Signature: Gary Reist	D. Date Signed: 2/1/08

California Regional Water Quality Control Board
San Diego Region

Terry Tamminen
Secretary for
Environmental
Protection

9174 Sky Park Court, Suite 100, San Diego, California 92123-4340
(858) 467-2952 • Fax (858) 571-6972
http://www.swrcb.ca.gov/rwqcb9

Arnold Schwarzenegger
Governor

NOTICE TO APPLICANTS APPLYING FOR WASTE DISCHARGE REQUIREMENTS OR NPDES PERMITS

Government Code Section 84308 (c) requires all applicants for waste discharge requirements or NPDES permits to include with their application a statement disclosing any contributions made by the applicant to any Regional Board member if the contributions amounted to $250.00 or more, were made within 12 months of the date of application, and were to be used in a federal, state, or local election.

The current Regional Board members are: Vickie Butcher, Terese Ghio, Janet Keller, John Minan, Gary Stephany and Richard Wright.

Please reproduce the attached form on your letterhead, complete the form, and submit it as a part of your application (Report of Waste Discharge).

Updated: May 2004

CONTRIBUTIONS DISCLOSURE STATEMENT

Check the appropriate response:

✓ I certify that DEL MAR FAIRGROUNDS
(name of applicant)
has **not** made contributions amounting to $250.00 or more to any of the current Regional Board members, within 12 months of the date of this application, for use in a federal, state, or local election.

_____ I certify that _____
(name of applicant)
has made contributions amounting to $250.00 or more to any of the current Regional Board members, within 12 months of the date of this application, for use in a federal, state, or local election.

Regional Board Member	Amount of Contribution

Signature Gary Reist

Name Gary Reist

Title Chief Plant Operations

Date 8/1/08

Organization 22nd District Agricultural Association

Address 2260 Jimmy Durante Blvd.
Del Mar, CA 92014

Phone Number 858-792-4272

I certify that:

(for a municipal, state, federal, or other public agency)
I am a principal executive officer or ranking elected official; or

In the case of Federal agencies, I am the chief executive officer of the agency, or I am the senior executive officer having responsibilty for the overall operations of a principal geographic unit of the agency.

(for a partnership or sole proprietorship)
I am a general partner (partnership) or a proprietor (sole proprietorship).

(for a corporation)
I am President, Vice President, Secretary or Treasurer of the corporation and in charge of a principal business function, or I perform similar policy or decision making functions for the corporation; or,

I am the manager of one or more manufacturing, production or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), and authority to sign documents has been assigned or delegated to me in accordance with corporate procedures.

****

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

Date of Cover Letter

Description of Document

Application

Type of Organization (please circle): 1. sole proprietorship 2. partnership 3. corporation 4. municipal (5. state,) federal or other public agency

Signature Gary Reist

Name Gary Reist

Title Chief - Plant Operations

Date 2/1/08

Company Name 22nd District Agricultural Association

Phone Number 858-792-4272

TABLE OF CONTENTS

APPENDICES

TABLES

EXHIBITS

ACRONYMS

22nd DAA	22nd District Agricultural Association
AFO	animal feeding operation
amsl	above mean sea level
BAT	best achievable technology
BCT	best conventional technology
bgs	below ground surface
BMP	best management practice
BOD	biological oxygen demand
CAFO	concentrated animal feeding operation
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulation
COD	chemical oxygen demand
DMTC	Del Mar Thoroughbred Club
FEMA	Federal Emergency Management Association
LID	low impact development
MBAS	methylene blue activated substances
MEP	maximum extent practicable
MS4	municipal separate storm sewer system
MTBE	ethlyne glycol monobutyl ether
ND	no detection
NPDES	National Pollutant Discharge Elimination System
PCB	polychlorinated biphenyls
ROWD	Report of Waste Discharge
RWQCB	Regional Water Quality Control Board
SVOC	semivolatile organic compounds
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TSS	total suspended solids
TRPH	total recoverable petroleum hydrocarbons
VOC	volatile organic compounds
WDR	Waste Discharge Requirement
WQTR	Water Quality Technical Report
WURMP	Watershed Urban Runoff Management Plan

1 INTRODUCTION

The Del Mar Fairgrounds encompasses approximately 300 acres in the City of Del Mar, and includes a variety of facilities including exhibit halls, offices, parking lots, a horse arena, racetrack, and horse stables, among other facilities. The Fairgrounds property is owned and operated by the State of California 22nd District Agricultural Association (22nd DAA), although operations management for specific events are often conducted by independent agencies through agreements with the 22nd DAA.

In November 2007, the 22nd DAA was advised by the San Diego Water Quality Control Board (RWQCB) during a follow-up meeting concerning an inspection under the National Pollutant Discharge Elimination System (NPDES) General Industrial Permit[1] (of which the Fairgrounds is currently covered under) that it was highly likely that it was subject to additional NPDES permitting requirements concerning Confined Animal Feeding Operations (CAFO). In a letter dated November 6, 2007, the San Diego RWQCB required the 22nd DAA to submit a NPDES application and Report of Waste Discharge (ROWD) to obtain Waste Discharge Requirements (WDRs) from the San Diego RWQCB. A copy of the letter is included under Appendix 1.

Pursuant to the definitions in 40 Code of Federal Regulations (CFR) Part 122.23 (NPDES Permit Regulations) and Effluent Limitation Guidelines and Standards for CAFOs established in 40 CFR Part 412 (Subpart A- Horse and Sheep), and revised in February 12, 2003, portions of Del Mar Fairgrounds are subject to the regulatory requirements for CAFOs. Portions of the property are also a confined animal facility pursuant to California Code of Regulations, Title 27, section 20164 because they confine horses that do not graze. Because the Fairgrounds houses more than 500 horses for 45 days or more in a 12-month period, the Fairgrounds is also considered a Large CAFO facility.

It should be noted that although portions of the Fairgrounds can be considered a Large CAFO, the Fairgrounds does not house more than 500 horses continually throughout the year. Horses and other animals are only confined when events are held at the Fairgrounds. This includes the 43-racing meet, where on average 2,000 to 2,200 horses are confined during the racing season. The Fairgrounds also hosts several equestrian-related events throughout the year, in which approximately 500 to 700 horses are confined for periods of 5 to 7 days. In addition, horses as well as other livestock animals are confined at the Fairgrounds during the 21-day San Diego Fair, held annually from June to July. During the remaining portions of the year when no events are held, few to no animals are housed on-site. Therefore, CAFO regulations do not apply to the entire Fairgrounds facility, and only apply during portions of the year where animals are present.

This ROWD was prepared to accompany the WDR application forms to comply with those requirements as stated by the RWQCB, as well as with 40 CFR Part 122.23, of which the regulations are based. This report summarizes the activities and operations in relation to CAFO at the Del Mar Fairgrounds facilities. The following information is presented:

[1] State Water Resources Control Board (SWRCB) Order No. 97-03-DWQ.

- Existing on-site facilities, including CAFO production areas, non-production areas, and non-CAFO areas covered under separate NPDES permits
- Best management practices (BMPs) implemented to protect storm water quality for CAFO production areas and non-production areas
- Current storm water monitoring programs for CAFO areas
- Supporting exhibits and maps depicting locations of on-site facilities and BMPs

In addition to the above-listed items, a Nutrient Management Plan has been prepared in accordance with CAFO regulations. The Nutrient Management Plan describes practices, operations, and BMPs specific to manure and CAFO-related waste collection, storage, and removal from the site. The Nutrient Management Plan is included as Appendix 3 of this report.

The Del Mar Fairgrounds operates its CAFO operations similar to other racetracks in Southern California, specifically Santa Anita Park and the Los Angeles County Fair, Hotel and Exposition Complex (LA Fairplex), both of which have current WDRs specific to CAFO operations. Due to the similar operations and for consistency purposes, CAFO definitions and language from Los Angeles RWQCB Orders R4-2006-0081 (Santa Anita) and R4-2006-0061 (LA Fairplex) have been incorporated into this report.

2 SITE DESCRIPTION

2.1 LOCATION

The Del Mar Fairgrounds property is bounded by the Interstate 5 (I-5) to the east, Via de la Valle to the north, the San Diego Northern Railway and Stevens Creek to the west, and the San Dieguito River to the south. In addition to Villa de la Valle, direct access to the Fairgrounds is also provided by Jimmy Durante Boulevard, which traverses the Fairgrounds property. The Fairgrounds property is also located adjacent to the Pacific Ocean, separated by railroad tracks and Pacific Coast Highway to the west. A Vicinity Map is provided under Section 8 of this report (Exhibit 1.0).

2.2 WATERSHED DESCRIPTION

The Del Mar Fairgrounds is located within the San Dieguito River Watershed, which drains approximately 346 square miles in central San Diego County. The watershed includes portions of the Cities of Del Mar, Escondido, Poway, San Diego, and Solana Beach, as well as unincorporated San Diego County. The majority of the watershed is undeveloped (54%) and/or parks & open space (29%); however approximately half of the undeveloped land is zoned for future residential development.[2] The San Dieguito River, the watershed's primary drainage course, is located along the Fairground's southern property boundary, and Stevens Creek, a tributary to the San Dieguito River, is located along the western and northern property boundary. The San Dieguito River discharges to the Pacific Ocean approximately 0.3 mile downstream of the project site. Refer to Section 8 for a map of the San Dieguito Watershed (Exhibit 2.0).

2.3 SOIL & GROUNDWATER CONDITIONS

Soil types on-site are characterized as generally underlain by fill, alluvium, and materials of the Bay Point Formation. The fill is relatively shallow, extending from depths 3 to 6 feet below ground surface (bgs). The alluvium exists approximately 15-20 feet bgs, and consists of soft to loose, clayey, sandy silt. Dense to very dense, fine grained sand and silty sand alluvium exists beneath the softer alluvium to depths explored of 55 to 66 feet. Groundwater is anticipated to be at depths ranging from 5 to 10 feet bgs, and is subject to tidal influence and seasonal variations resulting in saline conditions for such features as the infield lakes that are influenced by groundwater conditions in the area.[3]

[2] County of San Diego. Project Clean Water Website: http://www.projectcleanwater.org/html/ws_san_dieguito.html
[3] Ninyo & Moore. Limited Geotechnical Evaluation Del Mar Fairgrounds Master Plan, Del Mar, CA. September 12, 2006.

2.4 OVERALL DRAINAGE CONDITIONS

Under existing conditions, storm water runoff within the Fairgrounds is generally conveyed west, southwest, and south, discharging off-site at five major discharge points. Storm water runoff from the northern portions of the Fairgrounds, including the backstretch areas, is conveyed west to a pump station located between the training track and Stevens Creek. During the dry season, runoff is diverted to the sewer system. During the wet season (October 1 through April 30), only first flush runoff (roughly equivalent to 0.2 inches) is diverted to the sewer, and the remaining flows are discharged to Stevens Creek at Discharge Point #1. Runoff from the main track drainage area is conveyed to a pump station located west of the grandstands. At this pump station, low-flow and initial storm event flows (up to the first flush volume, approximately 32,000 ft^3) are diverted to the sewer system, while high flows and extended storm event flows are discharged to Stevens Creek at Discharge Point #2. Within the main track, the majority of runoff is conveyed inward, discharging into the infield lakes. During extreme high flow conditions and when lakes are at capacity (total capacity of 520,000 ft^3), excess flows from the main track are discharged into Stevens Creek at Discharge Point #2. Water within the infield lakes does not discharge off-site. Runoff from the western parking lot discharges to the San Dieguito River at Discharge Point #3, and runoff from the central Fairgrounds facilities, including the exhibit halls and grandstands, drains south discharging to the San Dieguito River at Discharge Point #4. Runoff from the horse arena and main parking lot generally drains southwest, discharging to the San Dieguito River at Discharge Point #5. Runoff from the east dirt parking lot, located east of Jimmy Durante Boulevard, generally sheet flows south and west, and is contained on-site. Refer to Exhibit 4.0 in Section 8 for locations of the existing storm drain facilities and discharge points.

The Federal Emergency Management Agency (FEMA) is the agency which administrates the National Flood Insurance Program, and prepares Flood Insurance Rate Maps to identify areas of flood hazards within a community. According to FEMA Map No. 06073C1307-F (see Exhibit 3.0), the majority of the Fairgrounds property is located within the floodplain of the 100-year storm event, and a portion of the site (that portion nearest to the San Dieguito River) is located within the 100-year floodway. According to the FEMA Map, the flood elevation near the horse arena is approximately 15 ft above mean sea level (amsl), and the elevation of the ground surface is 7.5 ft amsl. Throughout the remainder of the site, flood depths vary between 8 and 9 feet. Flooding is an existing condition, and procedures are in place for ensuring safety during flooding conditions.

2.5 FAIRGROUNDS OPERATIONS

The Del Mar Fairgrounds operates year-round, hosting various events on the property. Facilities at the Fairgrounds include a 1-mile synthetic dirt racetrack enclosing a turf track and infield lakes, a 15,000-seat grandstand, a paddock, dirt training track, offices, exhibit halls, show arena, off-track betting pavilion, machine shops, parking lots, stables, and grooms dormitories. All utilities on-site are owned and operated by the 22nd DAA. Operations management for specific events are often conducted by independent entities who enter into contact agreements with the 22nd DAA. These operators must agree to the rules and

regulations regarding operations and use of the facility. Refer to Exhibit 4.0 in Section 8 for locations of Fairgrounds facilities and major utilities.

Annually in July-August (dry season), the Del Mar Fairgrounds hosts the 43-day Del Mar Horse Racing Meet, which has been occurring at the facility since 1937. The Del Mar Thoroughbred Club (DMTC) operates the meet as well as manages racing operations on-site. The DMTC are a year round presence on the property, and often work in conjunction with the 22nd DAA concerning the track, grandstand, stables, and equipment. Thoroughbred horses are housed on the property, in the designated stable areas. Temporary barns are often constructed during the racing meet to meet demands during the racing season. On average, 2,000 horses and up to 2,200 horses can be housed on-site during the summer racing season.

In addition to the annual race meet, the Fairgrounds hosts the 22-day San Diego County Fair, which takes place annually in June-July (dry season). During the annual Fair, the majority of the Fairgrounds property is utilized for a variety of activities, including carnival areas, exhibits, livestock exhibits, horse shows, concerts and other entertainment events. For the livestock exhibits, various species of farm animals are temporarily housed in the exhibits, and include swine, sheep, goats, cattle, llamas, dogs, cats, and poultry. On average, the annual Fair features between 400 to 800 animals on-site, depending on the day and exhibits presented.

The Fairgrounds also hosts a variety of interim activities throughout the year, utilizing the exhibit halls, parking lots, horse arena, and other facilities. Activities include car shows, exhibitions, concerts, sporting events, horse shows and rodeos, among other events. In addition, the Fairgrounds property serves as an evacuation center for animals and nearby residents displaced during emergency situations, such as the San Diego Wildfires in 2003 and 2007.

2.6 NPDES PERMITTING

The entire Del Mar Fairgrounds property, including CAFO areas, is currently covered under the State Water Resources Control Board's (SWRCB) General Industrial Permit (Order 97-03-DWQ) (WDID #9-371001942). The General Industrial Storm Water Permit regulates storm water discharges from 10 categories of industrial activities, and also requires the development of an Industrial Storm Water Pollution Prevention Plan (SWPPP) and a monitoring plan. The Industrial SWPPP has two main objectives: 1) to identify and evaluate sources of pollutants associated with industrial activities, and 2) to identify and implement Best Management Practices (BMPs) that meet the Best Available Technology Economically achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) performance standards in reducing or preventing pollutants in runoff discharges.[4]

Per the requirements of the General Industrial Permit, an Industrial SWPPP was prepared in 1992, and was updated in 1997 and again in 2002 for the entire Fairgrounds. The Industrial SWPPP includes a description of the existing facilities, potential pollutant sources, BMPs to be

[4] State Water Resources Control Board (SWRCB). Industrial Storm Water Website: http://www.swrcb.ca.gov/stormwtr/industrial.html.

implemented on-site, and the existing monitoring and reporting requirements in accordance with the Industrial Permit. The Industrial SWPPP covers the entire Fairgrounds property and operations, including CAFO operations.

Current Industrial SWPPP practices include manure containment and material storage practices on-site for all CAFO associated activities. Material storage, operations, water quality testing, and annual reporting based on the provisions outlined in the General Industrial Permit have been historically followed by the Fairgrounds. Compliance with the General Industrial NPDES Permit falls under the authority of the San Diego RWQCB. During the month of August 2007, an Industrial SWPPP inspection was conducted by San Diego RWQCB staff and a final inspection report was produced. The purpose of the inspection was to review the Industrial SWPPP and evaluate the measures taken in the field to meet the objectives of the General Industrial Permit. The San Diego RWQCB's findings were supportive of the measures the 22nd DAA has taken to improve upon the source control and procedures to reduce the potential for pollutants to discharge off-site. A copy of the report is included as Appendix 4.

However, the nature of the Fairgrounds and its activities may not characterize it as an industrial facility under the General Industrial Permit. In April 2003, the SWRCB issued the Small Municipal Separate Storm Sewer System (MS4) Storm Water Permit (Water Quality Order No. 2003-0005-DWQ [Small MS4 Permit]). This NPDES permit is issued by the SWRCB to Small MS4 operators if the MS4 system discharges into Waters of the Untied States. Under the Small MS4 Permit, dischargers are required to develop and implement a Storm Water Management Program (SWMP) designed to reduce the discharge of pollutants through their MS4s to the Maximum Extent Practicable (MEP). The Small MS4 Permit identifies the Del Mar Fairgrounds as an anticipated non-traditional Small MS4. The San Diego RWQCB is the agency responsible for officially designating a facility for coverage under the Small MS4 Permit.

In a meeting with the San Diego RWQCB on October 2, 2007, the 22nd DAA requested that coverage under the Industrial Permit be terminated and the Fairgrounds enroll for coverage under the Small MS4 Permit. In a letter dated October 15, 2007 (see Appendix 1), the San Diego RWQCB provided further direction to the 22nd DAA on applying for coverage under the Small MS4 Permit and the requirements for preparation of a SWMP for the Fairgrounds. It is anticipated that the 22nd DAA will file for coverage under the Small MS4 permit in spring/summer 2008. Once the SWMP is approved by the San Diego RWQCB and coverage is obtained under the Small MS4 Permit, the 22nd DAA will file for termination of coverage under the General Industrial Permit. The SWMP developed will replace the current Industrial SWPPP, and CAFO operations, BMPs, and practices will also be incorporated into the SWMP for consistency.

2.7 WATER QUALITY CHARACTERIZATION

As part of the Industrial SWPPP, the 22nd DAA currently conducts water quality monitoring of discharges from the Fairgrounds as required by the General Industrial Permit. Storm water sampling is conducted at the five major outfalls from the Fairgrounds property. The Industrial Permit monitoring program is described further under Section 5 of this report.

To characterize current water quality conditions at the Fairgrounds, a summary of the previous sampling events is provided in Table 1 on the following page. Results are summarized for three of the five discharge points, since these are the only discharge points that discharge runoff from the CAFO production and non-production areas.

In general, exceedances of water quality objectives were observed for phosphorous, nitrogen, and bacteria consistently for most of the sites. However, exceedances of these constituents were also noted for the data collected in the San Dieguito River and Lagoon as part of the San Dieguito Watershed Urban Runoff Management Plan (WURMP) monitoring program.[5] A summary of the data is provided in Appendix 5.

[5] City of San Diego and San Dieguito Watershed Copermittees. San Dieguito Watershed Urban Runoff Management Program (WURMP) Website: http://www.projectcleanwater.org/html/wurmp_san_dieguito.html.

SUMMARY OF INDUSTRIAL PERMIT WATER QUALITY SAMPLING													
Parameter	Units	Sample/Discharge Point 1				Sample/Discharge Point 2				Sample/Discharge Point 5				
		n	Min	Max	# ND	n	Min	Max	# ND	n	Min	Max	# ND	WQO
Hexavalent Chromium	mg/l	6	ND	ND	6	4	ND	ND	4	5	ND	ND	5	--
Chloride	mg/l	6	100	530	0	4	25	120	0	6	17	150	0	250[1]
Fluoride	mg/l	6	ND	0.76	3	4	ND	0.28	1	6	0.17	1.8	0	1[1]
Nitrite	mg/l	6	ND	8.7	5	4	ND	ND	4	6	ND	0.37	5	0.68[3]
Nitrate (as N)	mg/l	6	1.3	3.1	0	4	0.37	0.84	0	6	0.26	2	0	--
Sulfate	mg/l	6	73	260	0	4	12	29	0	6	7.2	66	0	250[1]
Specific Conductance	mmhos/ cm	6	560	2300	0	4	110	220	0	6	130	820	0	--
pH		6	7.2	7.99	0	4	7.14	7.7	0	6	6.9	8.05	0	6.5-8.5[1]
Suspended Solids	mg/l	6	200	500	0	4	37	230	0	6	52	710	0	100[3]
BOD	mg/l	6	6.9	26	3	4	ND	ND	4	6	5.2	29	0	30[3]
Oil & Grease	mg/l	6	ND	ND	6	4	ND	ND	4	6	ND	4.7	5	15[3]
Total Petrol. Hydrocarbons	mg/l	6	ND	ND	6	4	ND	ND	4	6	ND	ND	6	--
Phosphorus	mg/l	6	0.45	0.9	0	4	0.19	0.47	0	6	0.22	0.89	0	2[3]
Ammonia (N)	mg/l	6	0.17	1	0	4	0.21	0.45	0	6	0.22	0.72	0	0.025[1]
Phenolics	mg/l	6	0.075	0.13	4	4	ND	0.52	2	6	ND	0.086	3	--
TOC	mg/l	6	4.9	13	0	4	3.9	9	0	6	4.9	20	0	--
COD	mg/l	6	49	250	0	4	42	220	0	6	32	130	0	--
SVOCs	mg/l	6	ND	ND	6	4	ND	ND	4	6	ND	ND	6	--
Antimony	mg/l	6	ND	0.0058	5	4	ND	ND	4	6	ND	0.01	5	--
Arsenic	mg/l	6	ND	0.034	4	4	ND	0.012	3	6	ND	0.018	4	--
Beryllium	mg/l	6	ND	ND	6	4	ND	ND	4	6	ND	ND	6	--
Cadmium	mg/l	6	ND	ND	6	4	ND	ND	4	6	ND	ND	6	--
Chromium	mg/l	6	0.003	0.023	0	4	0.0033	0.016	0	6	0.0057	0.021	0	--

SUMMARY OF INDUSTRIAL PERMIT WATER QUALITY SAMPLING													
Parameter	Units	Sample/Discharge Point 1				Sample/Discharge Point 2				Sample/Discharge Point 5				
		n	Min	Max	# ND	n	Min	Max	# ND	n	Min	Max	# ND	WQO
Copper	mg/l	6	0.021	0.059	0	4	0.01	0.017	0	6	0.015	0.049	0	--
Lead	mg/l	6	ND	0.013	1	4	ND	0.0062	3	6	ND	0.014	1	--
Nickel	mg/l	6	0.0057	0.011	0	4	ND	0.0068	3	6	ND	0.013	1	--
Selenium	mg/l	6	ND	0.02	3	4	ND	ND	4	6	ND	0.018	5	--
Silver	mg/l	6	ND	ND	6	4	ND	ND	4	6	ND	ND	6	--
Thallium	mg/l	6	ND	ND	6	4	ND	ND	4	6	ND	ND	6	--
Zinc	mg/l	6	0.15	0.5	0	4	0.072	0.08	0	6	0.12	0.55	0	--
Mercury	mg/l	6	ND	ND	6	4	ND	ND	4	6	ND	ND	6	--
VOCs	mg/l	5	ND	ND	5	3	ND	ND	3	5			5	--
Ethylene Glycol MBE	mg/l	6	ND	ND	6	4	ND	ND	4	5	ND	ND	5	--
GRO	mg/l	6	ND	ND	6	4	ND	ND	4	5	ND	ND	5	--
DRO	mg/l	6	ND	0.32	3	4	ND	0.6	3	5	ND	1.3	1	--
PCBs	mg/l	6	ND	ND	6	4	ND	ND	4	5	ND	ND	5	--
Cyanide	mg/l	6	ND	ND	6	4	ND	ND	4	5	ND	ND	5	--
Fecal Coliform	MPN/100 mL	4	**1600**	**>16000**	0	3	70	**>1600**	0	4	220	**>16000**	0	400[2]
Total Coliform	MPN/100 mL	4	1600	3000	0	3	1600	>1600	0	4	900	3000	0	10000[3]

Note: Events sampled include major rain events on the following dates: 11/12/2003, 2/23/2004, 12/28/2004, 2/11/2005, 2/28/2006, 12/27/06 and 1/30/07. Samples were only collected at sites with sufficient water to collect the sample, therefore not all sites were sampled at each event.
Note: Text in bold denotes exceedances of water quality objective
1 San Diego Regional Water Quality Control Board. Water Quality Control Plan for the San Diego Basin. September 8, 1994. Tables 3-2 & C-1
2 State Water Resources Control Board. California Ocean Plan: Water Quality Control Plan for Ocean Waters of California. February 14, 2006.
3 US Environmental Protection Agency, Multi-Sector General Permit for Industrial Activities. 65 FR 64746, October 30, 2000.
-- No water quality objective available or is not applicable to site (note that site is excepted from MUN objectives per Basin Plan)
N Number of rain events sampled
ND Not detected
WQO Water quality objective

Table 1 Summary of storm water sampling conducted at specific discharge points

3 CAFO OPERATIONS

3.1 CAFO PRODUCTION AREAS

In accordance with 40 CFR Section 142.2(h), "CAFO production area" refers to the areas of operations that includes the animal confinement areas, manure storage areas, raw materials storage areas, and waste containment areas. The following areas have been identified as CAFO production areas at the Del Mar Fairgrounds:

- Animal confinement areas, including all permanent and temporary barns and stables. The term "stable" refers to the stable buildings, structures or barns and all facilities, including horse stalls, located under the roofs of such structures. These areas are the locations where animals are housed during the various animal related events on the property.
- Animal wash racks, including covered and uncovered wash racks that discharge to sewer.
- Temporary and permanent storage areas for manure, bedding, and animal waste.

Exhibit 5.0 in Section 8 identifies the locations of the CAFO production areas at Del Mar Fairgrounds.

The term "process wastewater" refers to "water directly or indirectly used in the operation of an AFO for any or all of the following: spillage or overflow from animal or poultry watering systems; washing, cleaning, or flushing pens, barns, manure pits, or other AFO facilities; direct contact swimming, washing or spray cooling of animals; or dust control. Process wastewater also includes any water which comes into contact with any raw materials, products, or byproducts including manure, litter, feed, … or bedding."[6] The CAFO rule states that there may be no discharge of process wastewater pollutants into waters of the United States from the production area except for runoff and precipitation from greater than a 25-year, 24-hour storm event. The management of process wastewater from the CAFO production areas at Del Mar Fairgrounds is described further under Section 5.2.3 of this report, as well as in the Nutrient Management Plan, available as Appendix 3.

3.1.1 STABLES AND BARNS

The main horse stable area located north and east of the main track is generally known as the backstretch area (see Exhibit 4.0). Of the approximate 75 buildings located in the backstretch area, 39 are permanent barn structures. The 39 barn structures located in the backstretch area are roofed, and constructed out of varying materials, including adobe, concrete masonry, and pre-manufactured metal barns. Temporary stables are also occasionally constructed during the racing season to accommodate the number of horses participating in the racing events. Any temporary stables erected are covered to preclude rainfall. Other

[6] 40 CFR Sections 122.23 and 412.2(d)

facilities located in the backstretch area include groom dormitories, tack rooms, feed storage, a cafeteria, maintenance areas and offices.

The backstretch area is served by one main storm drain line that runs from east to west through the center of the backstretch area. This storm drain line connects to a pump station located west of the training track adjacent to Stevens Creek. This pump station pumps storm water and wash water from the backstretch area either to the sewer system or directly to Stevens Creek, depending on the conditions. During the summer racing season, all wash water from the backstretch area is pumped to the sewer system. This is the default condition for the dry season, therefore any rain events that may occur during the summer (typically are small events) are discharged to sewer. During winter rain events, the initial pulse of storm events (roughly equivalent to the first 0.2 inches of rainfall) is also diverted to the sewer system. Once the initial pulse of a storm event has passed, storm water from the backstretch area is diverted to Stevens Creek at Discharge Point #1. Further details on the sewer diversions are provided in Section 5.4.1 of this report.

There are four additional buildings that also provide temporary stables and housing for animals during different events of the year located outside of the backstretch area. Barn "W" is located immediately west of the horse arena, and is used for animal housing as well as material storage for various events throughout the year. The Expo Center (also know as Livestock Barn, or Barn "X") is located southwest of Barn "W", and during the County Fair serves as the animal barn for livestock-related exhibits. During the remainder of the year, the Expo Center houses the Del Mar Sports Center, an indoor multipurpose athletic facility. The Wyland Center (also known as Barn "Y") is located to the west of the Expo Center, and is an exhibit hall that temporarily houses smaller animals during the County Fair. During the remainder of the year, the Wyland Center serves as an exhibit hall for a variety of events, conferences, and trade shows. Lastly, the Activity Center (also known as Receiving Barn, or Barn "Z") is located south of the Wyland Center, and serves as a holding barn during the racing season. The Activity Center is utilized as an exhibit hall during the County Fair and other events throughout the year. In addition to the permanent barns, during the County Fair temporary stalls are often constructed outdoors in other areas of the Fairgrounds. These temporary stalls are typically located within the arena and in the track infield, and are occupied throughout the fair. The animals are removed, and all bedding is disposed of each night and replaced with clean bedding the following morning.

Runoff from the livestock barns located outside of the backstretch area is generally conveyed west towards the main parking lot. A storm drain line located north of the Wyland Center and Expo Center collects roof runoff and runoff from adjacent areas, and discharging east to a main storm drain line that also serves the main parking lot. The main parking lot storm drain line runs south, discharging runoff to the San Dieguito River at Discharge Point #5. An existing clarifier unit in the downstream storm drain line removes solids and debris in storm water runoff before discharging off-site. Further details on the clarifier unit are provided in Section 5.4.2 of this report.

Total, there are approximately 1930 permanent stalls and approximately 200 temporary stalls located on the Fairgrounds property.

3.1.2 WASH RACK FACILITIES

There are many wash rack facilities of varying designs located throughout the Fairgrounds used for horse washing activities. Within the backstretch area, there are several concrete-pad wash racks located adjacent to several of the newer barns along the northern portion of the backstretch area. In addition, during the racing season, wash racks between the barn structures are utilized. These generally consist of rubber mats surrounding a grated inlet. These grated inlets discharge into the main storm drain line within the backstretch area, which connects to the pump station adjacent to the training track. During the racing season, wash racks are primarily utilized daily during the hours of 5 am and 1 pm, and all wash water is discharged to the sewer system at the pump station. Within the backstretch area, there are approximately 74 wash rack facilities.

There are also covered horse wash racks adjacent to the barns located outside of the backstretch area. There are 2 wash racks located adjacent to Barn "W", 16 wash racks at the Expo Center, 9 wash racks at the Wyland Center, and 4 wash racks at the Activity Center. These wash racks are covered and feature direct sewer connections. Total, there are approximately 105 wash rack facilities on the Fairgrounds property, all of which discharge to sewer when in use. Refer to Exhibit 6.0 for locations of the existing wash rack facilities.

The 22nd DAA is currently proposing the construction of a roof over the existing horse arena. As part of this future Arena Roof Project (currently under regulatory review and approval), new wash rack facilities will be constructed within the backstretch area. These wash racks will connect directly to the existing sanitary sewer in the backstretch area that is dedicated to sewer only (existing line that sewers the existing dormitories), and will be designed and covered to preclude rainfall or runoff from entering the sewer connected drain. The wash racks will either be bermed or walled along sections of the perimeter. The design of these new wash racks will focus on keeping horse wash water in, while preventing localized storm water flows from entering the sewer connected inlet. Grit chambers will also be installed to reduce sediment and debris from entering the sewer system. These wash racks will be the only wash racks authorized for use within the backstretch area during wintertime arena use activities, resulting in zero discharge to the storm drain system from the wash racks and removing the potential for mixing of storm water and sewer discharges. The proposed locations for the new wash racks are shown in Exhibit 6.0.

3.1.3 STORAGE FACILITIES

During the summer racing season, clean hay and bedding is stored in the east parking lot of the backstretch area, adjacent to Barn "EE", as well as in the east parking lot located east of Jimmy Durante Blvd. During storage, haystacks are kept low to minimize exposure to wind. Tack and other equipment are stored within the tack rooms and barn living quarters. During the County Fair, clean straw and woodshaving bedding is wrapped in plastic and stored north of Barn "EE", located west of the small parking area. Also during the Fair, feed for the exhibit animals is stored within Barn "A". Other covered storage facilities are present within Barn "W" and the livestock barns outside of the backstretch area. Refer to Exhibit 6.0 for locations of the CAFO-related storage areas.

Equipment utilized for maintenance at the Fairgrounds is stored at the DMTC maintenance yard located in the western portion of the backstretch area. The majority of equipment is stored indoors or is covered when not in use. Runoff from this area discharges to the main storm drain line in the backstretch area, which discharges to sewer during summer racing season months, and discharges first flush runoff to sewer during winter months.

There are no permanent manure storage facilities on-site. When stalls are cleaned daily, all manure is temporarily stockpiled at the end of each of the barn buildings for collection. During the racing season, manure is collected several times per day to keep waste piled on-site for minimum amount of times. During the Fair and other events, manure is collected daily. Once collected, all manure is hauled off-site, and manure is not stored on-site for longer than 24-hours. For the livestock barns outside of the backstretch area, manure and soiled bedding is placed in covered storage bins located adjacent to the buildings. Similar to racing season procedures, waste is removed and hauled off-site on a daily basis. See Exhibit 7.0 for locations of the temporary manure storage areas and hauling routes. Further details on the CAFO-related storage facilities are provided in the Nutrient Management Plan, available as Appendix 3.

4 NON-CAFO OPERATIONS

4.1 NON-PRODUCTION AREAS

Non-production areas refer to those areas where animals are not confined. These areas are not considered CAFO production areas, but are still areas where animals may be present at times. Non-production areas at Del Mar Fairgrounds include the racetracks and training track, horse arena, paddocks, corrals, walkways and other trails, but do not include other non-CAFO areas, such as the parking lots and exhibit halls (see Section 4.2 for details). Discharges of materials other than storm water, including liquids and other materials, either directly or indirectly into Waters of the United States, are prohibited from the non-production areas. Exhibit 5.0 provides the locations of the non-production areas at Del Mar Fairgrounds.

4.1.1 RACETRACK AND TRAINING TRACK

The main racetrack at the Fairgrounds is a 1-mile loop track enclosing a turf track and infield lakes area. In 2007, the 1-mile track surface was converted from a dirt track to an engineered material known as "polytrack". The Polytrack material consists of 80 to 90% silica sand, recycled carpet fiber, a recycled rubber product, and is coated with micro-crystalline wax. A perforated underdrain system was installed beneath the track to convey excess storm water runoff that does not infiltrate into the underlying soils. Excess low flow and first flush storm water runoff from the track drainage system is diverted to two manmade lakes located within the infield of the track. Exhibit 8.0 provides details on the track drainage system and diversion to the infield lakes.

A smaller, 0.5-mile dirt training track is located in the northwest portion of the Fairgrounds. There is minimal landscaping surrounding the track, and Stevens Creek traverses the center of the infield. Animals are generally not permitted within the training track infield (controlled by fencing/guardrails around the inner track perimeter). Storm water generally ponds and flows toward an inlet in the infield area which is diverted to sewer. Under high flow conditions, some runoff discharges to Stevens Creek in the center of the track.

The main racetrack and training track are primarily utilized during the summer racing season and County Fair only. Occasionally, the track may be utilized during winter months for training should other Southern California racetracks (e.g. Santa Anita, Hollywood Park) experience problems and cannot accommodate training. Under these conditions, all BMPs and waste management procedures discussed under Section 5 will continue to be followed under normal operating procedures to ensure protection of storm water runoff and receiving waters.

4.1.2 HORSE ARENA

The existing horse arena, adjacent to the off-track betting facility (the Surfside Race Place), was designed as a multi-use facility for equestrian, sporting, and other entertainment events. Equestrian shows held at the arena are comprised mostly of jumping, dressage, and western

events. One of the larger equestrian events held at the arena is the Del Mar National Horse Show held annually in late April-early May. When equestrian-related events are held at the arena, animals are housed within Barns "A" through "G" in the backstretch area, depending on the size of the event.

The existing horse arena has a partial roof that covers the bleacher seating, but does not cover the dirt floor of the arena. As a result, the majority of events held during dry weather months to reduce the risk of cancellation due to rain. The 22nd DAA is currently preparing a Coastal Development Permit application and Mitigated Negative Declaration for the construction of a roof over the entire arena floor, which would enable year-round use to host additional horseshows, rodeos, and other events that would otherwise be cancelled in the event of rain. Additional improvements will also be made to adjacent facilities as part of the project, including the construction of eleven backstretch area wash racks, as previously mentioned under Section 3.1.2.

Construction of the roof over the arena floor will remove the arena floor as a potential source of equestrian-related pollutants. Currently, storm water runoff within the arena discharges into the storm drain system associated with the main parking lot, ultimately discharging to San Dieguito River at Discharge Point #4 after passing through an existing clarifier unit in the storm drain line (see Section 5.4.2). After construction of the roof, roof runoff will be conveyed around the arena, discharging into the existing storm drain system. Additional water quality improvements are also proposed as part of the project, such as the installation of media filtration units, and are discussed further under Section 5.4.4.

4.1.3 WALKWAYS AND TRAILS

The areas between the permanent barns in the backstretch areas are unpaved. Dirt walkways connect the many barns and stables with the main track and training track, as well as with the horse arena and barns outside of the backstretch area. These areas are frequently watered in small amounts to control dust, but not in amounts large enough to generate runoff. Within the backstretch area, the main storm drain lines collects sheet flow runoff from these areas, which connects to the pump station at Discharge Point #1. In addition, there are multiple small corrals and paddocks located throughout the backstretch area as well as north of the horse arena, and are frequently used as staging areas and exercise areas.

4.2 OTHER ON-SITE FACILITIES

There are many other types of facilities at the Fairgrounds that are not involved with CAFO operations. These facilities include maintenance yards for general fairground operations, parking lots, exhibit halls, offices, non-CAFO storage areas, interior streets, as well as sewer and storm drain utilities. Since these facilities are not involved in animal operations, management of storm water runoff within these areas is currently covered under the General Industrial Permit for the Fairgrounds. The Industrial SWPPP prepared for the Fairgrounds describes these facilities and operations, potential pollutant sources, BMPs implemented on-site and monitoring and reporting requirements. Refer to Section 2.6 for details on the General Industrial Permit.

5 BEST MANAGEMENT PRACTICES

5.1 POLLUTANTS OF CONCERN

The pollutants of concern for water quality are those pollutants that are anticipated (expected) or potentially could be generated by the on-site operations, along with those pollutants that have been identified by regulatory agencies as potentially impairing beneficial uses in receiving water bodies.

Due to the equestrian-related uses on the project site, anticipated pollutants for the CAFO production areas and non-production areas include sediment, phosphorous, nutrients, and bacteria.[7] Additional potential pollutants include trash and debris, organic compounds, and oxygen demanding substances. Since the Pacific Ocean Shoreline at San Dieguito River Hydrologic Unit is listed as impaired for bacteria indicators according to the 2002 303(d) list of Limited Water Quality Segments prepared by the San Diego RWQCB, bacteria is considered a priority pollutant of concern for the CAFO operations. Best management practices (BMPs) have been specified to control pollutants of concern, including bacteria, from the CAFO operations on-site, and are discussed further in the following sections.

5.2 CAFO PRODUCTION AREA BMPs

5.2.1 SITE DESIGN BMPs

Site design BMPs help minimize the introduction or generation of potential pollutants from a facility's operations. Careful consideration of site design is a critical first step in storm water pollution prevention. The following site design measures have been implemented at the CAFO production areas on-site.

- All on-site barns are roofed to completely cover all horse stalls on-site. Runoff from the roof is conveyed via downspouts away from the barns, and runoff does not come into contact with the horse stalls. Any temporary stalls utilized on-site are also covered to preclude rainfall from entering the stall.
- Barns are walled to enclose horse stalls, and are constructed at a slightly higher elevation than walkways to preclude runoff from entering the stalls.
- The majority of the backstretch area is pervious, allowing for percolation of storm water runoff.
- Berms and fencing constructed along Stevens Creek in the backstretch area prohibit horses as well as sheet flow runoff from entering the Creek. Animals are not permitted to enter Stevens Creek.
- Horses are washed at designated wash racks properly designed to minimize discharge of pollutants to receiving waters. When in use, all wash racks discharge wash water to

[7] County of Orange. *Equestrian-Related Water Quality Best Management Practices*. June 2004.

the sanitary sewer system. Newer wash racks are covered and designed to preclude contact with storm water.

- All permanent storage areas are located indoors or within covered sheds. Temporary storage areas for manure, hay, and feed are only present during the dry season, in which all runoff from the backstretch area discharges to sewer.

5.2.2 SOURCE CONTROL BMPs

Source control BMPs effectively minimize the potential for typical urban pollutants to come into contact with runoff, thereby limiting water quality impacts downstream. The 22nd DAA and DMTC consistently implement a variety of measures to ensure the cleanliness of the site is held in the utmost importance. The following equestrian-related source control BMPs are currently implemented at Del Mar Fairgrounds for the CAFO production areas.

STABLES AND BARNS

- All permanent horse stalls are roofed and walled to minimize contact with rainfall and storm water runoff. Any temporary stalls constructed will be covered and bermed to reduce contact with runoff, or will be located within buildings/exhibit halls.
- Absorbent bedding materials (e.g. woodshavings, straw) shall be used in the stalls to absorb liquid wastes and minimize leaching.
- Occupied stalls are cleaned daily using dry methods (i.e. sweeping, raking), and any manure shall be removed. Typically, stalls are not cleaned during rain events unless all runoff is diverted to sewer (see Section 5.4.1 for details on sewer diversions).
- During the dry season when the majority of horse-related events are held, soiled bedding and manure removed during cleaning of backstretch area stalls is temporarily stored in stockpiles at the end of each of the barn buildings for collection. During the racing season, manure is collected several times per day to keep waste piled on-site for minimum amount of times. During the County Fair and other events, manure is collected daily. Once collected, all manure is hauled off-site. For the livestock barns outside of the backstretch area, manure and soiled bedding is placed in covered storage bins located adjacent to the buildings. Similar to racing season procedures, waste is removed from the bins and hauled off-site on a daily basis. See Exhibit 7.0 in Section 8 for locations of manure storage areas and hauling routes.
- In the event of a rain event (winter or summer), all exposed waste shall be removed from the site prior to onset of rain. If infeasible, waste shall be relocated to an indoor facility, placed within covered dumpsters, or covered and bermed such that rainfall and runoff do not come into contact with waste. All animals shall be returned to covered stalls during rain events.
- As part of the proposed Arena Roof Project, manure management procedures will be developed for equestrian events held during the wet season at the horse arena to ensure waste is not exposed to storm water runoff during equestrian activities. Procedures shall be incorporated into the Nutrient Management Plan (Appendix 3) once developed upon completion of the Project.

HORSE WASH RACKS

- Horses are washed at designated wash racks properly designed to minimize discharge of pollutants to receiving waters.
- When in use, all wash racks discharge wash water to the sanitary sewer system. Management of sewer diversions is discussed further in Section 5.4.1 of this report.
- Any new wash racks constructed will feature concrete pads, and will contain perimeter walls or berms to minimize runon. Wash racks will also be covered to preclude rainfall, and connect directly to the sanitary sewer system. To keep high floodwater runoff from entering the sewer, inlets of new wash racks shall contain mechanisms that open the drain only when the water source is turned on and in use.
- During wintertime events at the horse arena, only newer, covered wash racks with dedicated sewer connections will be authorized for use after completion of construction of the Arena Roof Project. Uncovered backstretch wash racks may only be utilized during the wet season if wash water is diverted to sewer.

CAFO STORAGE AREAS

- Currently, manure is collected daily and is not stored on-site. Should any manure be stored on-site, manure shall be kept in a properly designed storage area, and shall not be kept on-site for longer than 7 days.
- Manure storage areas shall be located away from drainage courses, graded to minimize contact with runoff, stored on an impervious surface, and shall be covered to minimize contact with precipitation.
- Temporary manure storage areas are located at the end of each of the barns and in dumpsters around the livestock barns. Manure is collected from these areas daily at a minimum. Prior to onset or precipitation, any remaining stockpiles shall be moved indoors or to covered and elevated storage facilities. Stockpile management procedures shall be followed.
- Clean hay, bedding, and/or feed are currently stored in stockpiles within the backstretch area parking lot during the dry season only. During the winter rainy season, clean bedding and feed are stored within Barn "A" or other indoor facility.
- Any stockpiles shall be covered and bermed when not in use and prior to onset of precipitation, and shall not be located within drainage courses.
- Refer to Nutrient Management Plan in Appendix 3 for further details on manure management operations at Del Mar Fairgrounds.

5.2.3 PROCESS WASTEWATER MANAGEMENT

As defined under Section 3.1, the term "process wastewater" refers to "water directly or indirectly used in the operation of an AFO for any or all of the following: spillage or overflow from animal or poultry watering systems; washing, cleaning, or flushing pens, barns, manure

pits, or other AFO facilities; direct contact swimming, washing or spray cooling of animals; or dust control. Process wastewater also includes any water which comes into contact with any raw materials, products, or byproducts including manure, litter, feed, … or bedding."[8] The 22nd DAA has implemented measures to eliminate the discharge of process wastewater from the CAFO production areas at Del Mar Fairgrounds through the combination of the following practices:

- Routing all horse wash waters to the sanitary sewer;
- Placing roofs or covering all horse stalls, barns, and stables to route precipitation around the CAFO production areas;
- Storage of all contaminated bedding materials (manure-soiled bedding), feed, and manure indoors or in covered storage facilities such that storm water does not contact these materials;
- Temporary manure stockpiles are removed daily such that they do not come into contact with storm water runoff:
- Horse presence is limited to the maximum extent practicable to the covered CAFO production areas (stables/barns) during rain events and when necessary;
- Implementation of good housekeeping practices such that any manure inadvertently deposited outdoors in the CAFO production area and non-production area is removed before pollutants from these materials can be entrained in storm water runoff.

Currently, manure and waste collected on-site is delivered to a mushroom farm in Escondido, where it is composted and ultimately used in the mushroom growing process. Additional wood shavings and manure is delivered to a facility in Lakeside CA, where it is converted to compost and humus. Records are kept involving the amounts of waste generated and transported off-site to farms and mulching facilities. Further details on process wastewater management as well as manure and materials management measures, including volume estimates, are provided in the Nutrient Management Plan, available as Appendix 3.

5.2.4 MANAGEMENT OF MORTALITIES

Although veterinarians are kept on-site to assist in the treatment of animals during the racing season and County Fair, any activity involving animals has some risk concerning animal health and welfare, and life-threatening injuries and illnesses can occur. The 22nd DAA and DMTC have procedures in place for when mortalities occur. During the racing season, animals are brought to Barn "TT" and are placed on a specialized rubber pad for administering the injection that euthanizes the horses. The horse is then removed from the area and loaded onto a covered trailer for removal from the site. Should any mortalities occur to animals kept on-site outside of the racing season, procedures for management of the animals is similar. Deceased animals are not kept on-site fore extended periods of time, and are not left outside or exposed to storm water runoff.

[8] 40 CFR Sections 122.23 and 412.2(d)

Refer to the Nutrient Management Plan in Appendix 3 for further details on mortality management measures.

5.3 NON-PRODUCTION AREA BMPs

5.3.1 SITE DESIGN BMPs

The following site design measures have been implemented at the non-production areas on-site.

- The majority of the horse walkways are pervious, allowing infiltration of storm water runoff.
- Perforated drainage system discharges first flush runoff from main track to infield lakes.
- Berms constructed around corrals to make them "self-contained" and divert surface runoff around the areas with pollutants. Berms are constructed out of wooden beams or logs to an approximate height between 6 to 12 inches.
- Fencing/guardrails prevent animals from accessing the infield of the training track and Stevens Creek.
- Additional berms and fencing along the western project boundary of the Fairgrounds restricts access to Stevens Creek. Animals are generally not permitted along the western Fairgrounds property or the southern Fairgrounds property to protect surface waters.
- Future construction of a roof and side walls at the horse arena to remove arena floor as a source of equestrian-related pollutants by reducing direct precipitation and storm water runon inside the arena.

5.3.2 SOURCE CONTROL BMPs

The following equestrian-related source control BMPs are currently implemented at Del Mar Fairgrounds for the CAFO non-production areas.

- All unpaved and paved horse walkways, corrals, tracks, and paddocks shall be swept and cleaned at a minimum of daily to remove manure and other debris. General housekeeping measures shall be followed at all times.
- Dust control measures such as water application on all unpaved walkways and corrals to reduce dust generation. Water shall be applied in sufficient amounts to control dust but not to create runoff.
- All liquid materials will be stored in storage cabinets, sheds or enclosures that meet all applicable regulations. The areas will be paved accordingly and storage bins will include sidewalls to contain the materials.

- All storm drain inlets and sewer inlets within the Fairgrounds are stenciled to alert the public to the destination of pollutants discharged into storm water (i.e. "Drains to Storm Drain" and "Drains to Sewer").
- All trash and non-CAFO debris shall be stored in containers that have lids or tarps to minimize direct precipitation into the containers and keep drainage out of the storm drain. The trash storage areas will be situated away from roof runoff and pavement runoff diverted. Dumpsters will be leak proof and covered.
- The backstretch area and other CAFO areas will contain an appropriate number of trash receptacles in common areas. Litter control measures shall be implemented.
- All on-site catch basins and grate inlets within the backstretch area and other CAFO areas will be cleaned at a minimum of once per year, prior to the start of the wet season.
- Manure, trash and debris shall be collected from the main racetrack, training track, and horse arena is removed upon sight. Manure is temporarily stored in movable bins with lids/covers and deposited within the temporary stockpiles adjacent to the barns, where it is collected and hauled off-site daily at a minimum.
- Manure is collected multiple times per day and hauled off-site daily at a minimum to reduce breeding of flies and other insects. Additional measures are implemented within the infield lakes to reduce risk of mosquito breeding. This includes aeration and use of mosquito fish to c control breeding.

As previously mentioned, BMPs for non-CAFO areas are covered under the Industrial SWPPP prepared for the Fairgrounds in accordance with the General Industrial Permit, and are therefore not discussed in this report.

5.4 TREATMENT CONTROL BMPs

Treatment control BMPs remove pollutants of concern from storm water runoff, and are designed appropriately so as to infiltrate, filter, and/or treat the required runoff volume or flow prior to discharging into receiving waters. Several treatment control BMPs provide storm water treatment for portions of both the CAFO production areas and non-production areas. The following summarizes the treatment control BMPs serving the CAFO areas at Del Mar Fairgrounds.

5.4.1 SEWER DIVERSIONS

Currently, storm water runoff from the rooftops and walkways within the backstretch area is collected by a series of storm drains that drain west towards a pump station located at the edge of the Fairgrounds property adjacent to the training track. The wash racks within the backstretch area also drain into this storm drain system. As a result, during the summer racing season when wash racks are in use, all runoff and wash water is diverted to the sewer system at the pump station , and does not discharge into Stevens Creek. During the wet season, the wash racks that connect to the storm drain system are not used (only those with direct sewer

connections are used when animals are present during wet season months, unless runoff is diverted to sewer), and no wash water will discharge to the storm drain system. In addition, during rain events, the initial first flush volume of storm water runoff is diverted to the sewer system (roughly equivalent to the first 0.2 inches of rainfall) to treat runoff from the walkways and rooftops in the backstretch area. All diversions from the backstretch area are manually controlled at the pump station located near the training track, based on estimated amounts of rainfall. These diversions to sewer result in a minimal amount of animal associated pollutants of concern reaching surface waters.

Similar to the backstretch area, storm water runoff from the walkways north of the horse arena where horses frequent is diverted to the sewer system when animals are present. In this area, the sewer inlets are located adjacent to the storm drain inlets. Diversions are currently manually controlled through a cap on the riser pipes/inlets to the sewer and storm drain systems, and require field staff to manually cap the sewer or storm drain inlets during diversions. See Exhibit 6.0 for locations of the proposed wash racks. It is the intent of the 22nd DAA to investigate more automated methods such as flow meters, automated first flush rainfall devices and shutoff valves and other field instruments to help quantify first flush volumes and reduce the reliance on field staff to manually covering inlets during rain events. This work will occur during the final construction designs for the Arena Roof Project (currently pending regulatory approval) and field devices will be selected to improve the ability to accurately divert first flush volumes to the sewer and all other flows to the storm drain system.

5.4.2 CLARIFIER UNITS

In order to further treat runoff from the horse arena and adjacent barns, as well as the main parking lot, a clarifier unit is located in the downstream storm drain line of the main parking lot. The existing clarifier unit is a three-chambered baffle box system within a 7′ x 9′ x 6.5′ underground vault. Sediment, debris and oil & grease is removed from storm water runoff from the arena and parking lot drainage areas, prior to discharging into the San Dieguito River at Discharge Point #5. Refer to Exhibit 6.0 in Section 8 for the location of the existing clarifier unit.

5.4.3 INFIELD LAKES

In 2007, the dirt surface of the main 1-mile racetrack was replaced with a synthetic engineered track surface, known as "Polytrack". As part of the track improvements, the drainage system of the track was redesigned to utilize the existing infield lakes for storm water retention and treatment. During the summer months, the lakes are filled with reclaimed water for aesthetic purposes, but sufficient freeboard is maintained to accommodate storm water. In the event of a summer storm, all runoff from the track is diverted to the infield lakes through a pump station located east of the grandstands. The lakes do not discharge to Stevens Creek. During the winter months, the lakes are not filled with reclaimed water in order to allow extra capacity for storm water runoff. During winter storm events, all first flush flows from the track drainage system will be diverted to the lakes up to 32,000 ft^3 (first flush volume). In the event lakes reach capacity (approximately 520,000 ft^3) overflow will be directed to the infield for ponding and infiltration. Once the first flush volume has been pumped to the lakes and the

wet well capacity has been exceeded, the excess flows in the wet well at the pump station will gravity flow into the existing storm drain lines discharging to Sevens Creek at Discharge Point #2. The pump station controlling the diversions to the infield lakes is located south of the main track, west of the grandstands (see Exhibit 8.0 in Section 8 for details on the diversion system).

5.4.4 FUTURE PROJECTS

As previously mentioned, the 22nd DAA is currently obtaining a Coastal Development Permit and regulatory clearance for a proposed improvement project at the horse arena. A roof will be constructed over the arena floor as well as several other improvements to adjacent facilities. As part of the project, new wash racks will be constructed as previously discussed under Section 3.1.2. In addition to the wash racks and roof, new water quality BMPs are proposed to treat runoff from the arena roof and adjacent walkways and barns. Two media filtration units are proposed, to be located in the storm drain lines currently serving the arena drainage areas (see Exhibit 6.0 for proposed locations). Media filter units (e.g. StormFilter, BayFilter, or equivalent) are proprietary, structural BMPs installed underground in the storm drain system and use passive, siphon-activated media-filled cartridges that trap and adsorb particulates and pollutants. The media filtration units will be sufficiently sized to treat first flush runoff form the arena drainage area as well as the adjacent barns. Specific type of media filtration units installed will be determined upon final design and regulatory approval of the project.

The 22nd DAA is currently in the process of updating the previous 1985 Master Plan to help guide the development of the Fairgrounds facilities. The proposed 2008 Master Plan Update includes both near-term and long-term projects to upgrade existing facilities, remove irrelevant facilities, and construct new facilities in order to fulfill the mission of the 22nd DAA to "*manage and promote a world-class, multi-use, public assembly facility with an emphasis on agriculture, education, entertainment, and recreation in a fiscally sound and environmentally conscientious manner for the benefit of all.*" One of the primary objectives of the Master Plan update is to improve storm water runoff and water quality conditions for the near-term and long-term project areas, in addition to analyzing the feasibility of improving water quality for existing facilities not impacted by Master Plan projects. This includes investigating better management practices for sewer/storm drain diversions, structural BMPs, and low impact development (LID) strategies.

5.5 BMP OPERATIONS & MAINTENANCE

During the summer racing season, the DMTC manages the CAFO operations with respect to the summer race meet. This includes management of the CAFO-related source control BMPs for both production areas and non production areas. For the County Fair and all other events throughout the year, the 22nd DAA is responsible for all BMP inspection and maintenance of the CAFO production areas and non-production areas at Del Mar Fairgrounds. A breakdown of the maintenance responsibilities for CAFO BMPs is provided in the Nutrient Management Plan, available as Appendix 3.

Records of BMP maintenances activities shall be maintained by the 22nd DAA for both CAFO production areas and non-production area BMPs. The DMTC shall provide the 22nd DAA records of CAFO BMP maintenance activities for the summer racing season. Records shall be kept on-site for a minimum of 5 years. Recordkeeping requirements and additional forms that may be used to document inspection and maintenance activities specific to CAFO operations are provided in the Nutrient Management Plan, available as Appendix 3. Maintenance and recordkeeping requirements for non-CAFO areas (e.g. parking lots, exhibit halls, maintenance yards) are outlined in the Industrial SWPPP prepared for Del Mar Fairgrounds.

5.5.1 CAFO PRODUCTION AREA BMP MAINTENANCE

The following maintenance activities shall be performed for CAFO production area BMPs:

- Occupied stalls shall be inspected cleaned daily at a minimum using dry methods only (e.g. sweeping). Manure and spent bedding shall be removed and properly disposed of per Nutrient Management Plan guidelines (Appendix 3).
- Ensure wash water from horse wash racks is diverted to appropriate drain inlet with sewer connection or sewer diversion capabilities, and does not discharge into drainageways. Sweep wash rack areas frequently and remove any trash & debris.
- All storm drain and sewer inlets within the CAFO production areas shall be inspected and, if necessary, cleaned prior to the storm season, no later than October 1st each year.
- Sweep any feed, hay, bedding, and CAFO-related equipment storage areas at least once per week and before the start of the wet season to remove solid debris. Clean up spills immediately.
- Stockpiles shall be covered prior to the onset of precipitation and when not in use.
- Sweep any manure storage areas weekly at a minimum and inspect for leakage. Manure shall not be kept on-site for more than 7 days. Clean up spills immediately.
- Litter patrol, violations investigation, reporting and other litter control activities shall be performed within the CAFO production areas in conjunction with maintenance activities.

5.5.2 NON-PRODUCTION AREA BMP MAINTENANCE

The following maintenance activities shall be performed for non-production area BMPs:

- Remove manure daily from walkways, corrals, paddocks, horse arena, racetrack and the training track and properly dispose of off-site or in manure storage area. Sweep areas if needed using dry methods only. Keep areas free of trash and debris.
- Inspect racetrack drainage system for proper drainage and no excess ponded water (except under high flow conditions). Remove manure and any trash & debris daily and properly dispose.

- All storm drain and sewer inlets within the non-production areas shall be inspected and, if necessary, cleaned prior to the storm season, no later than October 1st each year.
- Sweep trash storage areas frequently and before the start of wet season each year. Maintain area clean of trash and debris at all times.
- Litter patrol, violations investigation, reporting and other litter control activities shall be performed within the non-production areas in conjunction with maintenance activities.
- Inspect berms along Stevens Creek for structural integrity and signs of erosion. Repair any rills, breaks, or other problems in berm structure as soon as possible.

5.5.3 TREATMENT CONTROL BMP MAINTENANCE

- The clarifier unit in the southern portion of the parking lot shall be inspected and cleaned at a minimum of twice per year. Maintenance activities include, but are not limited to, removal of collected sediment, trash and debris, as well as accumulated oil and grease. Materials removed from clarifier unit shall be properly disposed of off-site, and not discharged into the storm drain.
- Water levels within the infield lakes shall be maintained to have sufficient freeboard for storm events. Lake levels will be allowed to drop following the racing season in order to create capacity for winter season rain events. Dependent upon lake levels prior to the start of the wet season, lake levels may be manually lowered through the use of pumping and distribution of water for local irrigation or unused infield areas for percolation to create additional capacity within the lakes. Aerators and biological compounds will continue to be utilized as necessary to minimize algal growth, odor and water quality within the lakes.
- Maintenance of the proposed Arena Roof Project BMPs shall be maintained at frequencies and procedures specified in the Water Quality Technical Report (WQTR) prepared for the Arena Roof Project.[9]

[9] Fuscoe Engineering, Inc. Water Quality Technical Report: Arena Roof Project, Del Mar Fairgrounds. December 31, 2007.

6 MONITORING & REPORTING PROGRAMS

6.1 INDUSTRIAL PERMIT MONITORING

As part of the Industrial SWPPP, the 22nd DAA currently conducts on-going water quality monitoring of discharges from the Fairgrounds, as required by the General Industrial Permit (Order No. 997-03-DWQ, Section B). In accordance with the Permit, samples of storm water discharges are collected from the first storm event of the wet season that results in storm water discharge off-site, and at least one other storm event that results in discharge during the wet season. Samples are only collected when there is sufficient discharge to collect samples, during regular business hours and daylight hours as weather conditions permit. Storm events are separated by a minimum of 3 working days without storm water discharge.

Samples are collected at locations that best represent the quality and quantity of the facility discharge. At Del Mar Fairgrounds, samples are collected at the five major discharge points to receiving waters. The table below summarizes the five sampling locations at the Fairgrounds. As discussed under Section 2.7 of this report, of the five major discharge points of the Fairgrounds, only three discharge runoff from the CAFO production and non-production areas. Refer to Section 8 for locations of the discharge points and sampling locations, and Appendix 6 for further details on the Industrial Permit monitoring program.

INDUSTRIAL PERMIT SAMPLING LOCATIONS			
Outfall	General Location	Drainage Area Description	Drainage Area Type
#1	Pump station west of training track, drains to Stevens Creek	Backstretch stables & walkways, wash racks	CAFO Production Area[1], Non-Production Area, Industrial Permit Area
#2	West of main track and grandstands, drains to Stevens Creek	Racetrack engineered surface drainage system, portion of parking lot	Non-Production Area, Industrial Permit Area
#3	Southwest corner of site near confluence of Stevens Creek and San Dieguito River	Southwest parking lot	Industrial Permit Area
#4	South of maintenance shops and Bing Crosby Hall, drains to San Dieguito River	Exhibit halls, grandstands, offices, maintenance shops	Industrial Permit Area
#5	Southern portion of site near Jimmy Durante Bridge, drains to San Dieguito River	Horse arena, livestock barns, main parking lot	CAFO Production Area[1], Non-Production Area, Industrial Permit Area
1 No production area runoff discharges into storm drains. Wash water discharges to sewer system; stables and barns are roofed to eliminate contact with storm water.			

Table 2 Industrial Permit sampling location summary.

Storm water discharge samples are analyzed for the following constituents:

INDUSTRIAL PERMIT SAMPLING CONSTITUENTS	
Potential Pollutant	Sampling Frequency[1]
Biological Oxygen Demand (BOD)	Once per sampling event
Chemical Oxygen Demand (COD)	Once per sampling event
Chloride	Once per sampling event
Coliform, Fecal & Total	Once per sampling event
Cyanide, Total	Once per sampling event
Ethlyne Glycol Monobutyl Ether (MTBE)	Once per sampling event
Fluoride	Once per sampling event
Hexavalent Chromium	Once per sampling event
Mercury	Once per sampling event
Nitrite	Once per sampling event
Nitrogen, Ammonia	Once per sampling event
Nitrogen, Nitrate	Once per sampling event
Oil & Grease	Once per sampling event
pH	Once per sampling event
Phenolics, Total	Once per sampling event
Phosphate, Total	Once per sampling event
Polychlorinated biphenyls (PCBs)	Once per sampling event
Priority Pollutant Metals (12 Metals)	Once per sampling event
Semivolatile Organic Compounds (SVOCs)	Once per sampling event
Specific Conductance/Resistivity	Once per sampling event
Sulfate	Once per sampling event
Total Organic Carbon	Once per sampling event
Total Petroleum Hydrocarbons Diesel	Once per sampling event
Total Petroleum Hydrocarbons Gasoline	Once per sampling event
Total Recoverable Petroleum Hydrocarbons	Once per sampling event
Total Suspended Solids (TSS)	Once per sampling event
Volatile Organic Compounds (VOCs)	Once per sampling event

1. During periods of storm water discharge into receiving waters, samples shall be collected during the first hour of the discharge. Storm events must be preceded by at least 72 hours of dry weather or no discharge.

Table 3 Industrial Permit monitoring program constituents.

Although monitoring is currently performed under the guidance of the General Industrial Permit, it is anticipated that the monitoring program will continue with the transfer of NPDES coverage to the Phase II MS4 Permit.

6.2 RACETRACK DISCHARGE MONITORING

As part of the recent renovation of the dirt track to the engineered surface known as "Polytrack", a separate monitoring and reporting program was developed to meet the requirements of the California Coastal Commission. This monitoring program is specific to the track drainage system, and will be implemented for a period of 5 years to monitor discharges into Steven's Creek from the engineered track surface. The purpose of the track monitoring program is to determine the level of horse-related pollutants (if any) within the track effluent enter the creek after the first flush runoff has been diverted to the infield lakes, and to characterize the changes in effluent quality based on the track usage over time. Upon completion of the 5 year monitoring period, the data will be reviewed to determine future options for the diversion of storm water runoff to the infield lakes.

Sampling will be conducted at the outlet of the track drainage system immediately upstream of the discharge point to Stevens Creek (see Exhibit 8.0 for location). A sampling port was designed into the pump station vault to assist in sample collection. Samples are collected during each discharge to Stevens Creek, where storm events are preceded by at least 72 hours of no discharge, and no more than one sample per 2 weeks is required. Further details on the track monitoring program are provided in Appendix 6.

RACETRACK SAMPLING LOCATIONS			
Outfall	General Location	Drainage Area Description	Drainage Area Type
#2	At the 12" storm drain outlet from the pump station immediately upstream of Outlet-1 to Stevens Creek	Racetrack engineered surface drainage system	Non-Production Area, Industrial Permit Area

Table 4 Racetrack sampling location summary.

Different monitoring parameters have been selected to account for all potential compounds of the engineered surface track runoff in comparison to the Industrial Permit monitoring program. For the track drainage system, storm water discharge samples are analyzed for the following constituents:

RACETRACK SAMPLING CONSTITUENTS	
Potential Pollutant	Sampling Frequency[2]
Ammonia	Once per discharge
BOD_5 @ 20°C [1]	Once per discharge
Enterococcus	Once per discharge
Fecal Coliform	Once per discharge
Flow	Once per discharge
Nitrate + Nitrite as N	Once per discharge

RACETRACK SAMPLING CONSTITUENTS	
Potential Pollutant	Sampling Frequency[2]
Oil and Grease	Once per discharge
pH	Once per discharge
Phosphorous	Once per discharge
Settleable Solids	Once per discharge
Temperature	Once per discharge
Total Coliform	Once per discharge
Total Dissolved Solids	Once per discharge
Total Suspended Solids (TSS)	Once per discharge
Dimethylacetamide	Annually
Methylene blue activated substances (MBAS)	Annually
Polydimethylacetamide	Annually
Semivolatile Organic Compounds (SVOCs)	Annually
Total Magnesium	Annually
Total Phenolics	Annually
Acute/Chronic Toxicity	Once per 2 years

1. 5-day biochemical oxygen demand at 20 °C.
2. During periods of storm water discharge into Stevens Creek, samples shall be collected during the first hour of the discharge. Each separate storm event that results in a discharge of effluent shall be sampled, but no more than one sample per 2 weeks is required. Storm events must be preceded by at least 72 hours of dry weather or no discharge.

Table 5 Racetrack monitoring program constituents.

6.3 ANNUAL REPORTING

The General Industrial Permit requires each discharger to prepare an annual report that includes an annual comprehensive site compliance evaluation. As part of the evaluation, the current Industrial SWPPP is reviewed as well as all structural and non-structural BMPs for effectiveness. If any BMPs were found to be deficient or if additional BMPs are needed, the current Industrial SWPPP is revised to reflect changes to the BMPs. Also included in the annual report are the results of any discharge monitoring, site inspections and visual observations for the reporting period (July 1 through June 30). The annual report is submitted to the San Diego RWQCB by July 1st each year.

In addition, as part of the racetrack monitoring program, an annual report will be prepared by the 22nd DAA and submitted to the California Coastal Commission by November 1 each year. All effluent monitoring data for the previous fiscal year shall be included, in addition to a discussion of the compliance record and corrective actions taken or planned that may be needed to bring the discharge into full compliance with the waste discharge requirements. If there is no discharge during any reporting period, the report shall so state.

7 CONCLUSION

As requested by the San Diego RWQCB, this ROWD summarizes the activities and operations in relation to CAFO at the Del Mar Fairgrounds facilities. The implementation of sewer diversions of wash water runoff as well as first flush runoff, in addition to all horse stalls being covered, eliminate the discharge of process wastewater to receiving waters. Further, the discharge of potential pollutants in runoff as a result of CAFO operations are effectively minimized through the use of management measures and BMPs specifically targeting CAFO production area and non-production area operations. Moreover, the Nutrient Management Plan in Appendix 3 addresses how discharge of pollutants is minimized specific to process wastewater and waste handling operations.

Based on the findings of this technical study, the implementation of the project design features, BMPs, and management measures will adequately reduce all project related impacts, and no adverse levels of pollutants are expected in runoff that would violate water quality standards or adversely effect beneficial uses of downstream receiving waters.

8 EXHIBITS

The exhibits provided in this section are to illustrate the existing site facilities and BMPs described in this report. Drainage flow information for the existing facilities, such as general surface flow lines, drainage conveyances and storm drain facilities are also depicted. All structural source control and treatment control BMPs are shown as well.

- **Exhibit 1.0** Vicinity Map
- **Exhibit 2.0** San Dieguito Watershed Map
- **Exhibit 3.0** FEMA FIRM Panel
- **Exhibit 4.0** Site Plan and Utility Exhibit
- **Exhibit 5.0** CAFO Production Areas
- **Exhibit 6.0** Best Management Practices
- **Exhibit 7.0** Manure Management BMPs
- **Exhibit 8.0** Polytrack Drainage Exhibit

APPENDICES

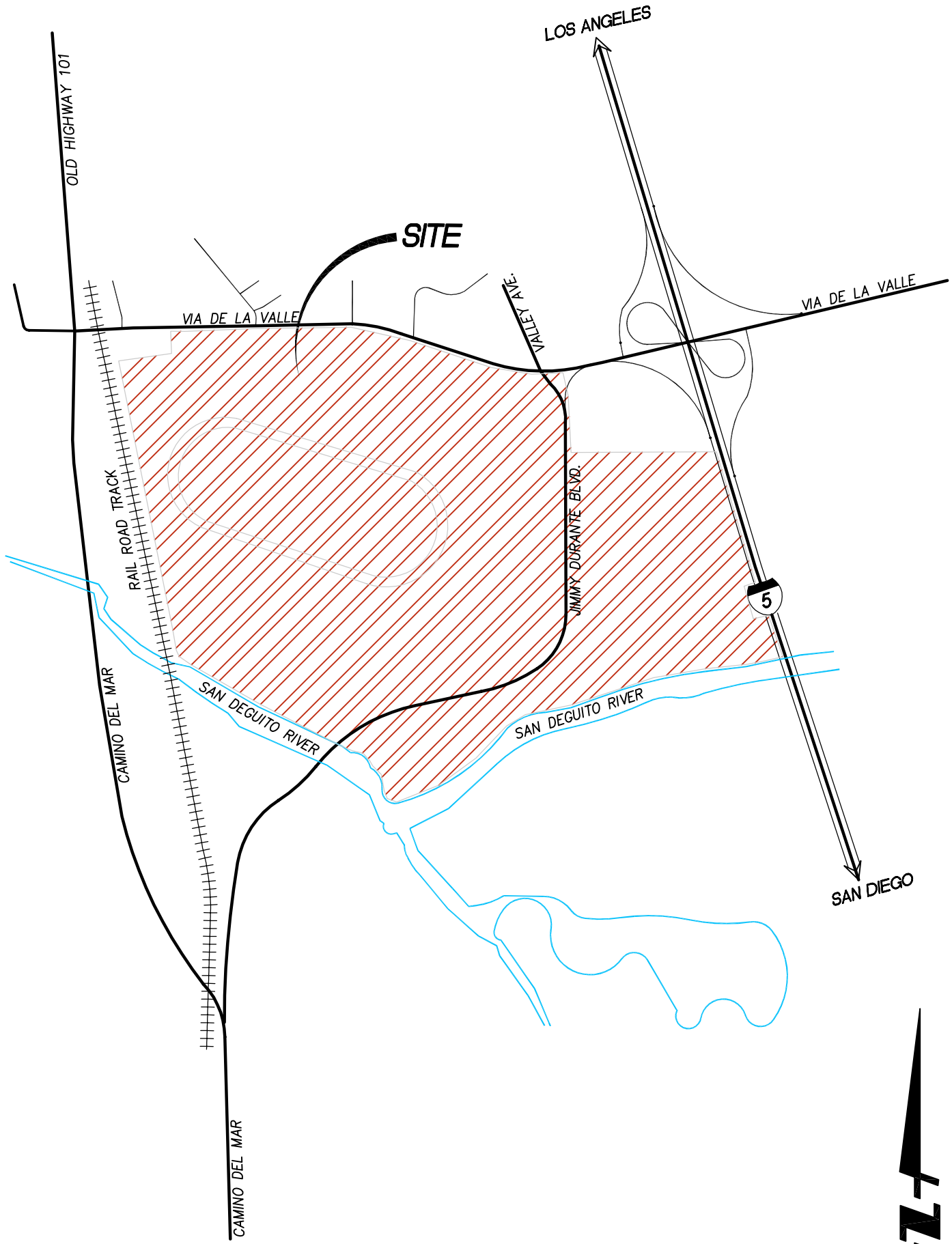


EXHIBIT 1.0 : VICINITY MAP

NOT TO SCALE

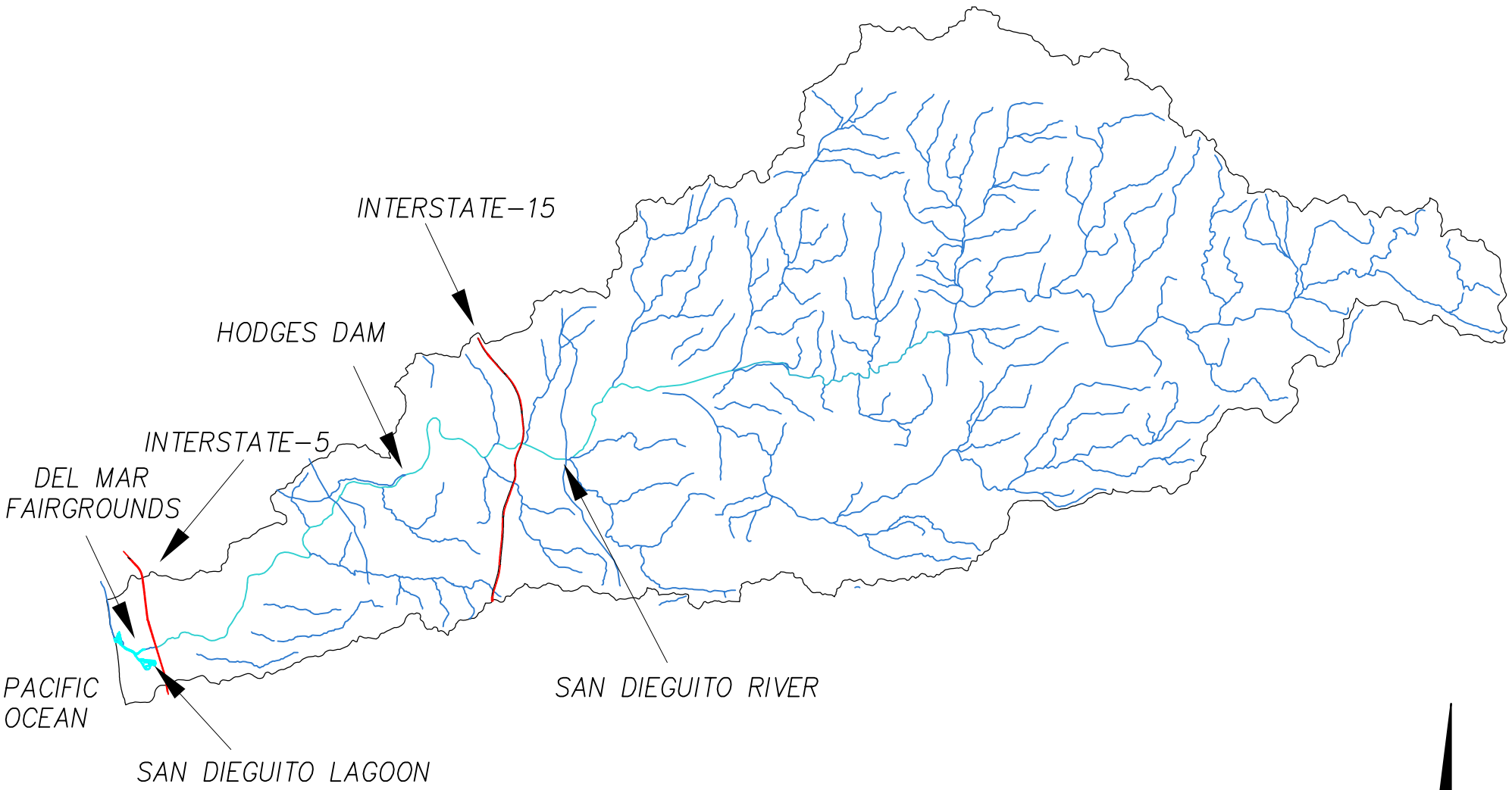
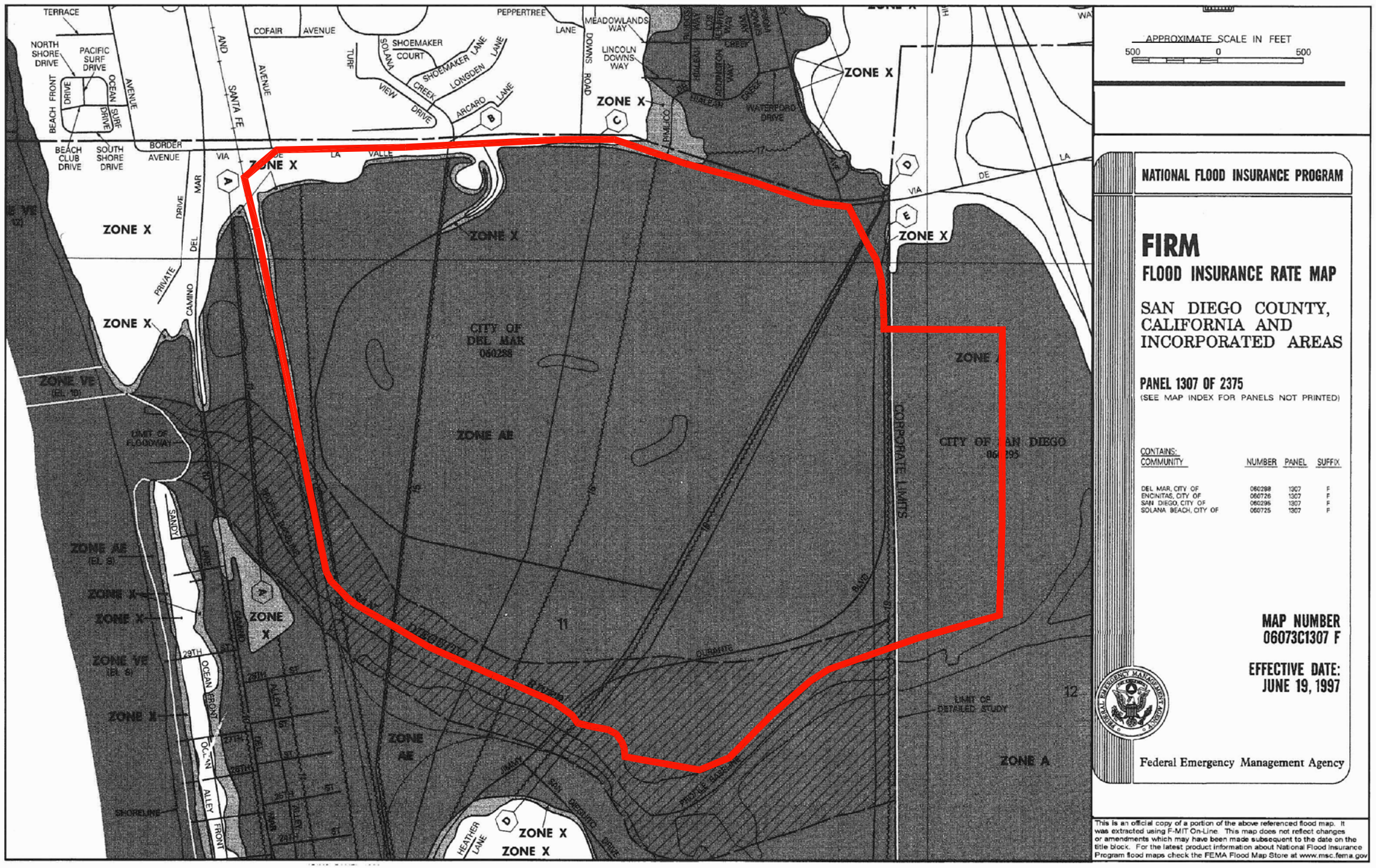


EXHIBIT 2.0 SAN DIEGUITO WATERSHED MAP

NOT TO SCALE



LEGEND

SITE BOUNDARY

SCALE: 1" = 650'

CAFO REPORT OF WASTE DISCHARGE EXHIBIT:

EXHIBIT 3.0
DEL MAR FAIRGROUNDS
FEMA FIRM PANEL

22nd District Agricultural Association
DEL MAR, CA

W.O. NO. —
P.T.S. NO. —
TM/TPM —

FOR CITY ENGINEER ____ DATE ____

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	FEI			

NAD 83 COORDINATES —
LAMBERT COORDINATES —

CONTRACTOR ____ DATE STARTED ____
INSPECTOR ____ DATE COMPLETED ____

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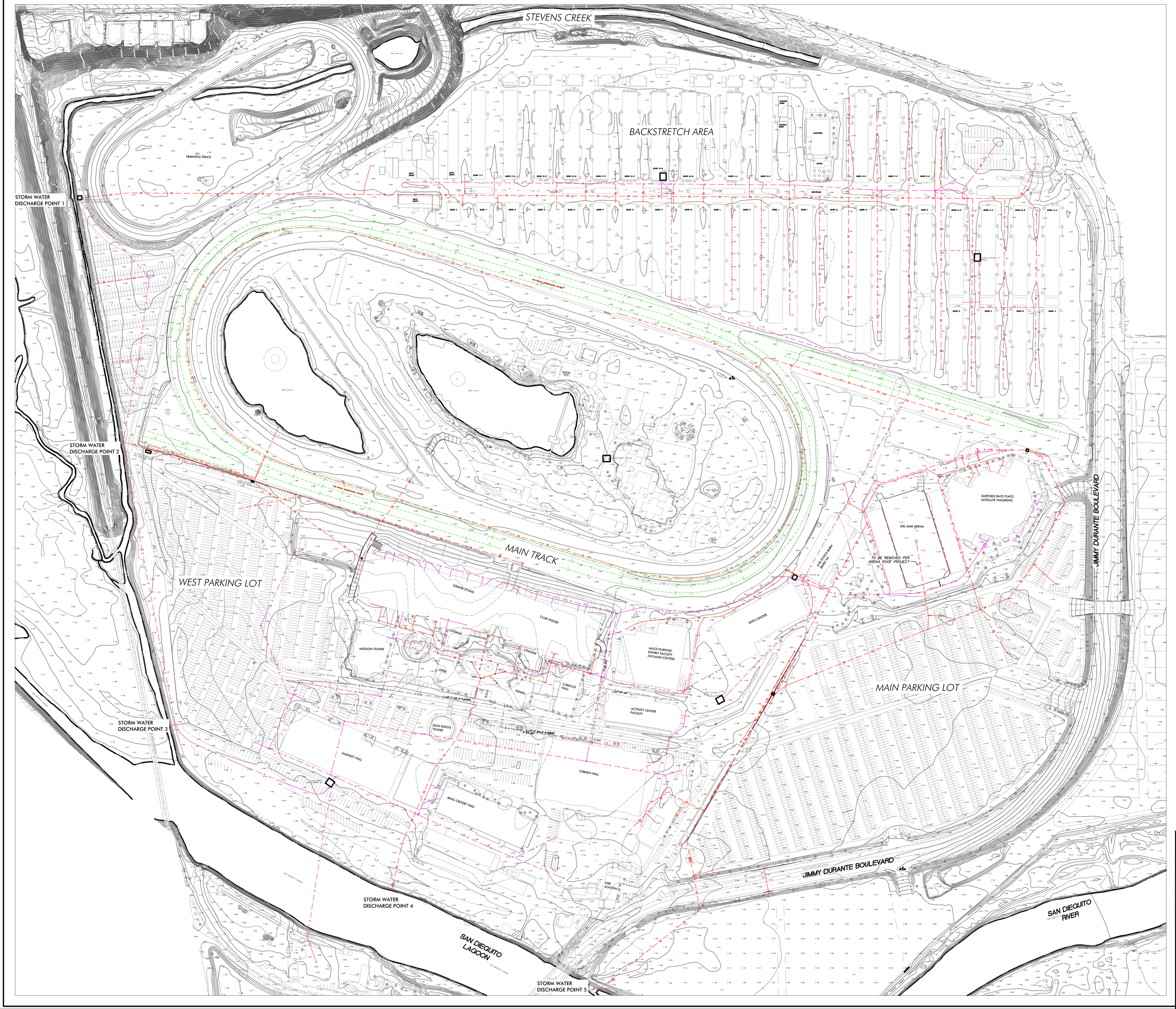
San Diego, California 92122
tel 858.554.1500 ∘ fax 858.597.0335
www.fuscoe.com



LEGEND

- EXIST. SEWER LINE — S —
- EXIST. STORM DRAIN — SD —
- EXIST. FORCE STORM DRAIN — FM —
- EXIST. PERF. STORM DRAIN
- EXIST. MANHOLE
- EXIST. PUMP STATION
- EXIST. CATCH BASIN

SCALE: 1" = 120'

120 60 0 120 240 360

GRAPHIC SCALE IN FEET

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CAFO REPORT OF WASTE DISCHARGE EXHIBIT:

EXHIBIT 4.0
DEL MAR FAIRGROUNDS
SITE PLAN AND UTILITY EXHIBIT

22nd District Agricultural Association
DEL MAR, CA

W.O. NO. —
P.T.S. NO. —

FOR CITY ENGINEER _____ DATE _____

TM/TPM —

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	FEI			

—
NAD 83 COORDINATES
—
LAMBERT COORDINATES

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

STEVENS CREEK

TRAINING TRACK

BACKSTRETCH AREA

INFIELD LAKE

INFIELD LAKE

STEVENS CREEK

TURF TRACK

MAIN TRACK

WEST PARKING LOT

GRANDSTANDS

WYLAND CENTER

EXPO CENTER

BARN W

DEL MAR ARENA

SURFSIDE RACE PLACE

ACTIVITY CENTER

MAIN PARKING LOT

EXHIBIT HALL

O'BRIEN HALL

BING CROSBY HALL

JIMMY DURANTE BLVD.

SAN DIEGUITO LAGOON

JIMMY DURANTE BLVD.

LEGEND

CAFO PRODUCTION AREAS - 16.48 AC

CAFO NON-PRODUCTION AREAS - 80.88 AC

CURENT INDUSTRIAL PERMIT/PHASE II AREAS - 154.20 AC

GENERAL NOTES

1. CAFO PRODUCTION AREAS CONSIST OF ANIMAL CONFINMENT AREAS, INCLUDING ALL BARNS AND STABLES; ANIMAL WASH RACKS, AND STORAGE AREAS CONTAINING MANURE, BEDDING, AND WASTE.

2. CAFO NON-PRODUCTION AREAS CONSIST OF LAND WHICH IS OCCASIONALLY USED BY ANIMALS AND IS NOT USED FOR CONFINEMENT, WASHDOWN, OR WASTE.

SCALE: 1" = 300'

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CAFO REPORT OF WASTE DISCHARGE EXHIBIT:

EXHIBIT 5.0
DEL MAR FAIRGROUNDS
CAFO PRODUCTION AREAS

22nd District Agricultural Association
DEL MAR, CA

W.O. NO. —
P.T.S. NO. —

FOR CITY ENGINEER _____ DATE _____

TM/TPM —

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	FEI			

—
NAD 83 COORDINATES
—
LAMBERT COORDINATES

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

SCALE: 1" = 125'

125 62.5 0 125 250 375
GRAPHIC SCALE IN FEET

LEGEND

- SITE BOUNDARY
- STORM DRAIN — SD
- SEWER — S
- DIRECTION OF FLOW
- BACKSTRETCH SEWER DIVERSION DRAINAGE AREA
- POLYTRACK BMP DRAINAGE AREA
- CLARIFIER BMP DRAINAGE AREA
- PROPOSED MEDIA FILTRATION UNIT BMP DRAINAGE AREA
- DISCHARGE POINT — DP

EXISTING BMP

- SEWER STORM DRAIN DIVERSION PUMP HOUSE — PH
- SEWER STORM DRAIN DIVERSION INLETS
- INFIELD LAKES POLYTRACK BMP (SEE POLYTRACK DRAINAGE EXHIBIT 7 FOR DETAILS)
- CLARIFIER UNITS — CL
- STABLES/HORSESTALL CLEANING AND HOUSEKEEPING BMPS
- TRAINING TRACK CLEANING AND HOUSEKEEPING BMPS
- RACETRACK CLEANING AND HOUSEKEEPING BMPS
- CLEAN HAY, BEDDING STORAGE AREA
- EXISTING WASH RACKS

PROPOSED BMP

- COVERED WASH RACK LOCATIONS
- MEDIA FILTRATION UNITS — FIL

STEVENS CREEK
PH
DP 1
DP 2
DP 3
DP 4
DP 5
INFIELD LAKES USED FOR POLYTRACK BMP (SEE EXHIBIT 7)
WEST PARKING LOT
MAIN PARKING LOT
EAST PARKING LOT
GRAND STAND
CLUB HOUSE
MISSION TOWER
LOUNGE
OFFICE
ADMIN.
CABALLO HALL
DON DIEGO TOWER
HARVEST HALL
BING CROSBY HALL
O'BRIEN HALL
FIRE STATION
MULTI PURPOSE EXHIBIT FACILITY (HYLAND CENTER)
ACTIVITY CENTER FACILITY
EXPO CENTER
THOROUGHBRED BARN (SOUTH BARN)
DEL MAR ARENA
SURFSIDE RACE PLACE
JIMMY DURANTE BOULEVARD
SAN DIEGUITO LAGOON
SAN DIEGUITO RIVER
CL
FIL

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CAFO REPORT OF WASTE DISCHARGE EXHIBIT:

EXHIBIT 6.0
DEL MAR FAIRGROUNDS
BEST MANAGEMENT PRACTICES

22nd District Agricultural Association
DEL MAR, CA

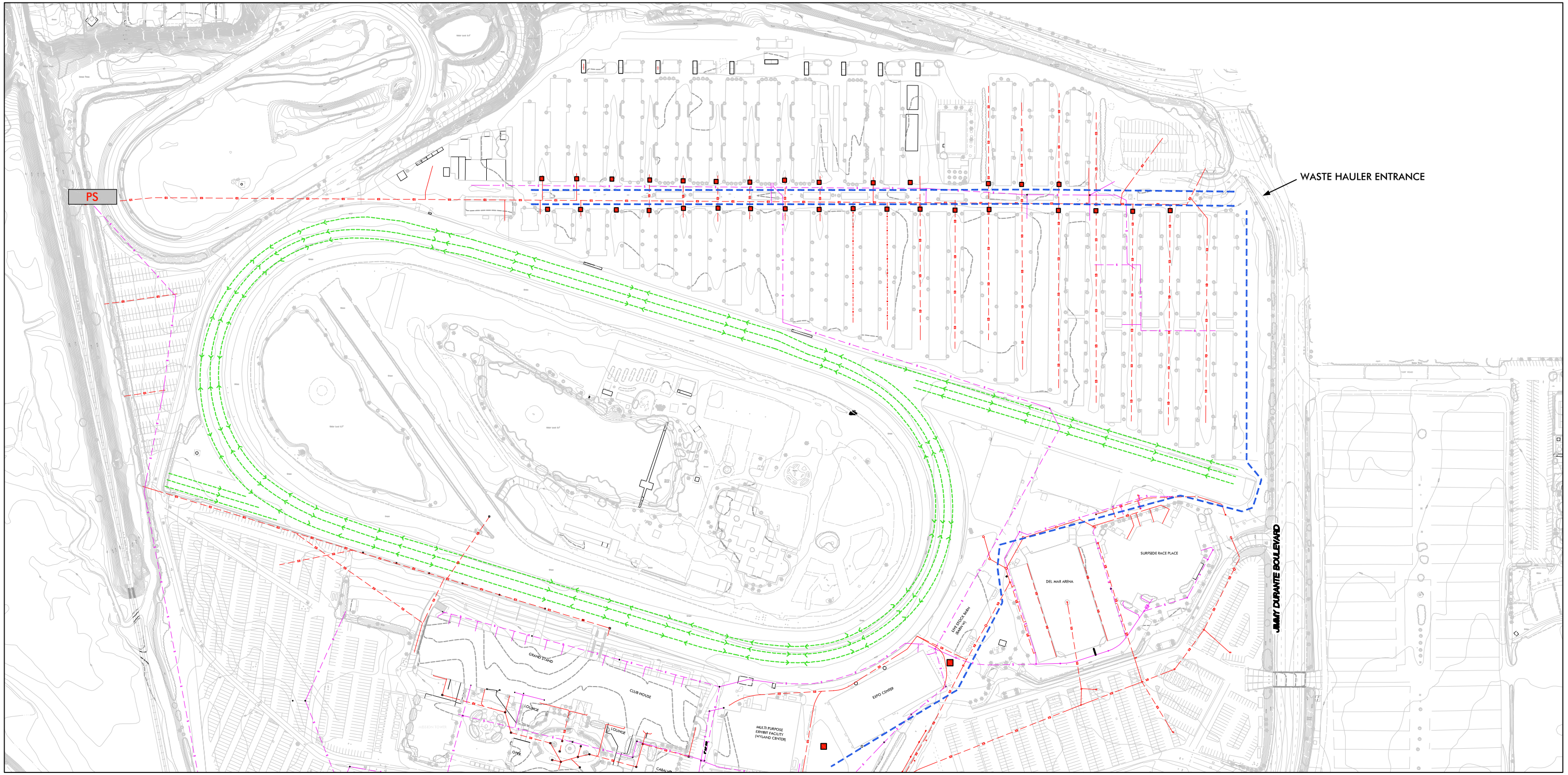
W.O. NO. —
P.T.S. NO. —
TM/TPM —

FOR CITY ENGINEER ____ DATE ____

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	FEI			

NAD 83 COORDINATES —
LAMBERT COORDINATES —

CONTRACTOR ____ DATE STARTED ____
INSPECTOR ____ DATE COMPLETED ____



LEGEND

MANURE HAULING ROUTE (APPROXIMATE)

TEMPORARY BEDDING/MANURE PILING AREAS

SEWER DIVERSION PUMP STATION — PS

STORM DRAIN — SD

SEWER — S

GENERAL NOTES

1. MANURE MANAGEMENT BMPS PRIMARILY CONSIST OF DEBRIS/MANURE REMOVAL FROM HORSE STALLS, AND HAULING TO AN OFFSITE RECYCLER. THE WASTE IS RAKED OUT FROM STALLS AND PILED AT THE END OF THE ROW FOR THE HAULER TO LOAD ONTO THE SEMI TRAILER. WASTE IS ONLY PILED FOR A SHORT TIME AND THE WORK IS CONTINUOUS. THE DIVERSION IS ALWAYS SET TO SEWER DURING THE RACING SEASON, THEREFORE NO RUNON OR RUNOFF IS ABLE TO REACH SURFACE WATERS.

SCALE: 1" = 250'

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CAFO REPORT OF WASTE DISCHARGE EXHIBIT:

EXHIBIT 7.0
DEL MAR FAIRGROUNDS
MANURE MANAGEMENT BMPS

22nd District Agricultural Association
DEL MAR, CA

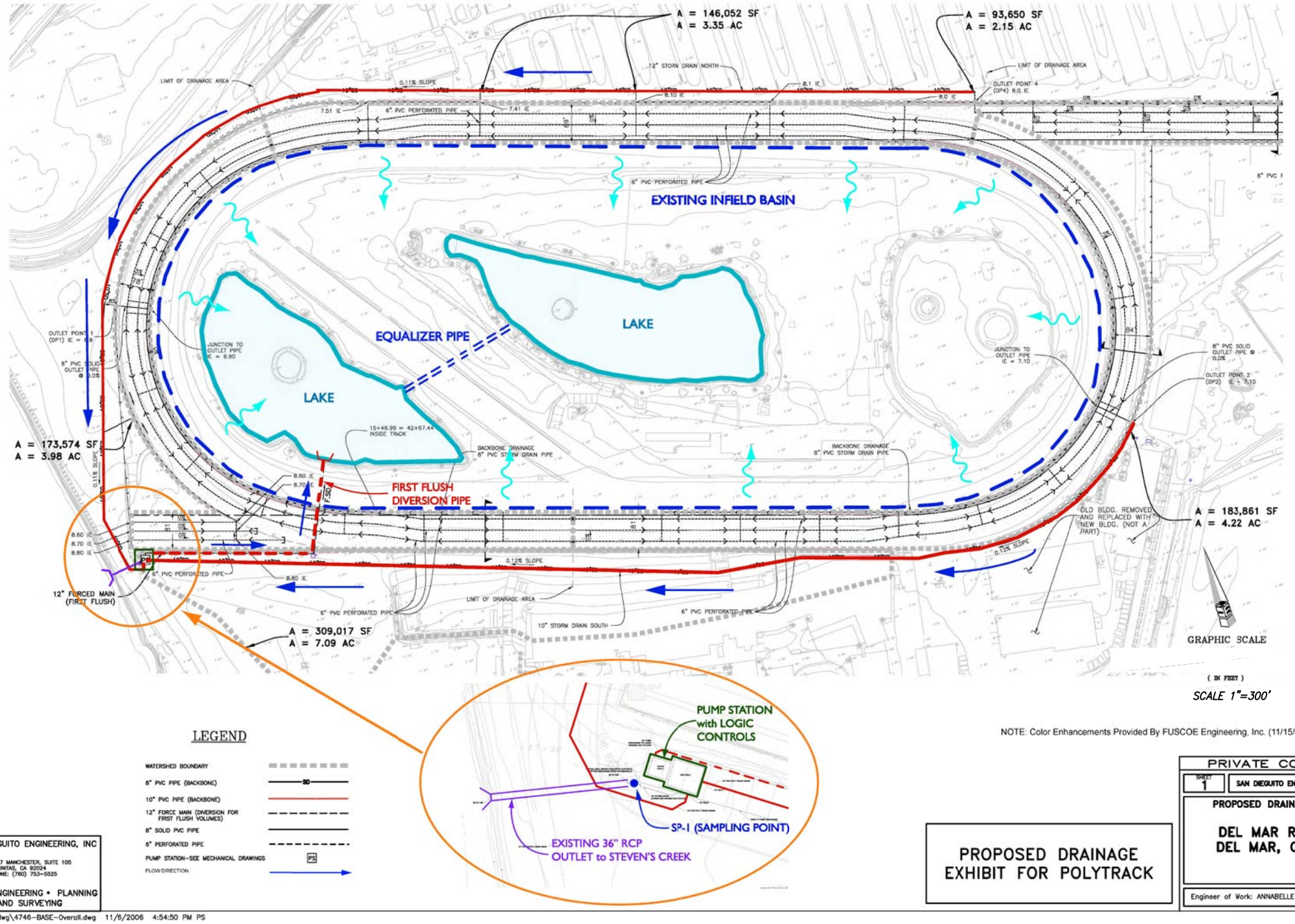
W.O. NO. —
P.T.S. NO. —

FOR CITY ENGINEER _____ DATE _____ TM/TPM —

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	FEI			

— NAD 83 COORDINATES
— LAMBERT COORDINATES

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____



LEGEND

- WATERSHED BOUNDARY
- 8" PVC PIPE (BACKBONE) — 8D
- 10" PVC PIPE (BACKBONE)
- 12" FORCE MAIN (DIVERSION FOR FIRST FLUSH VOLUMES)
- 8" SOLID PVC PIPE
- 6" PERFORATED PIPE
- PUMP STATION–SEE MECHANICAL DRAWINGS — PS
- FLOW DIRECTION

NOTE: Color Enhancements Provided By FUSCOE Engineering, Inc. (11/15/06)

SAN DIEGUITO ENGINEERING, INC
4407 MANCHESTER, SUITE 105
ENCINITAS, CA 92024
PHONE: (760) 753-5525
CIVIL ENGINEERING • PLANNING
LAND SURVEYING

U:\1data\engineering\4746.01\dwg\4746-BASE-Overall.dwg 11/6/2006 4:54:50 PM PS

PROPOSED DRAINAGE EXHIBIT FOR POLYTRACK

PRIVATE CONTRACT

SHEET 1 | SAN DIEGUITO ENGINEERING INC. | 1 SHEETS

PROPOSED DRAINAGE PLAN FOR:

DEL MAR RACETRACK
DEL MAR, CALIFORNIA

Engineer of Work: ANNABELLE S. AGUILAR RCE: 61158

ENGINEER'S NAME: SAN DIEGUITO ENGINEERING
PHONE NO. (760) 753-5525

FILE NO. 4746.01

GENERAL NOTES

1. RUNOFF ON THE POLYTRACK FEEDS INTO A PERFORATED PIPE SYSTEM UNDERNEATH THE SURFACE. THE FIRST FLUSH STORM WATER VOLUME OF 32,000 CF IS THEN PUMPED TOWARD THE WESTERN INFIELD LAKE. ONCE THIS FIRST FLUSH VOLUME HAS BEEN PUMPED, RUNOFF IS ALLOWED TO DRAIN TO THE STORM DRAIN OUTFALL AND IS TESTED PER MONITORING PROGRAM.

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CAFO REPORT OF WASTE DISCHARGE EXHIBIT:

EXHIBIT 8.0
DEL MAR FAIRGROUNDS
POLYTRACK DRAINAGE

22nd District Agricultural Association
DEL MAR, CA

W.O. NO. —
P.T.S. NO. —

FOR CITY ENGINEER _____ DATE _____ TM/TPM —

DESCRIPTION	BY	APPROVED	DATE	FILMED
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— NAD 83 COORDINATES
— LAMBERT COORDINATES

CONTRACTOR _____ DATE STARTED _____
INSPECTOR DATE COMPLETED

APPENDIX 1

SAN DIEGO RWQCB CAFO AND PHASE II PERMITTING LETTERS

CC 2

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San Diego Region

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November 6, 2007

CERTIFIED MAIL – RETURN RECEIPT REQUESTED
7006 2760 0000 1615 5796

Mr. Gary Reist, Chief Plant Operator
Del Mar Fairgrounds
2260 Jimmy Durante Boulevard
Del Mar, CA 92014-2216

In reply refer to:
SCR: 08-0533.02
WGhoram

Dear Mr. Reist:

SUBJECT: REQUEST FOR REPORT OF WASTE DISCHARGE (ROWD), WASTE DISCHARGE REQUIREMENTS FOR THE DEL MAR FAIRGROUNDS, SAN DIEGO COUNTY

FACILITY: DEL MAR FAIRGROUNDS, 2260 JIMMY DURANTE BOULEVARD, DEL MAR, CA

Based on prior inspections of the Del Mar Fairgrounds and a meeting with you, FUSCOE Engineering Staff, and Regional Board representatives on October 2, 2007, it has been determined that the Del Mar Fairgrounds meets the criteria for classification as a large Concentrated Animal Feeding Operation (CAFO) subject to NPDES permitting. As such, you are required to submit a complete NPDES application, Report of Waste Discharge (ROWD), and Nutrient Management Plan (NMP) to obtain waste discharge requirements (WDRs) from the Regional Board. The complete renewal package is due no later than February 1, 2008.

The ROWD must include all required completed forms (see below) as well as a description of the facility operations and information regarding the waste disposal that may impact water quality, including, but not limited to the following:

1. A "to scale" location map depicting the Del Mar Fairgrounds and identifying all facilities including ponds, corrals, wastewater sources, wastewater storage and disposal, manure storage and application areas, groundwater wells, and groundwater sampling locations. Also include a topographical map of the facility location. And include an 8.5" x 11" map showing the location of the facility in relation to major geographical features such as highways, streets, creeks and other water bodies.

2. A description of the facility operations, design capacities, and process wastewater volumes.

3. Best management practices that will be implemented to prevent runoff of wastes from the facility to surface waters during storm events. In addition, you must submit your facility's Nutrient Management Plan (NMP) in order for the Regional Board to establish your Waste Discharge Requirements and to comply with a recent federal court ruling.

   The Del Mar Fairgrounds shall develop and fully implement a Nutrient Management Plan (NMP) acceptable to this Regional Board. A registered professional engineer in the State of California, or other qualified individual, shall develop the NMP in accordance with current guidelines established in 40 CFR Part 122.42 and as summarized below in the attachments 6 and 7 to this letter. The NMP shall meet the minimum standards established in the Natural Resources Conservation Services (NRCS's) "Conservation Practice Standard, Nutrient Management, Code 590."

   Please refer to Attachment 6- *Nutrient Management Plan*, and Attachment 7- *Regional Board Requirements for a Nutrient Management Plan*, that are enclosed with this letter.

   More information can be found on the NRCS's website:

   www.nrcs.usda.gov/programs/afo/index.html

4. A report certified by a civil engineer registered in the State of California demonstrating that the design of the facilities will comply with all water quality objectives and all provisions of the Water Quality Control Plan for the San Diego Basin (Basin Plan). This report should include a description of any conditions that must be met to ensure that the discharge will protect water quality and beneficial uses of the San Dieguito Lagoon Hydrologic Sub Area (905.11), of the San Dieguito River Hydrologic Area (905.11) of the San Dieguito Hydrologic Unit (905.00).

5. A certification report verifying that the design capacity of the retention ponds will accommodate the facility processes and process wastewater volumes.

The timely submittal of a complete ROWD is an important step in the permit renewal process. The complete ROWD with all required information is due no later than February 1, 2008.

I have enclosed the following NPDES permit application forms to be completed, signed by the appropriate responsible person, and submitted with the ROWD:

1) Form 200
2) Contributions Disclosure Statement
3) USEPA Application Form 1-General Information
4) USEPA Application Form 2B-Concentrated Animal Feeding Operations and Aquatic Production Facilities; and
5) Signatory and Certification Statement

The Regional Board requests that only a single copy of the completed NPDES application, ROWD and NMP be submitted initially. Also, please submit one complete copy of the ROWD and NMP electronically on CD. It is the Regional Board's intent to minimize the need to request revisions to multiple copies if and when the initial submittal has been found deficient.

Upon review of the application, ROWD and NMP for completeness and accuracy, the Regional Board will then notify you of any required changes or additional information needed. After such corrections or additions have been incorporated, resubmitted, and reviewed, the Regional Board will then request additional copies for distribution to other agencies and interested parties for their review and comments.

If you plan to cease operations, or to reduce the number of animals at your facility, please notify the Regional Board in writing immediately so that a determination can be made as to whether or not a permit is required.

Please note that a portion of your facilities will be regulated under the general NPDES Municipal Storm Water Regulations. Regional Board letter dated October 15, 2007 was mailed to you with direction on applying for enrollment under the Municipal Storm Water Permit (MS4), NPDES Permit No. CA000004. Mr. Pete Peuron of the Central Watershed Unit is the point of contact for the MS4 Permit.

The heading portion of this letter includes a Regional Board code number noted after "In reply refer to:" In order to assist us in the processing of your correspondence please include this code number in the heading or subject line portion of all correspondence and reports to the Regional Board pertaining to this matter.

If you have any questions regarding this matter or need further assistance, please contact Ms. Whitney Ghoram by e-mail at WGhoram@waterboards.ca.gov or by phone at (858) 467-2967.

Respectfully,

JOHN H. ROBERTUS
Executive Officer

JHR:mpm:bdk:wjg
Enclosures (5)

Cc: Howard C. Wen, Project Manager, FUSCOE Engineering, 16795 Van Karmen, Suite 100, Irvine, CA 92606

Joe Kuhn, WaterQuality Scientist, FUSCOE Engineering, 16795 Van Karmen, Suite 100, Irvine, CA 92606

Chiara Clemente, Senior Environmental Scientist, Central Watershed Unit, San Diego RWQCB

File: 08-0533.02

S:\CoreRegulatoryUnits\South\Ghoram\DELMAR-FAIRGROUNDS-ROWD-RequestLetter-November 6-2007.doc

Linda S. Adams
Secretary for Environmental Protection

California Regional Water Quality Control Board

San Diego Region

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http:// www.waterboards.ca.gov/sandiego

October 15, 2007

In reply refer to:
CWU:10-3029152:peurp

Gary Reist
Chief Plant Operations
Del Mar Fairgrounds
22nd District Agricultural Association
2260 Jimmy Durante Boulevard
Del Mar, CA 92014-2216

SUBJECT: Enrollment of the Del Mar Fairgrounds and Horsepark Under National Pollutant Discharge Elimination System (NPDES) Permit No. CA000004, Waste Discharge Requirements (WDRs) for Storm Water Discharges From Small Municipal Separate Storm Water Systems (MS4s)

Recently (on October 2, 2007) during a meeting that was held between the San Diego Regional Water Quality Control Board (Regional Board) and the 22nd District Agricultural Association (District) you stated your interest enrolling the Del Mar Fairgrounds and Horsepark under the General Permit for Small Municipal Separate Storm Water Systems (Phase II Permit). This letter is written to provide further direction on actions that should be taken in order to enroll. Please note that enrollment under the Phase II Permit will apply to requirements dealing with storm water issues, while waste discharge issues pertaining to confined animals at your facilities must be handled through a Confined Animal Feeding Operation (CAFO) permit that must be applied for separately. Please consult with Whitney Ghoram of the Southern Core Regulatory Unit of the Regional Board regarding CAFO requirements.

The following steps should be taken to apply for coverage under the Phase II Permit.

1. A completed Notice of Intent (NOI) must be submitted to the Regional Board (NOI form attached).

2. A fee must be paid to the State Water Resources Control Board. The appropriate fee, which is based on the daily population present at your facilities, can be determined by consulting the fee schedule in the California Code of Regulations, Title 23, Division 3, Waste Discharge Reports and Requirements, Article 1. Fees. The fee schedule can be accessed at www.swrcb.ca.gov/stormwtr/municipal.html.

3. A Storm Water Management Plan (SWMP) must be submitted to the Regional Board. The SWMP must be prepared in accordance with Section D of the Phase II Permit. The SWMP must be approved by the Regional Board prior to Permit coverage being in effect.

Please contact me at (858) 637-7137 or ppeuron@waterboards.ca.gov if you have any questions concerning this matter.

The heading portion of this letter includes a Regional Board code number noted after "In reply refer to:" In order to assist us in the processing of your correspondence please include this code number in the heading or subject line portion of all correspondence and reports to the Regional Board pertaining to this matter.

Sincerely,

Peter Peuron

Peter Peuron
Environmental Scientist

Pmp :cmc :pmp

Attachment: Notice of Intent

cc: Joe Kuhn, Fuscoe Engineering, 6390 Greenwich Dr., # 170, San Diego, CA 92122

State Water Resources Control Board
NOTICE OF INTENT
TO COMPLY WITH THE TERMS OF THE GENERAL PERMIT FOR
STORM WATER DISCHARGES FROM
SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS
(WATER QUALITY ORDER NO. 2003 – 0005 - DWQ)

I. NOI Status

Mark Only One Item	1. [ ]New Permittee	2. [ ]Change of Information WDID #:_____

II. Agency Information

A. Agency			
B. Contact Person		C. Title	
D. Mailing Address		E. Address (Line 2)	
F. City	State **CA**	G. Zip	H. County
I. Phone	J. FAX	K. Email Address	
L. Operator Type (check one) 1. [ ] City 2. [ ] County 3. [ ] State 4. [ ] Federal 5. [ ] Special District 6. [ ] Government Combination			

III. Permit Area

_____

IV. Boundaries of Coverage (include a site map with the submittal)

_____

_____

_____

_____

V. Billing Information

A. Agency			
B. Contact Person		C. Title	
D. Mailing Address		E. Address (Line 2)	
F. City	State **CA**	G. Zip	H. County
I. Phone	J. FAX	K. Email Address	

Fees are based on the daily population served by the Small MS4. To determine your fee, consult the current fee schedule (California Code of Regulations, Title 23, Division 3, Chapter 9 Article 1), which can be viewed at www.swrcb.ca.gov/stormwtr/municipal.html.

L. Population_____

Fee _____

Check(s) should be made payable to the SWRCB and submitted to the appropriate RWQCB.

SWRCB Tax ID is: 68-0281986

VI. Discharger Information (check applicable box(es) and complete corresponding information)

1. [ ] Applying for Individual General Permit Coverage

2. [ ] Applying for a permit with one or more co-permittees

The undersigned agree to work as co-permittees in implementing a complete small MS4 storm water program. The program must comply with the requirements found in Title 40 of the Code of Federal Regulations, parts 122.32. Attach additional sheets if necessary. Each co-permittee must complete an NOI.

Lead Agency	Signature
Agency	Signature
Agency	Signature
Agency	Signature

3. [ ] Separate Implementing Entity (SIE)

A. Agency			
B. Contact Person	C. Title		
D. Mailing Address	E. Address (Line 2)		
F. City	State CA	G. Zip	H. County
I. Phone	J. FAX	K. Email Address	

H. Operator Type (check one)

1. [ ] City 2. [ ] County 3. [ ] State 4. [ ] Federal 5. [ ] Special District 6. [ ] Government Combination

Minimum Control Measures being implemented by the SIE (check all that apply)

[ ] Public Education [ ] Public Involvement [ ] Illicit Discharge/Elimination
[ ] Construction [ ] Post Construction [ ] Good Housekeeping

"I agree to coordinate with the agency identified in Section III of this form and comply with its qualifying storm water program. 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, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. Additionally, I certify that the provisions of the permit, including the development and implementation of a Storm Water Management Program, will be complied with."

N. Signature of Official _____ Date _____

VII. Storm Water Management Plan (check box)

[ ] As per section A.2. of this General Permit, the SWMP is attached.

VIII. 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, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. Additionally, I certify that the provisions of the permit, including the development and implementation of a Storm Water Management Program, will be complied with."

A. Printed Name: _____

B. Title: _____

C. Signature: _____ D. Date: _____

APPENDIX 2

DEFINITIONS

DEFINITIONS

Animal Feeding Operation (AFO)	A lot or facility (other than an aquatic animal production facility) where the following conditions are met: (i) animals (other than aquatic animals) have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period, and (ii) crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility.
Bedding	Material such as straw, sawdust, wood shavings, shredded newspaper, sand or other similar material used in animal confinement areas for the comfort of the animal or to absorb excess moisture.
Best Management Practice (BMP)	Permit condition used in place of or in conjunction with effluent limitations to prevent or control the discharge of pollutants. May include schedule of activities, prohibition of practices, maintenance procedure, or other management practice. BMPs may include, but are not limited to, treatment requirements, operating procedures, or practices to control runoff, spillage, leaks, or drainage from raw material storage.
Concentrated Animal Feeding Operation (CAFO)	Means an AFO which is defined as a Large CAFO or Medium CAFO by 40 CFR 122.23(4) and (6), or that is designated as a CAFO.
Confinement Area	The animal confinement area includes but is not limited to open lots, housed lots, feedlots, confinement houses, stall barns, free stall barns, milkrooms, milking centers, cowyards, barnyards, medication pens, and stables.
Discharge Point	Location where storm water is released into a receiving water from a conveyance system/storm drain.
General Industrial Permit	A National Pollutant Discharge Elimination System (NPDES) Permit (No. CAS000001) issued by the State Water Resources Control Board for discharge of storm water associated with industrial activity. Board Order 97-03-DWQ.
Horse Waste	Manure, urine, bedding material, and feed debris.

Industrial SWPPP	A written plan that documents the series of phases and activities that, first, characterizes your site, and then prompts you to select and carry out actions which prevent the pollution of storm water discharges covered under the General Industrial Permit.
Large CAFO	An AFO is defined as a Large CAFO if it stables or confines as many as or more of the numbers of animals specified in any of the following categories: (i) 700 mature dairy cows, whether milked or dry; (ii) 1,000 veal calves; (iii) 1,000 cattle other than mature dairy cows or veal calves; (iv) 2,500 swine each weighing 55 pounds or more; (v) 10,000 swine each weighing less than 55 pounds; (vi) 500 horses; (vii) 10,000 sheep or lambs; (viii) 55,000 turkeys; (ix) 30,000 laying hens or broilers, if the AFO uses a liquid manure handling system; (x)125,000 chickens (other than laying hens), if the AFO uses other than a liquid manure handling system; (xi) 82,000 laying hens, if the AFO uses other than a liquid manure handling system; (xii) 30,000 ducks (if the AFO uses other than a liquid manure handling system); or (xiii) 5,000 ducks (if the AFO uses a liquid manure handling system).
Manure	Fecal and urinary defecations of livestock and poultry; may include spilled feed, bedding, or soil.
Manure Storage Area	The manure storage area includes but is not limited to lagoons, runoff ponds, storage sheds, stockpiles, under house or pit storages, liquid impoundments, static piles, and composting piles.
Non-CAFO Area	Areas that horses or animals are not confined and are not used for animal-related operations. These areas include, but are not limited to, exhibit halls, offices, streets, parking lots, and maintenance areas.
Non-Production Area	Non-production areas refer to those areas where animals are not confined. These areas are not considered CAFO production areas, but are still areas where animals may be present at times. This includes the racetracks and training track, horse arena, paddocks, corrals, walkways and other trails.

Nutrient Management Plan	A grouping of conservation practices and management activities which, when implemented as part of a conservation system, will help to ensure that both production and natural resource protection goals are achieved. At a minimum, a nutrient management plan must include best management practices and procedures necessary to implement applicable effluent limitations and standards.
Process Wastewater	"water directly or indirectly used in the operation of an AFO for any or all of the following: spillage or overflow from animal or poultry watering systems; washing, cleaning, or flushing pens, barns, manure pits, or other AFO facilities; direct contact swimming, washing or spray cooling of animals; or dust control. Process wastewater also includes any water which comes into contact with any raw materials, products, or byproducts including manure, litter, feed, milk, eggs, or bedding."
Production Area	The areas of operations that includes the animal confinement areas, manure storage areas, raw materials storage areas, and waste containment areas.
Runoff	Water from rain or other sources that do not infiltrate into the ground but runs over the land surface and into creeks or the storm drain system/MS4.
Wet Season	October 1 to April 30

References:

40 CFR Sections 122.23, 142.2(h), and 412.2(d)

California Stormwater Quality Association (CASQA). California Stormwater Best Management Practice Handbook: Industrial and Commercial Activities. January 2003.

Counties of Orange and San Diego. Equestrian-Related Water Quality Best Management Practices. June 2004.

US EPA Office of Wastewater Management, Water Permits Division. NPDES Permit Writers' Guidance Manual and Example NPDES Permit for Concentrated Animal Feeding Operations. December 31, 2003. EP-833-B-04-001.

APPENDIX 3

NUTRIENT MANAGEMENT PLAN

DEL MAR FAIRGROUNDS

NUTRIENT MANAGEMENT PLAN

City of Del Mar, CA

Prepared For:

STATE OF CALIFORNIA 22ND DISTRICT AGRICULTURAL ASSOCIATION
DEL MAR FAIRGROUNDS
2260 Jimmy Durante Blvd.
Del Mar, CA 92014-2216

Prepared By:

FUSCOE ENGINEERING, INC.
16795 Von Karman Suite 100
Irvine, CA 92606
949.474.1960

Date Prepared: February 1, 2008

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ACRONYMS

22nd DAA	22nd District Agricultural Association
AFO	animal feeding operation
amsl	above mean sea level
bgs	below ground surface
BMP	best management practice
BOD	biological oxygen demand
CAFO	concentrated animal feeding operation
CFR	Code of Federal Regulation
DMTC	Del Mar Thoroughbred Club
FEMA	Federal Emergency Management Association
NMP	Nutrient Management Plan
NPDES	National Pollutant Discharge Elimination System
ROWD	Report of Waste Discharge
RWQCB	Regional Water Quality Control Board
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
US EPA	United States Environmental Protection Agency
WDR	Waste Discharge Requirement

1 INTRODUCTION

This Nutrient Management Plan (NMP) is prepared in accordance with 40 CFR 122.42 and in response to the San Diego Regional Water Quality Control Board (RWQCB) letter to the Del Mar Fairgrounds (dated November 6, 2007), mandating that the discharger develop and implement a NMP. The Del Mar Fairgrounds is designated as a large Confined Animal Feeding Operations (CAFO) facility, housing over 499 horses for a period of 45 days or more each calendar year. The established protocols outlined in this NMP are at a minimum, as stringent as the protocols specified in the Natural Resources Conservation Service's (NRCS) "Conservation Practice Standard, Nutrient Management, Code 590." It should be noted that the Del Mar Fairgrounds does not land-apply any manure or process wastewater generated at the facility (further detailed in this NMP).

1.1 CAFO OPERATIONS

The Del Mar Fairgrounds, operated by the 22nd District Agricultural Association (DAA), is a multi use facility of approximately 300 acres in the City of Del Mar (see Exhibit 1.0 Vicinity Map). The Fairgrounds hosts approximately 350 activities and events throughout the year. Although some of these events involve animals, the vast majority of the events do not. The primary activity which triggers the Large CAFO status is the housing of thoroughbred horses during the 43-day thoroughbred horse racing meet, which takes place annually from mid July through Labor Day (first Monday of September). During the race meet, close to 2,000 to 2,200 horses are stabled for the duration of the season. The race meet is currently, and has historically, been operated by the Del Mar Thoroughbred Club (DMTC). In addition to the race meet, the Fairgrounds hosts the 22-day San Diego County Fair, which takes place annually in June-July (dry season). During the annual Fair, the majority of the Fairgrounds property is utilized for a variety of activities, including livestock exhibits and horse shows. On average, the annual Fair features between 400 to 800 animals on-site, depending on the day and exhibits presented. There are several other equestrian-related events held throughout the year at the horse arena on-site, which typically last between 3-5 days and can feature up to 500 to 700 animals on-site. Once the racing season and County Fair are completed, few to no animals are housed on-site. Therefore, CAFO regulations do not apply to the entire Fairgrounds facility, and only apply during portions of the year where animals are present, in locations where they are present.

Large CAFO requirements have been applied toward fairgrounds in Southern California previously, including at Fairplex Park in Pomona, CA; which is home to the Los Angeles County Fairgrounds and the Fairplex thoroughbred and quarter horse racing. Application of CAFO requirements toward entities such as fairgrounds requires a different strategy than what is required of a CAFO entity such as a large dairy. As demonstrated in the Individual Waste Discharge Requirements (WDRs) issued to Fairplex Park (Los Angeles RWQCB Order No 99-107) and below, dividing the property into specified CAFO "production areas" allows the enforcement of CAFO rules in an efficient and effective manner, in the locations where they are applicable. In previously issued CAFO permits, such as the LA Fairplex, CAFO production areas and CAFO non-production areas are clearly defined.

As specified in the accompanying Report of Waste Discharge (ROWD) application document, portions of the facility are designated as CAFO production areas, non-production areas, and CAFO-exempt areas which include other areas governed by the existing General Industrial Storm Water NPDES Permit[1] (WDID # 9 37I001942). The CAFO production area designation is based on the definition stated in 40 CFR 122.23, the US EPA's CAFO Final Rule. "Production Area" is defined as "that part of an animal feeding operation (AFO) that includes the animal confinement area, the manure storage area, the raw materials storage area, and the waste containment areas."

The following areas have been identified as CAFO production areas at the Del Mar Fairgrounds (see Section 2.1 for further descriptions of these areas):

- Animal confinement areas, including all permanent and temporary barns and stables. The term "stable" refers to the stable buildings, structures or barns and all facilities, including horse stalls, located under the roofs of such structures. These areas are the locations where animals are housed during the various animal related events on the property.
- Animal wash racks, including covered and uncovered wash racks that discharge to sewer.
- Temporary and permanent storage areas for manure, bedding, and animal waste.

The term "process wastewater" refers to "water directly or indirectly used in the operation of an AFO for any or all of the following: spillage or overflow from animal or poultry watering systems; washing, cleaning, or flushing pens, barns, manure pits, or other AFO facilities; direct contact swimming, washing or spray cooling of animals; or dust control. Process wastewater also includes any water which comes into contact with any raw materials, products, or byproducts including manure, litter, feed, ... or bedding."[2] The 22nd DAA has implemented measures to eliminate the discharge of process wastewater from the CAFO production areas at Del Mar Fairgrounds through the combination of the following practices:

- Routing all horse wash waters to the sanitary sewer;
- Placing roofs or covering all horse stalls, barns, and stables to route precipitation around the CAFO production areas;
- Storage of all contaminated bedding materials (manure-soiled bedding), feed, and manure indoors or in covered storage facilities such that storm water does not contact these materials;
- Temporary manure stockpiles are removed daily such that they do not come into contact with storm water runoff:
- Horse presence is limited to the maximum extent practicable to the covered CAFO production areas (stables/barns) during rain events and when necessary;

[1] State Water Resources Control Board (SWRCB) Order No. Order 97-03-DWQ
[2] 40 CFR Sections 122.23 and 412.2(d)

- Implementation of good housekeeping practices such that any manure inadvertently deposited outdoors in the CAFO production area and non-production area is removed before pollutants from these materials can be entrained in storm water runoff.

Further details on process wastewater management are provided under Section 4 of this report.

CAFO "non-production" areas refer to those areas where animals are not confined. These areas are not considered CAFO production areas, but are still areas where animals may be present at times. As described in the ROWD, non-production areas at Del Mar Fairgrounds include the racetracks and training track, horse arena, paddocks, corrals, walkways and other trails. They do not include CAFO exempt areas (currently subject to the General Industrial Storm Water NPDES Permit, WDID # 9 371001942), such as the parking lots, grandstands, infields, maintenance facilities and exhibit halls. Discharges of materials other than storm water, including liquids and other materials, either directly or indirectly into Waters of the United States, are prohibited from the non-production areas.

CAFO-exempt areas include those areas governed by the existing General Industrial Storm Water NPDES Permit consist of areas where animals are not held, and where animal activities do not occur. In all, CAFO areas comprise approximately 97 acres of the 300-acre facility. Further details on the CAFO production areas and non-production areas are provided under Section 2 of this NMP.

Due to the availability of a sewer connection within CAFO production areas (either directly plumbed to sanitary sewer or via storm drain with a sewer diversion), and the manner in which the non-production areas do not expose animals or waste to storm water run-on, it is advised that the detention of the 25-year 24-hour storm is not applicable to this project site. The procedures outlined within this plan, and the nature of this facility as compared to other similarly permitted facilities suggests that the discharge of process wastewater through the site best management practices (BMPs) are sufficient to satisfy CAFO permit requirements. Further details regarding process wastewater management are provided in Section 4.

1.2 RESOURCE CONCERNS

The function of this document is to outline procedures and information concerning avoiding water quality impacts to surface waters from CAFO facilities. The Del Mar Fairgrounds is located adjacent to the San Dieguito River, and the downstream Pacific Ocean Shoreline at the San Dieguito River was listed as impaired for bacteria indicators on the 2002 303(d) list of Limited Water Quality Segments prepared by the San Diego RWQCB. In addition, the Fairgrounds property is bounded on the west by Stevens Creek, a tributary to the San Dieguito River (see Exhibit 2.0 Watershed Map). Horse manure stemming from the Del Mar Fairgrounds contains compounds which are harmful to surface water beneficial uses outlined

in the Water Quality Control Plan for the San Diego Basin[3] (also known as the Basin Plan). Harmful pollutants found in horse manure include fecal coliform, enterococcus, nutrients, as well as biological oxygen demand (BOD) and other water quality indicators.

In general, storm water runoff within the Fairgrounds is generally conveyed west, southwest, and south, ultimately discharging off-site at five major discharge points. Storm water runoff from the northern portions of the Fairgrounds, including the backstretch area in which the majority of the barns reside, is conveyed west to a pump station located between the training track and Stevens Creek.

In general, storm water runoff within the Fairgrounds is generally conveyed west, southwest, and south, discharging off-site at five major discharge points. Storm water runoff from the northern portions of the Fairgrounds, including the backstretch areas, is conveyed west to a pump station located between the training track and Stevens Creek. During the dry season, runoff is diverted to the sewer system. During the wet season (October 1 through April 30), only first flush runoff (roughly equivalent to 0.2 inches) is diverted to the sewer, and the remaining flows are discharged to Stevens Creek at Discharge Point #1. Runoff from the main track drainage area is conveyed to a pump station located west of the grandstands. At this pump station, low-flow and initial storm event flows (up to the first flush volume, approximately 32,000 ft^3) are diverted to the sewer system, while high flows and extended storm event flows are discharged to Stevens Creek at Discharge Point #2. Within the main track, the majority of runoff is conveyed inward, discharging into the infield lakes. During extreme high flow conditions and when lakes are at capacity (total capacity of 520,000 ft^3), excess flows from the main track are discharged into Stevens Creek at Discharge Point #2. Water within the infield lakes does not discharge off-site. Runoff from the western parking lot discharges to the San Dieguito River at Discharge Point #3, and runoff from the central Fairgrounds facilities, including the exhibit halls and grandstands, drains south discharging to the San Dieguito River at Discharge Point #4. Runoff from the horse arena and main parking lot generally drains southwest, discharging to the San Dieguito River at Discharge Point #5. Runoff from the east dirt parking lot, located east of Jimmy Durante Boulevard, generally sheet flows south and west, and is contained on-site. Refer to Exhibit 4.0 for locations of the existing storm drain facilities and discharge points.

According to FEMA Map No. 06073C1307-F (see Exhibit 3.0), the majority of the Fairgrounds property is located within the floodplain of the 100-year storm event. Throughout the site, flood depths vary between 8 and 9 feet above the ground surface. Flooding is an existing condition, and procedures are in place for ensuring safety during flooding conditions.

Groundwater is anticipated to be at depths ranging from 5 to 10 feet bgs, and is subject to tidal influence and seasonal variations resulting in saline conditions for such features as the infield lakes that are influenced by groundwater conditions in the area.[4] Environmental concerns due to groundwater are not significant due to the abundance of drain inlets and relative runoff characteristics of the CAFO production areas.

[3] San Diego Regional Water Quality Control Board (RWQCB). Water Quality Control Plan for the San Diego Basin. September 8, 1994.

[4] Ninyo & Moore. Limited Geotechnical Evaluation Del Mar Fairgrounds Master Plan, Del Mar, CA. September 12, 2006.

The application of nutrient fertilizers on CAFO production areas is not conducted, and thus nutrient loadings as a result of land applications of manure are not a concern. The main focus of this NMP will be the procedures taken to ensure that CAFO related discharge is not allowed to enter surface waters surrounding the facility. By continuing to implement the management practices outlined in this report, as well as heed recommendations for future practices, the beneficial uses of nearby water resources will not be compromised.

2 FACILITIES DESCRIPTION

2.1 PRODUCTION AREA FACILITIES

As previously mentioned, "CAFO production area" refers to the areas of operations that includes the animal confinement areas, manure storage areas, raw materials storage areas, and waste containment areas.[5] Refer to Exhibit 4.0 Site Plan for the locations of the facilities listed below, and Exhibit 5.0 for a breakdown of the CAFO production areas non-production areas, and CAFO-exempt areas covered under the General Industrial Permit.

BACKSTRETCH STABLES

The main horse stable area located north and east of the main track is generally known as the backstretch area (see Exhibit 4.0). Stables include those barns located in the backstretch area, labeled Barns "A" through "U" and "EE" through "TT" on Exhibit 4.0 (Site Plan). Each barn contains individual stalls which may be used by one or multiple horses. A total of 1930 permanent stalls are located on-site. Additionally, up to 200 temporary stalls are constructed during the thoroughbred race meet.

Stalls are filled with straw or wood shaving bedding, and are the primary residence for horses when they are not training, being washed, groomed, or transported. All permanent barns located on-site are roofed, and rainwater is diverted away from the stalls. In addition, the stalls are walled and slightly elevated such that runoff does not drain towards the stalls. There are no drains or wash racks located within the barn structures in the backstretch area.

HORSE WASH RACKS

Individual horse washing takes place at 74 wash racks located throughout the backstretch stables area (see Exhibit 6.0 for locations). There are multiple wash racks located in the walkways between each barn, and additional wash racks located on the north side of Barns "KK" through "SS". All wash racks located in the backstretch area drain to the main storm drain line connecting to the pump station near the training track, where wash water is diverted to the sewer system. In addition, there are 31 indoor wash racks located in Barn "W", the Wyland Center, the Expo Center and the Activity Center. These indoor wash racks are covered and feature direct connections to the sanitary sewer for drainage.

BARN "W"

Barn "W" is a livestock barn located outside of the backstretch area adjacent to the horse arena. Barn "W" is used for material storage throughout the year, and provides temporary housing of various animals during the County Fair as well as during the racing season. Barn "W" is equipped with 2 indoor sanitary sewer connected wash racks that are covered, and the western side of the barn has areas for temporary horse stalls.

EXPO CENTER

[5] In accordance with 40 CFR Section 142.2(h)

The Expo Center is a facility which temporarily houses animals during the San Diego County Fair, and horses during the horse race meet. During the County Fair, general livestock exhibits and shows are held here, with animals residing here only temporarily for the duration of the exhibit. Throughout the majority of the year, the Expo Center does not house animals, and serves as the home of the Del Mar Sports Center, an indoor multipurpose athletic facility. This facility is also equipped with 16 indoor wash racks connected to the sanitary sewer.

WYLAND CENTER

The Wyland Center is an exhibit hall which temporarily houses animals during the San Diego County Fair as well as horses during the race meet. The animals temporarily housed here during the County Fair are usually small animals which are on exhibit, and do not have permanent stalls. The majority of the year, the Wyland center is an exhibit hall which is utilized for a variety of events, conferences, and trade shows. This facility is equipped with 9 indoor wash racks connected to sanitary sewer.

ACTIVITY CENTER

The Activity Center is located south of the Wyland Center, and is primarily used as a detention and receiving barn for horses during the race meet, and is used as an exhibit hall during the County Fair and other events throughout the year. The Activity Center is equipped with 4 indoor wash racks which are connected to the sanitary sewer.

The following table summarizes the existing CAFO production areas at Del Mar Fairgrounds. Refer to Exhibit 4.0 for locations of the barn facilities, and Exhibit 6.0 for locations of the wash rack facilities.

FACILITY	SIZE	# OF WASH RACKS
Stables A-U and EE-TT	523,755 SF	74
Barn "W"	22,045 SF	2
Expo Center	42,266 SF	16
Wyland Center	42,063 SF	9
Activity Center	24,811 SF	4
Total Horse Wash Racks	~ 7,000 SF	105
Total CAFO Production Area	~661,940 SF	--

2.2 NON-PRODUCTION AREA FACILITIES

As previously mentioned, "non-production areas" refer to those areas where animals are not confined. These areas are not considered CAFO production areas, but are still areas where

animals may be present at times. Non-production areas at Del Mar Fairgrounds include the racetracks and training track, horse arena, paddocks, corrals, walkways and other trails, but do not include other non-CAFO areas, such as the parking lots and exhibit halls. Refer to Exhibit 4.0 Site Plan for the locations of the facilities listed below, and Exhibit 5.0 for a breakdown of the CAFO production areas and non-production areas.

RACETRACK AND TRAINING TRACK

The main racetrack at the Fairgrounds is a 1-mile loop track enclosing a turf track and infield lakes area. In 2007, the 1-mile track surface was converted from a dirt track to an engineered material known as "polytrack". The Polytrack material consists of 80 to 90% silica sand, recycled carpet fiber, a recycled rubber product, and is coated with micro-crystalline wax. A perforated underdrain system was installed beneath the track to convey excess storm water runoff that does not infiltrate into the underlying soils. Excess low flow and first flush storm water runoff from the track drainage system is diverted to two manmade lakes located within the infield of the track. Exhibit 8.0 details the drainage system associated with the main racetrack.

A smaller, 0.5-mile dirt training track is located in the northwest portion of the Fairgrounds. There is minimal landscaping surrounding the track, and Stevens Creek traverses the center of the infield. Animals are generally not permitted within the training track infield (controlled by fencing/guardrails around the inner track perimeter). There are no storm drains within the training track area. Storm water generally ponds and infiltrates to the soil within the training track drainage area. Under high flow conditions, runoff discharge to Stevens Creek in the center of the track.

The main racetrack and training track are primarily utilized during the summer racing season and County Fair only. Occasionally, the track may be utilized during winter months for training should other Southern California racetracks (e.g. Santa Anita, Hollywood Park) experience problems and cannot accommodate training.

HORSE ARENA

The existing horse arena, adjacent to the off-track betting facility (the Surfside Race Place), was designed as a multi-use facility for equestrian, sporting, and other entertainment events. Equestrian shows held at the arena are comprised mostly of jumping, dressage, and western events. One of the larger equestrian events held at the arena is the Del Mar National Horse Show held annually in late April-early May. When equestrian-related events are held at the arena, animals are housed within Barns "A" through "G" in the backstretch area, depending on the size of the event.

The existing horse arena has a partial roof that covers the bleacher seating, but does not cover the dirt floor of the arena. As a result, the majority of events held during dry weather months to reduce the risk of cancellation due to rain. The 22nd DAA is currently preparing a Coastal Development Permit application and Mitigated Negative Declaration for the construction of a roof over the entire arena floor, which would enable year-round use to host

additional horseshows, rodeos, and other events that would otherwise be cancelled in the event of rain.

Construction of the roof over the arena floor will remove the arena floor as a potential source of equestrian-related pollutants. Currently, storm water runoff within the arena discharges into the storm drain system associated with the main parking lot, ultimately discharging to San Dieguito River at Discharge Point #5. An existing clarifier unit in the downstream storm drain line removes solids and debris in storm water runoff before discharging off-site. After completion of the Arena Roof Project, roof runoff will be conveyed around the arena, discharging into the existing storm drain system.

WALKWAYS, TRAILS, & CORRALS

The areas between the permanent barns in the backstretch areas are unpaved. Dirt walkways connect the many barns and stables with the main track and training track, as well as with the horse arena and barns outside of the backstretch area. These areas are frequently watered in small amounts to control dust, but not in amounts large enough to generate runoff. Within the backstretch area, the main storm drain lines collects sheet flow runoff from these areas, which connects to the pump station at Discharge Point #1.

In addition, there are multiple small corrals and paddocks located throughout the backstretch area as well as north of the horse arena, and are frequently used as staging areas and exercise areas. In general, approximately 80.9 acres of the Del Mar Fairgrounds are considered non-production areas.

2.3 BUFFERS

Animals are not to come in contact with surface waters at the Del Mar Fairgrounds, including Stevens Creek and the San Dieguito River. The nature of the facility revolves around control of animals, and at no point are they allowed to roam free or graze. Stevens Creek is not accessible on the northern point of the backstretch stable area due to a dirt berm, and barbed wire fence. In addition, the berm precludes any surface drainage to the creek in this area. While exercising at the training track horses are not allowed to be taken into the interior near the Creek. The training track is elevated and although close in proximity, is not accessible to the Creek due to a guardrail. Any manure left on the track is to be promptly removed by DMTC staff and disposed of.

Animals are not to be taken to the western perimeter of the facility near Stevens Creek, therefore animals do not directly come into contact with the Creek. The western perimeter of the Fairgrounds is also fenced to prohibit access to Stevens Creek. In addition, animals from the Del Mar Fairgrounds are not to be taken around the San Dieguito River. The River is located on the extreme southern portion of the project site, and animals are not involved in events or housed near this area.

2.4 STORAGE AREAS

Storage of animal related material takes place either outdoors in stockpiles (dry season only) or indoors (wet season) in the following areas. The majority of outdoor stockpiles utilized for storage of feed and bedding are temporary in nature, and are covered when not in use. Outdoor storage of CAFO-related materials is not utilized during the wet season. Since the majority of CAFO-related storage areas are temporary in nature, storage capacities are not provided in this NMP.

- Hay Storage is located in the eastern dirt parking lot. Stacks are to be kept as low as possible to minimize exposure to the wind. Hay is not a significant source of pollutants during storm conditions.
- Feed for animals during the San Diego County Fair is kept in Barn "A" within the backstretch area. It is kept under cover and not exposed to storm water run-on.
- Clean straw bedding and wood shavings are kept north of Barn "EE" in the backstretch area. The material is wrapped in plastic and not exposed to any storm water run-on during storage.
- Material Storage: Most hardware materials are stored inside the DMTC Maintenance area located on the western side of the backstretch area. Barn "W" is also utilized for material storage throughout the year.

Refer to Exhibit 6.0 for locations of the storage areas.

3 MANURE MANAGEMENT OPERATIONS

3.1 RACING SEASON MANURE MANAGEMENT

The Del Mar Fairgrounds is committed to consistently implementing effective protocols concerning collection, storage, and removal of manure and animal related waste. The thoroughbred horse race meet brings some of the nation's most prestigious horses, owners, and jockeys to the facility each year, and horse stable cleanliness is of the utmost importance. The investment involved in owning and training thoroughbred horses is very high, and the 22nd DAA and DMTC do not condone substandard conditions and cleanliness. Therefore, the requirement of proper handling and storage of manure is in effect even in absence of permit requirements. The racing season is a business, and any perception of below average conditions can be equated to a loss of revenue for the facility.

During the thoroughbred race meet, manure/waste removal and storage is conducted in an ongoing fashion. Horse manure, soiled straw bedding and wood shavings are collected from inside the horse stables from around 7am to sundown. The material removed is individually raked out from the inside of each horse stable and piled at the end of the barn row for immediate hauling. Manure and bedding material is normally removed when horses are on the track or at the paddock, resulting in a scenario where stable cleaning is conducted throughout the day. Exhibit 7.0 shows the locations of the temporary piling locations at the end of each barn.

The material is collected in a temporary pile outside the stables until it can be loaded into one of several semi-trailers which continuously haul the material off-site. The length of time that waste is temporarily piled is often brief, usually consisting of the time required for heavy machinery to load the material onto the semi-trailer. Due to the large number of occupied stalls during the racing season, the removal, loading and hauling process requires fast paced and continuous work. The hauling routes for manure collection are shown on the Exhibit 7.0.

Any temporary stalls located in Barn "W", the Expo Center, the Wyland Center, and the Activity Center are cleaned out in a similar fashion. Manure and bedding material is removed from the temporary stalls and piled in designated areas on the north and south sides of Barn "W", and between the Expo Center and the Wyland Center (see Exhibit 7.0). This material is loaded into a semi trailer shortly after the material is stockpiled for removal from the site.

Any manure found in non-stable areas, including walkways between the barns, the racetrack, training track, or anywhere else horses may be located, is quickly removed upon sight by DMTC staff and taken to a temporary piling area at the end of the barns and added to the bedding waste awaiting removal from the site.

The service contracted to haul all manure and bedding material delivers the majority to a Mushroom Farm in Escondido, CA. It takes approximately 4 months for the straw and manure waste to compost at the farm, with the product ultimately used in the mushroom growing process. Additional wood shavings and manure are delivered to a facility in Lakeside, CA, where it is converted to compost and humus. Since 1990, approximately 100% of all stable

manure and bedding is recycled in this or a similar fashion. Records are kept on the amount of manure and waste removed from the site per manifests and invoices prepared by the hauling company. The following table summarizes the amount of waste recycled from the 2007 racing season.

2007 RACING SEASON WASTE YIELD	
Straw Bedding & Manure	56,350 tons
Wood Shavings & Manure	11,440 tons
Total Waste	**67,790 tons**

3.2 SAN DIEGO COUNTY FAIR MANURE MANAGEMENT

The San Diego County Fair is held annually at the Del Mar Fairgrounds in June and July. In addition to a variety of recreational activities, the Fair hosts several livestock exhibits and horse shows. Various species of farm animals such as swine, sheep, goats, cattle, llamas, dogs, cats, and poultry are shown in livestock shows and exhibits held during the Fair. The exhibit animals are primarily housed in the livestock barns located adjacent to the arena, including Barn "W", the Expo Center and Wyland Center. The backstretch barns may also provide additional housing for exhibit animals, depending on the day and exhibits presented. Below is a breakdown of the primary facilities used for the animal exhibits:

- The Wyland Center hosts the Agrifair which include rabbits, pigeons and a pig pen along with a chick hatchery. The Wyland Center also features pastures that will include goats, cattle and sheep, baby animals, and other small animal exhibits.
- The Expo Center serves as the main livestock barn concerning exhibiting animals to the public.
- Barn "W" houses various other animals, and is not home to any public exhibits.

Bedding for fair animals located in barn areas consists of wood shavings, except for sheep and goats which have beddings of straw. The exhibitors are required to clean out bedding for their exhibits daily by 7am using dry cleaning methods. The waste is to be removed by the exhibitors and conveyed by wheelbarrow toward a covered 40 yd. dumpster located outside of the barns. The material is stored in the bin until the haulers arrive to remove the material and take it off site for recycling (see Exhibit 8.0 for locations and hauling routes). If exhibitors do not adequately clean the area, 22nd DAA staff is responsible for maintaining acceptable conditions. Under no circumstances shall exhibitors stockpile the manure and bedding in any area where it is potentially exposed to storm water runoff.

Outdoor animal exhibits utilized during the County Fair are only temporary in nature, and are removed following the activities of the day. No animals or animal bedding are out left overnight exposed to potential precipitation. The bedding material is completely removed at night and replaced with fresh material at the beginning of the day.

Animals housed in the stable areas in the backstretch area have manure management identical to the procedure outlined for the thoroughbred racing season, as discussed in Section 3.2. Hauling of bedding is accomplished daily in a similar fashion as during the thoroughbred racing season, and is recycled off-site.

3.3 DEL MAR ARENA MANURE MANAGEMENT

Animal events held Del Mar Arena primarily consists of horse shows, including the prestigious Del Mar National Horse Show held annually in late April-early May. This is the largest horse show event of the year, and can involve as many as 1,000 horses. The majority of other horse show events held at the arena feature significantly fewer horses, and are typically between 3 to 5 days in length and house up to 500 to 700 animals on-site.

The shows are comprised mostly of jumping, dressage, and western events. Horses involved in the events are stabled in the backstretch stables area, similar to the thoroughbred race season. Animals are housed within Barns "A" through "G", depending on the size of the event. Bedding and manure removal is achieved in an identical fashion as mentioned for the racing season under Section 3.1. Horse manure, soiled straw bedding and wood shavings are collected from inside the horse stables. The material is collected in a temporary pile outside the stables until it can be loaded into one of several semi-trailers which haul the material off-site on a daily basis at a minimum. The fast turnaround between horse shows creates the necessity of changing and hauling the bedding material very fast, usually quicker than during the thoroughbred racing season. Often the material must be removed from the stockpiles at the end of the row within a short time period, in order to begin accepting horses for the next event.

Horse show events have historically been held predominately in dry weather months, resulting in an ideal condition concerning the capability of the backstretch sewer diversion. The probability of a large precipitation event during these months is reduced, with the sewer system having capacity to handle any first flush discharge as well as any horse washing waste water used during the event. If any significant rainfall event occurred, the horse shows may have been postponed. This procedure is changing in 2008 with the development of the Arena Roof Project (currently undergoing regulatory review and approval). The Arena Roof project involves the construction of a roof over the arena floor that will allow for an increased number of horse show events, as well as the occurrence of prime show conditions regardless of the weather. An increased frequency of events leads to an increase of stabled horses during the winter months. These horses, which are normally stabled from Barns "A" through "G" during horse shows, will need to stable, perform, and washdown, regardless of the weather.

During a wintertime storm event, the existing drains and wash racks will divert the first flush (roughly equivalent to 0.2 inches) to the sanitary sewer through the sanitary sewer diversion

located at the training track pump station. Following the first flush amount, the diversion will be turned off, with runoff discharging to Stevens Creek. At this time, no horses will be using storm drain connected wash racks, and horse activities in the stable area will be limited to prevent any contamination. All horses inside the arena, in wash down stalls, and stabled, will be under cover and not exposed to storm water. This design helps protect water quality by ensuring that no contaminants or horse washdown water is discharged to surface waters. Sewer diversions are discussed further under Section 4 of this report.

In addition, bedding waste be not removed and stockpiled unless the runoff is diverted to sewer. During any large storm event, where runoff is diverted to the storm drain system following the first flush diversion to sewer, it is not feasible to remove bedding from the stalls. 22nd DAA staff will wait until the rain event slows down and the sewer diversion is on before commencing any cleaning.

3.4 PROCEDURAL WATER QUALITY PROTECTION

STRUCTURAL BEST MANAGEMENT PRACTICES

In addition to the diversion of wash water and first flush storm water runoff to the sanitary sewer, there are several additional practices that assist in the removal of pollutants from storm water runoff prior to discharging off-site. These include a clarifier unit installed in the storm drain line as well as the diversion of the track drainage to the infield lakes. These practices are discussed further below.

In order to further treat runoff from the horse arena and adjacent livestock barns, as well as the main parking lot, a clarifier unit is located in the downstream storm drain line of the main parking lot (see Exhibit 6.0). The existing clarifier unit is a three-chambered baffle box system within a 7' x 9' x 6.5' underground vault. Sediment, debris and oil & grease is removed from storm water runoff from the horse arena and parking lot drainage areas, prior to discharging into the San Dieguito River at Discharge Point #5.

As part of the Polytrack improvements to the main racetrack, the drainage system of the track was redesigned to utilize the existing infield lakes for storm water retention and treatment. During the summer months, the lakes are filled with reclaimed water for aesthetic purposes, but sufficient freeboard is maintained to accommodate storm water. In the event of a summer storm, all runoff from the track is diverted to the infield lakes through a pump station located east of the grandstands. The lakes do not discharge to Stevens Creek. During the winter months, the lakes are not filled with reclaimed water in order to allow extra capacity for storm water runoff. During winter storm events, all first flush flows from the track drainage system will be diverted to the lakes up to 32,000 ft^3 (first flush volume). In the event lakes reach capacity (approximately 520,000 ft^3) overflow will be directed to the infield for ponding and infiltration. Once the first flush volume has been pumped to the lakes and the wet well capacity has been exceeded, the excess flows in the wet well at the pump station will gravity flow into the existing storm drain lines discharging to Sevens Creek at Discharge Point #2. The pump station controlling the diversions to the infield lakes is located south of the main track, west of the grandstands (see Exhibit 8.0).

VECTOR CONTROL

Pest control during the thoroughbred racing season primarily consists of fly control around the stables and backstretch area. Files can be a nuisance to both humans as well as horses which are housed on the property. This problem is taken care of by ensuring that horse manure is picked up as fast as possible and not allowed to remain on the ground. It has been found that ensuring that waste is removed and disposed of properly, the fly issues can be adequately controlled. Additional measures are implemented within the infield lakes to reduce risk of mosquito breeding. This includes aeration and use of mosquito fish to c control breeding.

4 PROCESS WASTEWATER MANAGEMENT

As previously mentioned, the term "process wastewater" refers to "water directly or indirectly used in the operation of an AFO for any or all of the following: spillage or overflow from animal or poultry watering systems; washing, cleaning, or flushing pens, barns, manure pits, or other AFO facilities; direct contact swimming, washing or spray cooling of animals; or dust control. Process wastewater also includes any water which comes into contact with any raw materials, products, or byproducts including manure, litter, feed, ... or bedding."[6]

The 22nd DAA has implemented measures to eliminate the discharge of process wastewater from the CAFO production areas at Del Mar Fairgrounds through the combination of the following practices:

- Routing all horse wash waters to the sanitary sewer;
- Placing roofs or covering all horse stalls, barns, and stables to route precipitation around the CAFO production areas;
- Storage of all contaminated bedding materials (manure-soiled bedding), feed, and manure indoors or in covered storage facilities such that storm water does not contact these materials;
- Temporary manure stockpiles are removed daily such that they do not come into contact with storm water runoff:
- Horse presence is limited to the maximum extent practicable to the covered CAFO production areas (stables/barns) during rain events and when necessary;
- Implementation of good housekeeping practices such that any manure inadvertently deposited outdoors in the CAFO production area and non-production area is removed before pollutants from these materials can be entrained in storm water runoff.

4.1 PRODUCTION AREA DESIGN

BARNS AND STABLE DESIGN

The barn structures as well as the wash rack facilities and other CAFO production areas on-site are designed to preclude precipitation and storm water runoff from coming into contact with these areas. All on-site barns are roofed to completely cover all horse stalls on-site. Runoff from the roof is conveyed via downspouts and does not come into contact with the horse stalls. In addition, any temporary stalls utilized on-site are also covered or are placed indoors to preclude rainfall from entering the stall. Further, the barns are walled to enclose horse stalls, and are constructed at a slightly higher elevation than walkways to preclude runoff from entering the stalls. Runoff generally drains away from the barn structure toward the storm drain inlets placed throughout the site.

[6] 40 CFR Sections 122.23 and 412.2(d)

HORSE WASH RACK DESIGN

Horses are washed at designated wash racks properly designed to minimize discharge of pollutants to receiving waters. Within the backstretch area, there are several concrete-pad wash racks located adjacent to several of the newer barns in the northern portion of the backstretch area. In addition, during the racing season, wash racks within the walkways between the barn structures are utilized. These generally consist of rubber mats surrounding a grated inlet. These grated inlets discharge into the main storm drain line within the backstretch area, which connects to the pump station adjacent to the training track. During the racing season, wash racks are primarily utilized daily during the hours of 5 am and 1 pm, and all wash water is discharged to the sever system at the pump station.

There are also covered horse wash racks adjacent to the barns located outside of the backstretch area. There are 2 wash racks located adjacent to Barn "W", 16 wash racks at the Expo Center, 9 wash racks at the Wyland Center, and 4 wash racks at the Activity Center. These wash racks are covered and feature direct sewer connections. When in use, all wash racks discharge wash water to the sanitary sewer system. Further discussion of the sewer diversions are provided in Section 4.2.

As part of the future Arena Roof Project (currently under regulatory review and approval), new wash rack facilities will be constructed within the backstretch area. These wash racks will connect directly to the existing sanitary sewer in the backstretch area that is dedicated to sewer only (existing line that sewers the existing dormitories), and will be designed and covered to preclude rainfall and runoff from entering the sewer connected drain. The wash racks will either be bermed or walled along sections of the perimeter. The design of these new wash racks will focus on keeping horse wash water in, while preventing localized storm water flows from entering the sewer connected inlet. Grit chambers will also be installed to reduce sediment and debris from entering the sewer system. These wash racks will be the only wash racks authorized for use within the backstretch area during wintertime arena use activities, resulting in zero discharge to the storm drain system from the wash racks and removing the potential for mixing of storm water and sewer discharges. Other wash racks in the backstretch area may only be utilized if wash water is diverted to sewer.

4.2 SEWER DIVERSIONS

At the Del Mar Fairgrounds, procedures are in place to protect nearby water resources from contamination due to manure handling and storage. A sanitary sewer diversion is in place which diverts all runoff from the backstretch area toward the sewer line on the western perimeter of the property. This includes runoff from the rooftops of the barns during rain events, as well as wash water from the horse wash racks in the backstretch area. This diversion is operated by both DMTC and 22nd DAA staff by means of a swivel at the pump station, immediately west of the training track, on the northwestern border of the property. The drainage is conveyed toward a pump station located in the southern portion of the Fairgrounds, which receives all sewage flows for the entire facility.

During the summer racing season, all storm drain drainage in the backstretch area is to be diverted to the sanitary sewer. This ensures that any spillage, washing or any other contamination is not conveyed toward Stevens Creek. Any rain events during the summer racing season are also conveyed to sewer, preventing the mobilization of equestrian-related pollutants toward into surface waters. This procedure is the primary means of water quality protection during the racing season, and has been successful in avoiding impacts to nearby water resources.

During the wet season, the wash racks that connect to the storm drain system in the backstretch area are not used (only those with direct sewer connections are used when animals are present during wet season months, October through April) unless wash water is diverted to sewer, and no wash water will discharge to the storm drain system. In addition, during rain events, the initial first flush volume of storm water runoff is diverted to the sewer system (roughly equivalent to the first 0.2 inches of rainfall) to treat runoff from the walkways and rooftops in the backstretch area.

Similar to the backstretch area, storm water runoff from the walkways north of the horse arena where horses frequent is diverted to the sewer system when animals are present. In this area, the sewer inlets are located adjacent to the storm drain inlets (see Exhibit 6.0 for locations). Diversions are currently manually controlled through a cap on the riser pipes/inlets to the sewer and storm drain systems, and require field staff to manually cap the sewer or storm drain inlets during diversions. It is the intent of the 22nd DAA to investigate more automated methods such as flow meters, automated first flush rainfall devices and shutoff valves and other field instruments to help quantify first flush volumes and reduce the reliance on field staff to manually covering inlets during rain events. This work will occur during the final construction designs for the Arena Roof Project (currently pending regulatory approval) and field devices will be selected to improve the ability to accurately divert first flush volumes to the sewer and all other flows to the storm drain system.

4.3 WASTEWATER AND STORM WATER CALCULATIONS

The City of Del Mar monitors the total sewer flow that exits the Del Mar Fairgrounds site and enters the City's sewer system. Flows are measured on a daily basis at the southern end of the primary sewer force main that traverses the San Dieguito River. Because of the placement of the flow meter, however, the amount of wash water generated on the Fairgrounds cannot be separated from the other types of sewer flows generated from other public and private areas on-site. During the racing season, horses are washed during specific hours of the morning when other activities on-site are limited. Therefore, assumptions can be made of the amounts of wash water generated during a typical day of the racing season by comparing total sewer flows from the racing season with days that no events take place at the Fairgrounds. Results estimated from the 2006 racing season are summarized in the table on the following page. Refer to Attachment 1 for detailed calculations.

2006 RACING SEASON WASH WATER VOLUME ESTIMATES			
Time of Day	Total Week (gal)	Daily Average (gal)	Total Racing Season (gal)
0500	300	43	2,100
0600	109,100	15,586	763,700
0700	146,600	20,943	1,026,200
0800	150,800	21,543	1,055,600
0900	151,400	21,629	1,059,800
1000	151,850	21,693	1,062,950
1100	145,850	20,836	1,020,950
1200	106,100	15,157	742,700
1300	50,500	7,214	353,500
Total	**1,012,500**	**144,644**	**7,087,500**

Similar to the wash water estimates, storm water runoff estimates cannot be separated between CAFO and non-CAFO areas since all storm water runoff is combined and discharged off-site at the five major discharge points. Three of the five discharge points discharge runoff from CAFO production and non-production areas: Discharge Point #1 (Backstretch Basin), #2 (Parking Lot/Arena Basin), and #5 (Polytrack/Infield Basin). Refer to Exhibit 4.0 for locations of the major discharge points.

Hydrologic calculations to evaluate surface water runoff associated with the 25-year, 24-hour storm events were performed for the on-site CAFO-related drainage areas. The calculations were performed using the USDA Tr-55, Urban Hydrology for Small Watersheds methodology. Results of the hydrologic analysis are summarized in the table below. Detailed calculations are provided in Attachment 2.

25-YEAR HYDROLOGY SUMMARY FOR CAFO DRAINAGE AREAS					
Discharge Point	Runoff Coefficient	Drainage Area	Time of Concentration	25-Year Peak Flow Rate	25-Year Volume
#1	0.65	48.46 ac	41 min	74.8 cfs	1,640,284 ft^3
#2	0.40	51.80 ac	58 min	39.3 cfs	930,419 ft^3
#5	0.94	40.77 ac	24 min	128.5 cfs	2,327,195 ft^3

5 MORTALITY MANAGEMENT

Any activity involving animals has some associated risk concerning health and welfare of the animals. The Del Mar Fairgrounds prides itself in having safe facilities and highly qualified veterinary staff who are qualified in the diagnosis and treatment of animals on-site. During the racing season, specialized equine veterinarians are on staff that are in tune with the risks and dangers of thoroughbred racing. In addition, veterinarians who specialize in the treatment of farm animals are on staff during the San Diego County Fair.

Breakdowns are inevitable in high stakes thoroughbred racing, even with the installation of horse friendly synthetic track surfaces, such as the recently installed Polytrack surface on the main racetrack. Although breakdowns have substantially decreased due to the Polytrack surface, they still occur, and will continue to occur in the future. Due to the fragile nature of thoroughbred horses, these injuries are often life threatening, and sometimes require euthanizing to minimize any suffering. These injuries can occur during workouts, racing, or rarely in or near the stable.

This procedure usually involves removing the horse from the track surface with a specialized ambulance, if the breakdown occurs during racing or training. The horse is then brought to the DMTC maintenance barn which is located in the western portion of the backstretch stables area, west of Barn "TT". The horse is placed in a designated area inside the barn which has a rubberized surface and administered an injection which euthanizes the horse. The horse is the removed from the area and loaded into a covered trailer and taken to an off-site facility or other location at the owner's wishes.

During the San Diego County Fair, mortalities on-site are uncommon, with ill animals usually removed immediately from the population. If a sick or injured animal cannot be easily treated on-site, it is taken away from the facility by the owner. If an animal mortality does occur on-site, it is removed immediately by 22nd DAA staff or the owner and taken away from the facility. 22nd DAA staff also cleans and rinses any pen or stable where a diseased animal was kept. A water and bleach solution is used, and is drained toward the sanitary sewer.

At no point is any dead animal involved in any activity at the Fairgrounds allowed to remain outside exposed to storm water. Although animal mortalities do occur at the Fairgrounds, they never go unseen for very long or have any potential to contaminate surface waters.

6 CAFO OPERATIONS AND MAINTENANCE

During the summer racing season, the DMTC manages the CAFO operations with respect to the summer race meet. This includes management of the CAFO-related source control BMPs for both CAFO production areas and non-production areas. For the County Fair and all other events throughout the year, the 22nd DAA is responsible for all BMP inspection and maintenance of the CAFO production areas and non-production areas at Del Mar Fairgrounds.

The following sections summarize the operation and maintenance activities for the CAFO production areas as well as the non-production areas.

6.1 CAFO PRODUCTION AREAS

PRODUCTION AREA BMP OPERATIONS & MAINTENANCE			
BMP	RESPONSIBLE PARTY	MINIMUM FREQUENCY	ACTIVITY
Stall Cleaning	Racing Season: DMTC All other times: 22nd DAA	Daily	Occupied stalls shall be inspected cleaned daily at a minimum using dry methods only (e.g. sweeping). The site is to be maintained and monitored daily to ensure that bedding and manure which is removed from stalls is promptly removed and not exposed to runoff.
Temporary Manure Storage	Racing Season: DMTC All other times: 22nd DAA	Ongoing	All manure is temporarily stockpiled at the end of each barn or designated temporary storage area for removal from site. Sweep any manure storage areas and ensure all materials are confined within temporary storage area.
Manure Hauling & Removal	Racing Season: DMTC All other times: 22nd DAA	Daily	Remove all temporary manure stockpiles and haul off-site for recycling. Manure piles shall be removed daily.

PRODUCTION AREA BMP OPERATIONS & MAINTENANCE			
BMP	**RESPONSIBLE PARTY**	**MINIMUM FREQUENCY**	**ACTIVITY**
Clean Hay & Feed Storage	Racing Season: DMTC All other times: 22nd DAA	Weekly	Sweep any feed, hay, bedding, and CAFO-related equipment storage areas at least once per week and before the start of the wet season to remove solid debris. Clean up spills immediately. Any stockpiles shall be covered when not in use and prior to onset of precipitation. During wet season, clean hay & feed shall be stored indoors.
Outdoor Animal Exhibits (Fair only)	22nd DAA	Daily	By the end of each day, animals must be located inside, and all bedding must be collected and properly stored for removal off-site.
Wash Racks	Racing Season: DMTC All other times: 22nd DAA	Ongoing	Ensure wash water from horse wash racks is diverted to appropriate drain inlet with sewer connection or sewer diversion capabilities, and does not discharge into drainageways. During winter events, only covered, sewer-dedicated wash racks may be used unless backstretch wash rack runoff is diverted to sewer. Sweep wash rack areas frequently and remove any trash & debris.
Sewer Diversions	22nd DAA	Ongoing	Default setting of the pump station is to divert all runoff from the backstretch area to sewer to ensure all wash water is diverted and not discharged to Stevens Creek. In the event of rain event, only first flush runoff will be diverted to sewer.
Mortality Management	Racing Season: DMTC All other times: 22nd DAA	Ongoing	Verify proper management of mortalities to ensure proper handling and transport off-site, and that mortalities do not come into contact with storm water runoff.
General Housekeeping	Racing Season: DMTC All other times: 22nd DAA	Ongoing	Litter patrol, violations investigation, reporting and other litter control activities shall be performed within the CAFO production areas in conjunction with maintenance activities.

6.2 NON-PRODUCTION AREAS

NON-PRODUCTION AREA BMP OPERATIONS & MAINTENANCE			
BMP	RESPONSIBLE PARTY	MINIMUM FREQUENCY	ACTIVITY
Racetrack and Training Track	Racing Season: DMTC All other times: 22nd DAA	Ongoing	Manure, trash and debris shall be collected from the main racetrack, training track, and arena is removed upon sight. Manure is temporarily stored in movable bins with lids/covers and deposited within the temporary stockpiles adjacent to the barns, where it is collected and hauled off-site daily at a minimum.
Walkways & Corrals	Racing Season: DMTC All other times: 22nd DAA	Daily	All unpaved and paved horse walkways, corrals, & paddocks shall be swept and cleaned at a minimum of daily to remove manure and other debris. General housekeeping measures shall be followed at all times.
Berms and Buffer Areas	Racing Season: DMTC All other times: 22nd DAA	Biannually	Conduct visual inspections to ensure no grading or erosion has changed the condition of the dirt berm buffer north of the stable area. Ensure all fencing is intact, and repair any damages immediately. Repair any rills, breaks, or other problems in berm structures as soon as possible.
Trash Storage	Racing Season: DMTC All other times: 22nd DAA	Ongoing	All trash and non-CAFO debris shall be stored in containers that have lids or tarps to minimize direct precipitation into the containers and keep drainage out of the storm drain. The trash storage areas will be situated away from roof runoff and pavement runoff diverted. Dumpsters will be leak proof and covered.
General Housekeeping	Racing Season: DMTC All other times: 22nd DAA	Ongoing	Litter patrol, violations investigation, reporting and other litter control activities shall be performed within the CAFO production areas in conjunction with maintenance activities.

6.3 STRUCTURAL BMP OPERATIONS & MAINTENANCE

STRUCTURAL BMPs			
BMP	RESPONSIBLE PARTY	MINIMUM FREQUENCY	ACTIVITY
Storm Drain Inlets	22nd DAA	Annually	All on-site catch basins and grate inlets within the backstretch area and other CAFO areas will be cleaned at a minimum of once per year, prior to the start of the wet season.
Clarifier Units	22nd DAA	Biannually	The clarifier unit in the southern portion of the parking lot shall be inspected and cleaned at a minimum of twice per year. Maintenance activities include, but are not limited to, removal of collected sediment, trash and debris, as well as accumulated oil and grease. Materials removed from clarifier unit shall be properly disposed of off-site, and not discharged into the storm drain.
Infield Lakes	22nd DAA	Ongoing	Water levels within the infield lakes shall be maintained to have sufficient freeboard for storm events. Lake levels will be allowed to drop following the racing season in order to create capacity for winter season rain events. Dependent upon lake levels prior to the start of the wet season, lake levels may be manually lowered through the use of pumping and distribution of water for local irrigation or unused infield areas for percolation to create additional capacity within the lakes. Aerators and biological compounds will continue to be utilized as necessary to minimize algal growth, odor and water quality within the lakes.
Discharge Points	22nd DAA	Monthly	Inspect Discharge Points to ensure no non-storm water discharges are occurring, as well as for the presence of pollutants in storm water runoff.

6.4 RECORD-KEEPING REQUIREMENTS

Records of BMP maintenances activities shall be maintained by the 22nd DAA for both CAFO production areas and non-production area BMPs. The DMTC shall provide the 22nd DAA records of CAFO BMP maintenance activities for the summer racing season. Records shall be kept on-site for a minimum of 5 years after creation of record.

Forms that may be used for tracking CAFO-related BMP operations and maintenance are provided as attachments to this report. The following forms are provided in Attachment 3:

- Monthly Summary Reports
  - Ongoing Maintenance Checklist
  - Daily Maintenance Checklist
  - Weekly Maintenance Checklist
- Annual Summary Reports
  - Bi-Annual Maintenance Checklist
  - Annual Maintenance Checklist

Maintenance and recordkeeping requirements for non-CAFO areas (e.g. parking lots, exhibit halls, maintenance yards) are outlined in the Industrial SWPPP prepared for Del Mar Fairgrounds, and therefore are not included in this report. This includes records kept of water quality sampling events per the General Industrial Permit and Polytrack monitoring programs.

7 EXHIBITS

The exhibits provided in this section are to illustrate the existing site facilities and BMPs described in this report. Drainage flow information for the existing facilities, such as general surface flow lines, drainage conveyances and storm drain facilities are also depicted. All CAFO-related BMPs are shown as well.

- **Exhibit 1.0** Vicinity Map
- **Exhibit 2.0** San Dieguito Watershed Map
- **Exhibit 3.0** FEMA FIRM Panel
- **Exhibit 4.0** Site Plan and Utility Exhibit
- **Exhibit 5.0** CAFO Production Areas
- **Exhibit 6.0** Best Management Practices
- **Exhibit 7.0** Polytrack Drainage Exhibit
- **Exhibit 8.0** Manure Management BMPs

ATTACHMENTS

Attachment 1 Wash Water Calculations

Attachment 2 Storm Water Calculations

Attachment 3 Maintenance Checklists

ATTACHMENT 1

WASH WATER CALCULATIONS

Del Mar Fairgrounds CAFO
Average Daily Sewer Flows-Wash Water Estimates

All sewer flow data is based on Supervisory Control and Data Acquisition (SCADA) information obtained from the City of Del Mar. The data is measured on the southern end of the primary sewer force main transversing the San Dieguito Lagoon, therefore all flows from 22nd DAA property are encompassed. It is currently impossible to differentiate CAFO related horse wash water flows during the Del Mar Thoroughbred Racing Season from those sewer flows originating in other public and private areas onsite. However, assumptions have been made concerning flows at certain times of day when the public is not present. These assumptions take into account the time of day in which the general public begins to arrive at the facility and impact site sewer flows. The racing season volumes represent the amount of water used for horse washing and related activities in the backstretch stables area which is sent to sewer through the backstretch diversion.

Sample Period- Monday July 17, 2006 to Sunday July 23, 2006

All Units in Gallons

Time	*Baseline Assumption* [1]	17-Jul	18-Jul	19-Jul	20-Jul	21-Jul	22-Jul	23-Jul	Total
5:00	*7600*	3500	8200	8200	12700	7700	4800	8400	53500
6:00	*8000*	16900	16700	24400	31500	25800	25800	24000	165100
7:00	*10000*	23000	31400	34000	35000	31500	31200	30500	216600
8:00	*11000*	27300	30400	33700	41000	34400	30000	31000	227800
9:00	*12000*	31200	32100	33900	40900	31700	31900	33700	235400
10:00	*13000*	31000	34600	34400	40650	34700	33700	33800	242850
11:00	*13000*	27300	34600	34500	40650	32300	33700	33800	236850
12:00	*14000*	13500	25600	38800	32200	26600	33600	33800	204100
13:00	*14000*	10400	10000	20500	32200	24900	27800	22700	148500

Time of Day	Total Week Washwater Volume	Daily Average	7 Week Racing Season Volume[2]
5:00	300	43	2100
6:00	109100	15586	763700
7:00	146600	20943	1026200
8:00	150800	21543	1055600
9:00	151400	21629	1059800
10:00	151850	21693	1062950
11:00	145850	20836	1020950
12:00	106100	15157	742700
13:00	50500	7214	353500
Total	**1,012,500**	**144,643**	**7,087,500**

[1] The baseline assumption is based on the aveage "normal" sewerage not including wash water from horse areas sent to backstretch diversion. This was calculated by examining a time period of flow data and making an approximation based on uses at the facility.

[2] The 7 week racing season volume is an extrapolation of the July 17 2006- July 23, 2006 flow data.

ATTACHMENT 2

STORM WATER CALCULATIONS

Del Mar Fairgrounds Hydrology Calculations- CAFO ROWD

Storm Intensity Calculation Sheet - 24 Hour 25 Year Del Mar Fairgorunds

Storm Frequency (yr.)	Frequency 24hr. Storm (in.)	Tc (min)	Intensity (in/hr)
25	3.50	24	3.35
25	3.50	41	2.37
25	3.50	58	1.90

Tc Calculation - Overall Parking Lot Basin	Time (min)
Tc Overland Flow	21.6
Force Main Time	0.8
Gravity Pipe Time	2.1
Total Tc	24.5

Tc Calculation - Overall Backstretch Basin	Time (min)
Tc Overland Flow	10.5
Gravity Pipe Time	30.6
Total Tc	41.1

Tc Calculation - Overall Polytrack+Infield	Time (min)
Tc Overland Flow	16.5
Gravity Pipe Time	42.0
Total Tc	58.5

$$Tc = \frac{1.8(1.1 - C)\sqrt{D}}{\sqrt[3]{s}}$$

Point of Interest	C	Area (ac.)	Tc (min.)	Q (cfs)
Parking Lot Basin	0.94	40.77	24	
25-year				128.5
Backstretch Basin	0.65	48.46	41	
25-year				74.8
Polytrack+Infield Basin	0.40	51.80	58	
25-year				39.3

The Following Hydology was calculated Using USDA TR-55, Urban Hydrology For Small Watersheds
For The Del Mar Fairgrounds 24 Hour 25 Year Storm

IA/p 0.199 Tc=24 min | IA/p 0.199 Tc=41 min | IA/p 0.199 Tc=58 min

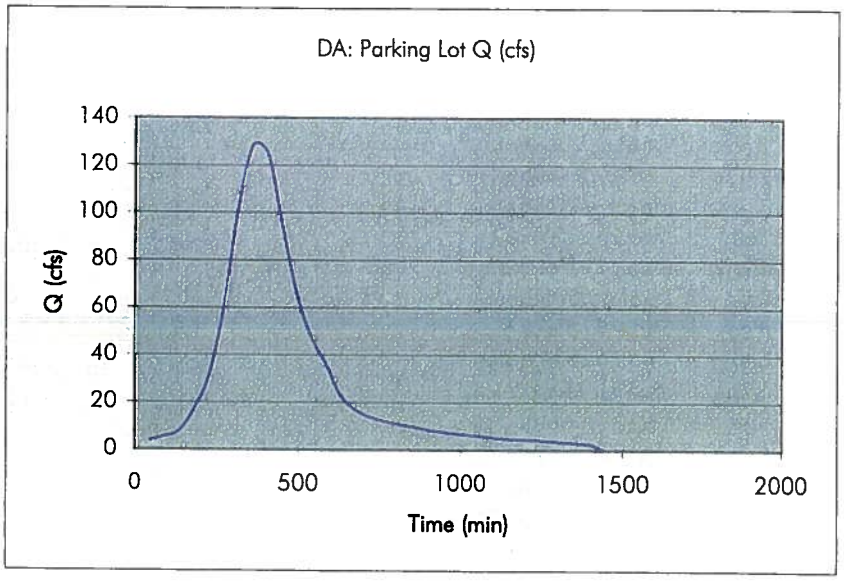
Qt= NRCS TR 55 Time Step Type II Rainfall Distribution

x(AmQ)= area*rainfall intensity*runoff coeff.

	Parking Lot			Backstrech			Track/Infield		
Time Mins	Qt	x(AmQ)	q (cfs)	Qt	x(AmQ)	q(cfs)	Qt	x(AmQ)	q(cfs)
45	18	0.217	3.9	13	0.175	2.275	11	0.111	1.221
90	25	0.217	5.4	18	0.175	3.15	15	0.111	1.665
135	36	0.217	7.8	24	0.175	4.2	20	0.111	2.22
180	77	0.217	16.7	36	0.175	6.3	29	0.111	3.219
225	141	0.217	30.6	46	0.175	8.05	35	0.111	3.885
270	271	0.217	58.8	68	0.175	11.9	47	0.111	5.217
315	468	0.217	101.6	115	0.175	20.125	72	0.111	7.992
360	592	0.217	128.5	194	0.175	33.95	112	0.111	12.432
405	574	0.217	124.6	294	0.175	51.45	168	0.111	18.648
450	431	0.217	93.5	380	0.175	66.5	231	0.111	25.641
495	298	0.217	64.7	424	0.175	74.2	289	0.111	32.079
540	216	0.217	46.9	410	0.175	71.75	329	0.111	36.519
585	163	0.217	35.4	369	0.175	64.575	357	0.111	39.627
630	104	0.217	22.6	252	0.175	44.1	313	0.111	34.743
675	77	0.217	16.7	172	0.175	30.1	239	0.111	26.529
720	63	0.217	13.7	123	0.175	21.525	175	0.111	19.425
765	55	0.217	11.9	93	0.175	16.275	133	0.111	14.763
810	49	0.217	10.6	74	0.175	12.95	103	0.111	11.433
855	44	0.217	9.5	61	0.175	10.675	83	0.111	9.213
900	38	0.217	8.2	49	0.175	8.575	63	0.111	6.993
945	34	0.217	7.4	41	0.175	7.175	50	0.111	5.55
990	31	0.217	6.7	35	0.175	6.125	40	0.111	4.44
1035	28	0.217	6.1	31	0.175	5.425	33	0.111	3.663
1080	25	0.217	5.4	27	0.175	4.725	29	0.111	3.219
1125	22	0.217	4.8	24	0.175	4.2	26	0.111	2.886
1170	21	0.217	4.6	22	0.175	3.85	23	0.111	2.553
1215	20	0.217	4.3	20	0.175	3.5	21	0.111	2.331
1260	18	0.217	3.9	19	0.175	3.325	20	0.111	2.22
1305	16	0.217	3.5	17	0.175	2.975	17	0.111	1.887
1350	14	0.217	3.0	15	0.175	2.625	15	0.111	1.665
1395	12	0.217	2.6	12	0.175	2.1	12	0.111	1.332
1440	0	0.217	0.0	0	0.175	0	0	0.111	0

DA: Parking Lot

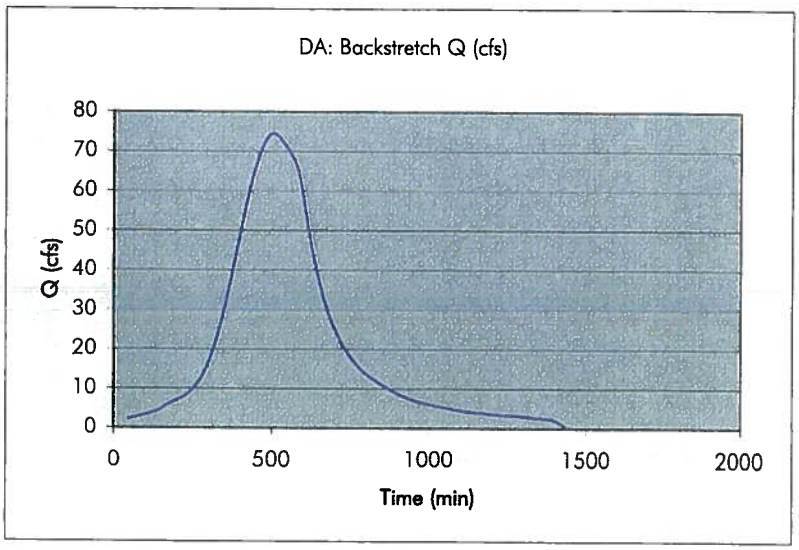
Time (min)	Q (cfs)	Volume
45	3.91	
90	5.43	209.95
135	7.81	297.83
180	16.71	551.72
225	30.60	1064.39
270	58.81	2011.59
315	101.56	3608.17
360	128.46	5175.45
405	124.56	5693.00
450	93.53	4906.91
495	64.67	3559.34
540	46.87	2509.61
585	35.37	1850.47
630	22.57	1303.63
675	16.71	883.73
720	13.67	683.55
765	11.94	576.14
810	10.63	507.78
855	9.55	454.07
900	8.25	400.37
945	7.38	351.54
990	6.73	317.36
1035	6.08	288.07
1080	5.43	258.77
1125	4.77	229.48
1170	4.56	209.95
1215	4.34	200.18
1260	3.91	185.54
1305	3.47	166.01
1350	3.04	146.48
1395	2.60	126.95
1440	0.00	58.59
		38786.58
		2327195 cubic feet



24 Hour 25 Year Storm= 2,327,195 cf

DA: Backstretch

Time (min)	Q (cfs)	Volume
45	2.28	
90	3.15	122.06
135	4.20	165.38
180	6.30	236.25
225	8.05	322.88
270	11.90	448.88
315	20.13	720.56
360	33.95	1216.69
405	51.45	1921.50
450	66.50	2653.88
495	74.20	3165.75
540	71.75	3283.88
585	64.58	3067.31
630	44.10	2445.19
675	30.10	1669.50
720	21.53	1161.56
765	16.28	850.50
810	12.95	657.56
855	10.68	531.56
900	8.58	433.13
945	7.18	354.38
990	6.13	299.25
1035	5.43	259.88
1080	4.73	228.38
1125	4.20	200.81
1170	3.85	181.13
1215	3.50	165.38
1260	3.33	153.56
1305	2.98	141.75
1350	2.63	126.00
1395	2.10	106.31
1440	0.00	47.25
		27338.06
		1640284 cubic feet

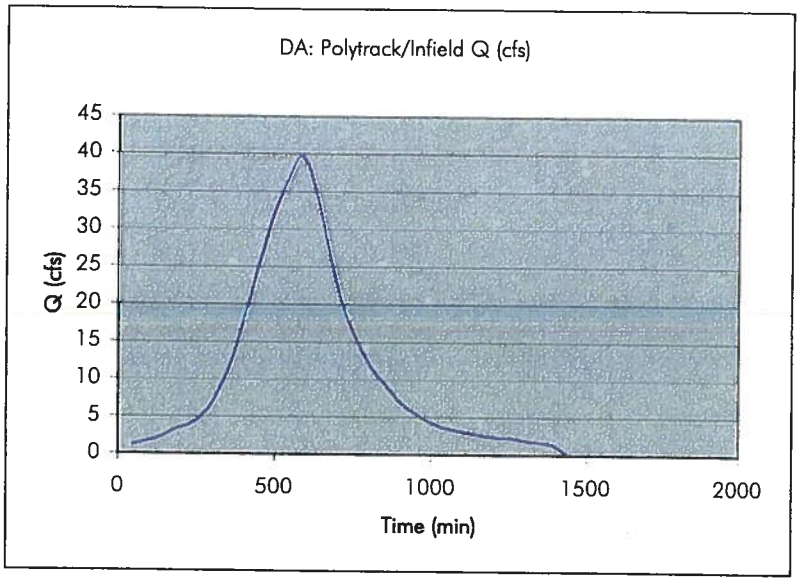


24 hour 25 year storm volume = 1,640,284 cubic ft

DA: Polytrack/ Infield

Time (min)	Q (cfs)	Volume
45	1.22	
90	1.67	64.94
135	2.22	87.41
180	3.22	122.38
225	3.89	159.84
270	5.22	204.80
315	7.99	297.20
360	12.43	459.54
405	18.65	699.30
450	25.64	996.50
495	32.08	1298.70
540	36.52	1543.46
585	39.63	1713.29
630	34.74	1673.33
675	26.53	1378.62
720	19.43	1033.97
765	14.76	769.23
810	11.43	589.41
855	9.21	464.54
900	6.99	364.64
945	5.55	282.22
990	4.44	224.78
1035	3.66	182.32
1080	3.22	154.85
1125	2.89	137.36
1170	2.55	122.38
1215	2.33	109.89
1260	2.22	102.40
1305	1.89	92.41
1350	1.67	79.92
1395	1.33	67.43
1440	0.00	29.97

15506.98
930418.7 cubic feet



24 hour 25 year storm volume = 930,418 cubic ft

ATTACHMENT 3

MAINTENANCE CHECKLISTS

FUSCOE
ENGINEERING

Irvine
San Diego
Inland Empire
Palm Springs

The following maintenance checklists and associated Nutrient Management Plan (NMP) have been developed to ensure CAFO compliance within Del Mar Fairgrounds. These checklists are to be used as part of a Nutrient Management Program at Del Mar Fairgrounds. Monthly and annual maintenance reports are to be completed by the Facility Manager. All supplemental or supporting information, such as invoices and forms are to be attached to the reports.

The following checklists are included:

1 MONTHLY MAINTENANCE REPORT FORM

2 ANNUAL MAINTENANCE REPORT FORM

16795 Von Karman, Suite 100, Irvine, California 92606 o tel 949.474.1960 o fax 949.474.5315 o www.fuscoe.com

SECTION 1 – MONTHLY MAINTENANCE REPORT FORM

MONTHLY MAINTENANCE REPORT

Report Month: _____

Inspector Name: _____ Signature: _____

Organization: _____

Date: _____

INSTRUCTIONS: Please check all that apply. For those items left unchecked, provide an explanation or corrective action in the notes section of the report. Attach operations and maintenance records, if any, to each monthly maintenance report.

MAINTENANCE FREQUENCY: ON-GOING

	CHECK
Temporary Manure Storage	
Stockpile manure in DESIGNATED AREAS ONLY for daily waste hauler pick-up.	☐
Manure stockpiles not exposed for more than 24 hours. Cover and berm stockpiles at end of day if not hauled away.	☐
Dry sweep manure storage areas. DO NOT WASH DOWN*.	☐
Wash Racks	
Washwaters drain to sewer/sewer diversion.	☐
Prohibit use of UNCOVERED wash racks with no sewer connection during rainy months (October 1 - May 1).	☐
Sweep wash rack area and keep free of trash and debris.	☐
Sewer Diversions	
Sewer Diversion at Discharge Point #1 is operational. In the event of rain, diversion is by-passed after 0.2 inches of precipitation.	☐
Sewer and storm drain inlets (8) north of Surfside Race Place are manually capped during rain events.	☐

Continues on next page

Trash Storage

Trash containers/dumpsters are covered or have lids to prevent contact with precipitation. ☐

Trash containers/dumpsters are leak proof. ☐

Trash storage areas are situated away from roof drainage and surrounding area drains away from the area. ☐

Prohibit manure or CAFO wastes from being disposed in trash containers/dumpsters. ☐

Racetrack and Training Track

Removed manure and trash upon sight. ☐

Temporarily store manure in moveable bins with lids/covers or as stockpiles in DESIGNATED AREAS ONLY for hauling. ☐

Do not mix manure and trash/debris. ☐

Infield Lakes

Check water levels to ensure adequate volume for rain water storage. ☐

Ensure lake water is kept clean with aerators and biological compounds. ☐

Enter lake level at the time of this report _____

General Housekeeping

Dispose of trash and litter in appropriate trash receptacles/dumpsters. ☐

Patrol Fairgrounds property for improper disposal of litter. Report violations, if any. ☐

Attach investigation reports, if any, to this monthly report (check box if none). ☐

Continues on next page

** Power washing is only permitted if all wash water is collected and disposed of properly (to sewer).*

MAINTENANCE FREQUENCY: DAILY

	CHECK
Manure Hauling and Removal	
Remove all temporary manure stockpiles daily.	☐
Haul off-site for recycling using designated haul routes.	☐
Attach hauling records to monthly report.	☐
Enter amount of manure/litter transferred (in tons) for this month	_____
Horse Stall Cleaning	
Clean stalls using dry methods* (e.g. sweeping).	☐
Remove bedding and manure promptly from stalls and stockpile at DESIGNATED AREAS ONLY for hauling away.	☐
Walkways and Corrals	
Clean and sweep walkways, corrals, and paddocks to properly remove any manure and trash.	☐
Follow General Housekeeping BMP practices.	☐
Outdoor Animal Exhibits (San Diego Fair Months Only; June - July)	
Move animals indoors at the end of each day.	☐
Collect bedding and stockpile at DESIGNATED AREAS ONLY for hauling at the end of each day.	☐

Continues on next page

** Power washing is only permitted if all wash water is collected and disposed of properly (to sewer).*

MAINTENANCE FREQUENCY: WEEKLY

	CHECK
Clean Hay and Feed Storage	
Store hay and feed indoors during rainy months (October 1 – May 1)	☐
Cover hay and feed stockpiles when not in use.	☐
Keep hay and feed stockpiles in DESIGNATED STORAGE AREAS ONLY and keep areas clean.	☐

MAINTENANCE FREQUENCY: MONTHLY

	CHECK
Storm Water Discharge Points	
Inspect monthly for detection of unauthorized non-storm water discharges.	☐
Report illegal discharges, if any.	☐
Attach investigation reports, if any, to this monthly report (check box if none).	☐

Supplemental information& notes (indicate which activity required additional information):

ATTACH INSPECTION RECORDS HERE

ATTACH MANURE HAULING RECORDS / MANIFESTS HERE

SECTION 2 – ANNUAL MAINTENANCE REPORT FORM

ANNUAL MAINTENANCE REPORT

Report Month: _____

Inspector Name: _____ Signature: _____

Organization: _____

Date: _____

INSTRUCTIONS: Please check all that apply. For those items left unchecked, provide an explanation or corrective action in the notes section of the report. Attach operations and maintenance records, if any, to each annual maintenance report.

MAINTENANCE FREQUENCY: BI-ANNUALLY

	CHECK
Berms and Buffer Areas	
No grading or erosion has occurred in berm north of Stable Area.	☐
All fencing is intact. Repair as necessary.	☐
Erosion rills/breaks are stabilized with erosion controls or re-graded, as necessary (check box if none).	☐
Clarifier Units	
Inspect and clean 2x per year.	☐
Properly dispose of clean-out material. DO NOT dispose of in storm drain.	☐
Clarifier units are operational.	☐
Attach cleaning logs/reports/invoices to this report.	☐

Continues on next page

MAINTENANCE FREQUENCY: ANNUALLY

	CHECK
Mortality Management	
Transport injured/dead animal indoors into DESIGNATED DMTC MAINTENANCE BARN until off-site transport arrives.	☐
Transport animal off-site at earliest possible convenience.	☐
Enter number of animal mortalities that occurred this year.	_____
Storm Drain Inlets	
Inspect and clean (if necessary) all on-site catch basin and grate inlets once per year.	☐
Attach cleaning logs/reports/invoices to this report.	☐

Supplemental information& notes (indicate which activity required additional information):

ATTACH CLEANING AND/OR MAINTENANCE LOGS, RECORDS, AND/OR INVOICES HERE

APPENDIX 4

SAN DIEGO RWQCB AUGUST 22, 2007 FACILITY INSPECTION REPORT

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD - SAN DIEGO REGION

FACILITY INSPECTION DATA ENTRY FORM

DATE: 8/22/07 TIME: 9:00 WDID: 9 37S001942 ORDER NO. CAS000001 FILE NO. 10-0001942.02

FACILITY REPRESENTATIVE(S) PRESENT DURING INSPECTION: Gary Reist, Chief Plant Operations, Mike Garcia, Health and Safety Officer

22nd Agricultural District
NAME OF OWNER, AGENCY OR PARTY RESPONSIBLE FOR DISCHARGE

Gary Reist, 858-792-4272
OWNER CONTACT NAME AND PHONE #

Del Mar Fairgrounds, Racetrack & Horsepark
FACILITY OR DEVELOPER NAME (if different from owner)

FACILITY OR DEVELOPER CONTACT NAME AND PHONE #

2260 Jimmie Durante Blvd.
FACILITY STREET ADDRESS

Del Mar, CA 92014
FACILITY CITY AND STATE

APPLICABLE WATER QUALITY LICENSING REQUIREMENTS (CHECK ALL THAT APPLY)

- ☐ **MS4 URBAN RUNOFF REQUIREMENTS NPDES NOS. CAS0108758, CAS0108740 or CAS0108766**
- ☐ **GENERAL PERMIT ORDER NO. 99-08-DWQ, NPDES NO. CAS000002 – CONSTRUCTION**
- ☐ **GENERAL PERMIT ORDER NO. 99-06-DWQ, NPDES NO. CAS000003 – CALTRANS**
- ☒ **GENERAL PERMIT ORDER NO. 97-03-DWQ, NPDES NO. CAS000001 – INDUSTRIAL**
- ☐ **GENERAL OR INDIVIDUAL WASTE DISCHARGE REQUIREMENTS OR NPDES**
- ☐ **GENERAL OR INDIVIDUAL WAIVER OF WASTE DISCHARGE REQUIREMENTS**
- ☐ **SECTION 401 WATER QUALITY CERTIFICATION**
- ☐ **CWC SECTION 13264,**

INSPECTION TYPE (Check One)

A1	____	"A" type compliance--Comprehensive inspection in which samples are taken. (EPA Type S)
B1	X	"B" type compliance--A routine nonsampling inspection. (EPA Type C)
02	____	Noncompliance follow-up--Inspection made to verify correction of a previously identified violation.
03	____	Enforcement follow-up--Inspection made to verify that conditions of an enforcement action are being met.
04	____	Complaint--Inspection made in response to a complaint.
05	____	Pre-requirement--Inspection made to gather info. relative to preparing, modifying, or rescinding requirements.
06	____	Miscellaneous – Inspection type is not included on this list, may include NOT, NEC, NONA or other types
07	____	Pretreatment Audit (every five years)
08	____	Pretreatment Compliance (yearly except audit year)

INSPECTION FINDINGS

Yes — Were violations noted during this inspection? (Yes/No/Pending Sample Results)

No — Were samples taken? (N=no) If YES then, G= grab or C= Composite and attach a copy of the sample results/chain of custody form

I. COMPLIANCE HISTORY:

Inspections performed on September 9th and 13th of 2002 resulted in a 13267 letter and NOV requiring identification of BMPs for materials and waste storage, housekeeping BMPs, BMPs for livestock areas, storm water conveyance system BMPs, street and parking lot sweeping schedules, various BMPs directed at managing wash water and a map of the racetrack drainage area. This was for the Racetrack area only. For the Horsepark, they were required to do similar descriptions of BMPs but they were also to address management of stockpiles and to address port-a-potty issues (relevant to the need to maintain them so that there are not unauthorized discharges from them). The NOV identified the following violations: 1) Failure to properly store/contain hazardous materials. 2) Improper implantation of trash container BMPs, 3) Lack of BMPs to contain runoff and sediment in "the corral area", 4) trash and debris in the parking lot outside the stables area, 5) sediment-impacted conveyance system at the northwest maintenance yard, 6) Poor housekeeping in this same area including not cleaning up spills, 7) Lack of BMP implementation in the northwest stables area, 8) Sediment tracking from stables area to Jimmie Durante Blvd. 9) Discharges of wash water from the grandstand area to Stevens Creek, 10) Discharge of wash water behind the

grandstand area, from a loading dock area, to Steven's Creek, 11) Lack of coverage or berms for stockpiles of soil and other materials. The District responded with a 12/6/02 letter that addressed the items for which information was required and discussed implementation of BMPs that were instituted in response to the identification of violations. The response appears to generally be adequate. Another 13267 letter was issued on 5/5/03. This letter required 1) confirm that various specific measures had been carried out including making sure that all storm drain inlets are properly labeled 2) confirm that a trash compacter (installed to deal with trash & debris issues) was installed and functioning, 3) confirm that various former storm drain conveyances had been connected to the sanitary sewer, etc.. There were numerous other issues that were just for confirmation (i.e., of correction of past violations). On August 29, 2003, another inspection was performed and the following activities were observed: 1) Horsewash being directed to a swale 2) No "discoloration" in San Dieguito River where there had been a plume of some sort previously (apparently with noticeable change in color). 3) Still had outhouse too close to storm drains, 4) Signs had been put up to prevent car and trailer washing, 5) There was some sawdust and manure that had been dumped near the San Dieguito River in the Horsepark. On 7/29/04 the Regional Board directed the District to 1) provide an explanation of why sanitary sewer hookups required by the Regional Board had not been completed, 2) Identify when the hookups would be completed, 3) describe hookups to be implemented in the Horsepark, and 4) identify BMPs to be implemented in the Horsepark until the sanitary sewer connections are completed. In the District's 8/26/04 response letter they say that the Coastal Commission had not yet permitted the additional sanitary sewer hookups and they only provide timeframes for implementation of the hookups once the Commission allows them to proceed. They did say that they thought the approval (which has yet to be granted) would take place in 10/04. They identify the grassy swale into which the wash racks were draining and currently drain, (with the exception it appears, of one wash rack area) as the interim BMPs until the sanitary sewage is allowed, after noting that the sanitary sewers will be designed to contain only the horse wash rack drainage. Note that there is an ongoing plan to add a roof to an arena east of the racetrack and this plan is undergoing CEQA review. There are some implications regarding the potential for increased runoff as the result of this roof. Also, the drainage characteristics of the site were also somewhat modified by the recent introduction of a synthetic racetrack surface material (polytrack) but the implications for impacts to storm water discharges appear to be negligible, as discussed below.

II. FINDINGS

Arrived at the site along with Tony Felix and Chad Loflen of the Regional Board and met with Gary Reist, Mike Garcia (both from the 22nd Agricultural District) and Joe Kuhn consultant (Fuscoe Engineering). We were also joined by Carmen Kasner representing the City of Del Mar. We began by reviewing the SWPPP. Gary indicated that they had just recently (within a few weeks) completed employee annual storm water training, however, this was not documented in the SWPPP. Told Gary that they should include a log in the SWPPP that indicates when the training was conducted. Note that this is pursuant to Section A.8.a.v of the General Industrial Storm Water Permit. Otherwise the SWPPP appeared to be in order. We began the site walk by inspecting the area near Gary's office (south side of the site near Gate 6). This area has workshops, a recycling center and vehicle wash areas. Photo No. 1 shows the recycling area which was clean and free of debris. An above-ground storage tank with gasoline (Photo No. 2) appeared to have adequate secondary containment. Photo No. 3 shows that they have a spill kit in this area, as well. Shops (like the one shown in Photo No. 4) were indoors and did not appear to have significant potential for causing storm water impacts. Photo No. 5 shows one of two vehicle wash areas on the south side of the site. Tony Felix had earlier required that they install these areas with the drains connected to the sanitary sewer. A waste storage area on the western portion of the south side of the site is used to store waste oil antifreeze and old car batteries (Photo No. 6). We told Gary that they need to provide coverage for the batteries prior to the beginning of the rainy season. Depending on what other waste products they may store here in the future, it may be advisable to cover the entire storage area. The driveway outside the shops were clean and free of debris, as shown in Photo No. 7. After completing the inspection of the south side of the racetrack/fairgrounds, we proceeded to the Horsepark. This is an area east of Interstate 5 with stables and show grounds, also some maintenance areas including horse washing stations. Photo No. 8 shows a pile of wood chips that is used as litter in stables. We were told by the people in charge of the stables that this material will be used up by early September which is when the horses will be leaving. Currently this material is stored on the north side of the Horsepark, far from any receiving water. Photo No. 9 shows an above-ground diesel tank with secondary containment. Although this tank is located far from receiving water, it is advisable to keep a spill cleanup kit available in case of spillage during fuel dispensing activities. We continued walking to the west (still on the north side of the Horsepark). Photo No. 10 shows finished and unfinished metals which did not have overhead protection or proper elevation from the ground. Some of the pipes had rusted. These materials should be elevated at least several inches above the ground to prevent contact with sheet flow during rain events and also they should be stored with overhead coverage to prevent rainfall from contacting unfinished metal. Photo No. 11 shows some more metal materials in the same area which need to be protected from rain. At the northeast corner of the Horsepark, there was a soil stockpile (Photo No. 12). This is material that was removed from the racetrack when they installed the new polytrack material that is the current racetrack surface. We were told that the soil is being temporarily stored at this location and that it will all be gone before October 1, 2007 (start of the rainy season). We can easily confirm removal of the soil because the stockpile is located alongside Via De La Valle (need to perform a drive-by inspection early in the rainy season). Photo No. 13

shows a stable on the north side of the Horsepark. Stables were generally clean and free of debris. They are cleaned on a daily basis according to the Horsepark personnel that were present. Photo No. 14 shows a horse wash area located on the southwest side of the Horsepark. This area is only about 100 feet away from the San Dieguito River. There is a storm drain inlet (shown by an arrow in Photo No. 14) which may be connected to the San Dieguito River. Photo No. 15 shows significant algae growth in the San Dieguito River at a location about 100 feet south of the horse wash station. We could not however determine if there was an outfall in this area. There is a need to determine where the discharge from this wash station goes. As we walked to the east, we observed a water truck wetting down the dirt road (Photo No. 16) as a dust and sediment control measure. Further to the east we encountered a series of horse washing stations that ran from north to south along a drainage swale. Photo No. 17 shows a typical wash station. The swale is well vegetated and has significant capacity as shown in Photo No. 18. The culvert leading from the swale appeared to be clogged with overgrowth of vegetation (mostly ice plants) and maintenance personnel removed material from the culvert (Photo No. 19). We returned to the Racetrack/Fairgrounds. Photo No. 20 shows the parking lot area on the west side of the grandstand. Parking lots were clean and free of debris. Further to the west, we encountered Discharge Point No. 3 (Photo No. 21). This is one of five discharge monitoring points that run along Steven's Creek, the San Dieguito Lagoon, and the San Dieguito River, generally on the west side of the site. Discharge is to the San Dieguito Lagoon at this point. The photograph shows a valve that was installed as a requirement of the Regional Board. The valve is closed during dry weather to prevent any non-storm water discharges from entering the lagoon. There is some question as to whether high specific conductivity readings in the last Annual Report may be the result of estuary water getting into the clarifier where samples are collected. The water does apparently flow into the clarifier at high tide and this would explain consistently high specific conductivity readings at all discharge points. In order to avoid this possible source of error, future storm water samples should be obtained just prior to entry of storm water into the clarifier (i.e. at the check valve). Note that all discharge points also yielded positive total and fecal coliform bacteria results. The San Dieguito Lagoon is an impaired, 303d-listed water body for bacteria. Therefore, the same concern regarding the possible influence of the lagoon on the sampling results exists with respect to coliform levels. Another problem (pointed out to Gary during the inspection) with discharge monitoring is that the lab reports consistently indicate fecal and total coliform concentrations of "> 1,600". A post-inspection call to the lab revealed that they can report an actual concentration if they perform additional dilutions. Given that the San Dieguito Lagoon is 303d-listed for bacteria, this additional effort is necessary. Photo No. 22 shows the parking lot in the Discharge Point No. 3 area. There was no apparent trash or debris. Gary said that a street sweeper goes through their parking lots on a daily basis and they perform three additional sweeps per week. Discharge Point No. 2 is shown in Photo No. 23. This is primarily used as a collection point for drainage water from the racetrack. The racetrack water drains to a lake within the track area and then it is pumped to a sump at Discharge Point No. 2. The sump is pumped out periodically. The system is designed (according to Gary) so that there should only be a discharge to Steven's Creek (which is just outside of Discharge Point No. 2) when there is a rain event greater than 2 ½ inches. We continued to walk to the north where there are maintenance shops and stables. Photo No. 24 shows a large above-ground gasoline and diesel tank which appears to have adequate secondary containment. Note that all drainage on the northern area of the site is now connected to the sanitary sewer. A large berm surrounds the northern boundary of the site so that there appears to be no surface drainage that can flow into Steven's Creek. Photo No. 25 shows Steven's Creek and a culvert which, according to Gary they regularly remove sediment from. The sediment removal also takes place within the creek, as well apparently. The District was required to do this by court order because of flooding that was occurring on Via De La Valle. However, it appears, based on in-house discussions with Mike Porter (401 Certification reviewer in the Central Watershed Unit) that this work may be not have received the appropriate permits. We visited the area where a roof is planned. According to Joe Kuhn (District's consultant) the roof should not have a significant effect in terms of increasing runoff to the San Dieguito River because the relative amount of added impervious surface is small and also the current (pre-roof) drainage system intercepts infiltrating water in the arena and routes it to the river already (although some portion of the infiltrating water is going to be lost to groundwater recharge and to evapotranspiration).

III. RECOMMENDATIONS AND ADDITIONAL ITEMS FOR FOLLOWUP

The SWPPP should be revised to include a log of annual storm water training. The SWPPP should also identify the periodic dates on which the training is conducted (pursuant to Section A.8.a.v of the General Industrial Storm Water Permit). Automobile batteries in the waste storage area identified in Photo No. 6 should be stored with overhead coverage during the rainy season. Exposed unfinished metals in the northern area of the Horsepark should be either stored completely indoors or stored with a canopy and enough elevation from the ground to prevent contact with sheet-flowing rainwater. The Regional Board will do a follow-up inspection or site visit during the rainy season (after October 1, 2007) to confirm that the soil stockpile shown in Photo No. 12 has either been removed or is properly contained and protected from storm water. The District should determine where the storm drain shown in Photo No. 14 discharges to. While it is acceptable for this drain to discharge to the vegetated swale shown in Photo No. 18, it is not acceptable for wash water from this area to discharge directly to the San Diego River or to any area near the river where wash water might reach the river. Storm water samples obtained at Discharge Points 1 through 5 should, in all future sampling, be obtained just prior to the entry of the storm water into the clarifier system. Sampling in this manner should avoid complications related to water from the San Dieguito River, or the

San Dieguito Lagoon or Steven's Creek mixing with storm water. The laboratory that performs analysis of storm water samples should be directed to provide a more accurately quantified value for fecal and total coliform. It should be specified that additional dilutions should be performed, as needed, to achieve actual concentrations instead of the minimum levels that are currently being determined. It appears that the appropriate permits/certification for removing sediment from Steven's Creek have not been obtained during at least the last several years of sediment removal (based on post-inspection discussion with Mike Porter, Regional Board Engineering Geologist who has been involved with this issue). A meeting has been scheduled to discuss this is issue.

IV. SIGNATURE SECTION

Pete Peuron	[signature]	8/22/07
STAFF INSPECTOR	SIGNATURE	INSPECTION DATE

IV. (For internal use only)

Reviewed by Supervisor: [signature] Date 8/28/07

cc: City Contact

Program: **NPDES STORM NON15-WDR 401 NPS TITLE 27 AGT DoD LNDISP PTPRG RCRA SLIC REC**

Inter-office Referral: 1) ________ 2) ________ 3) ________ 4) ________ 5) ________

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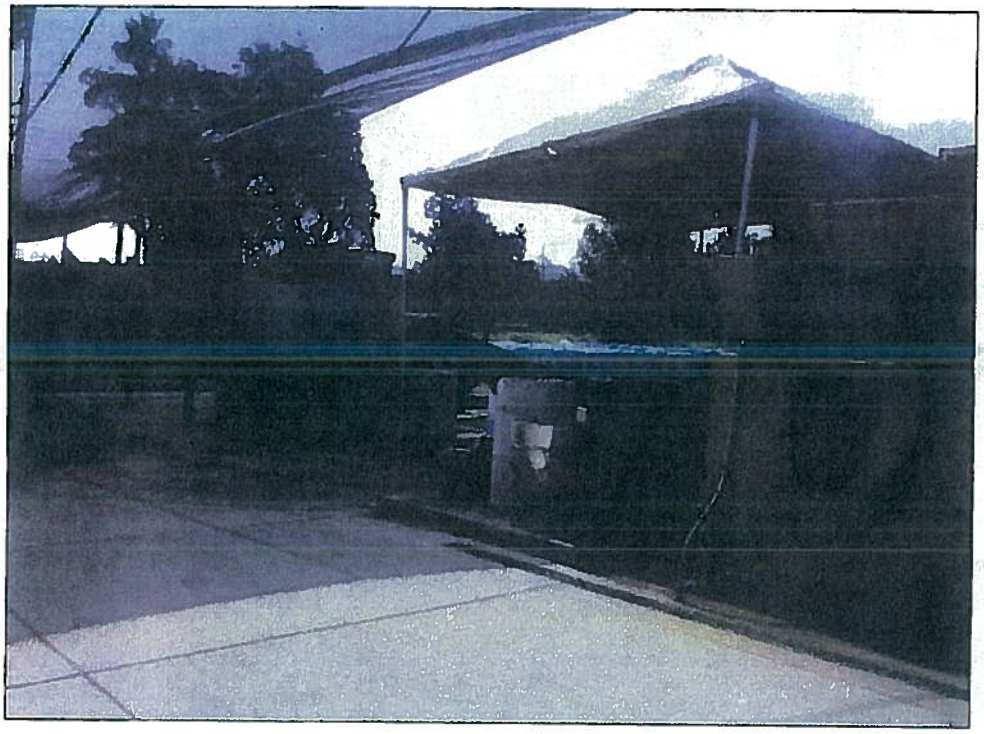


Photo No. 1 - Recycling area on south side of site.

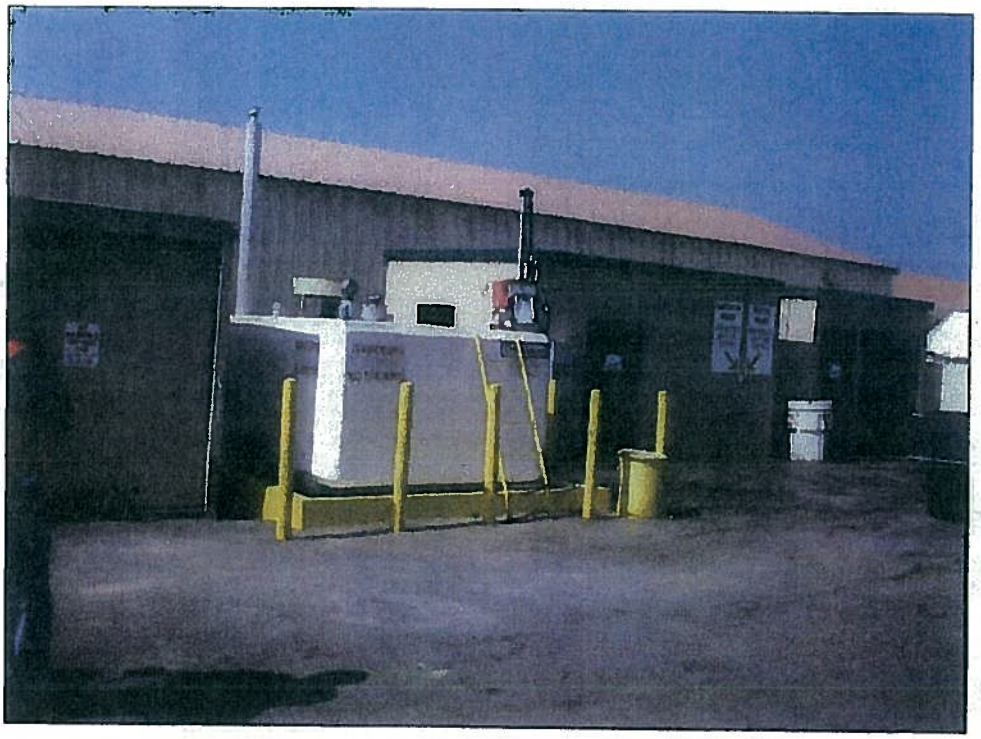


Photo No. 2 - Above-ground gasoline tank with secondary containment.

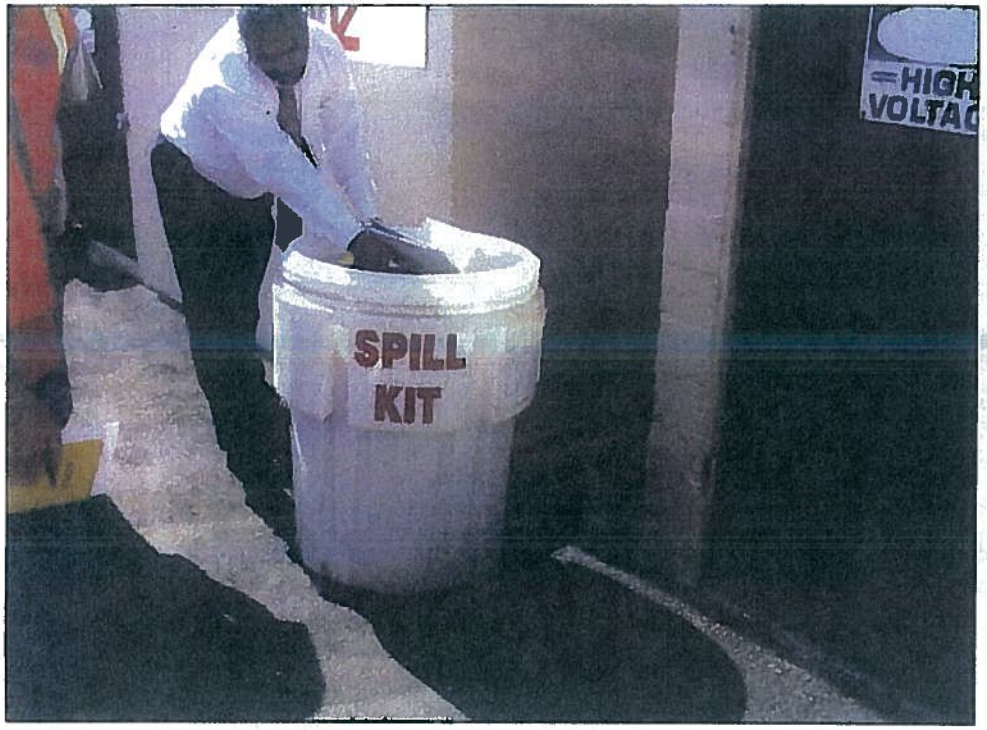


Photo No. 3 – Spill kit in gasoline AST area.

Photo No. 4 – Shop on the south side of fairgrounds.

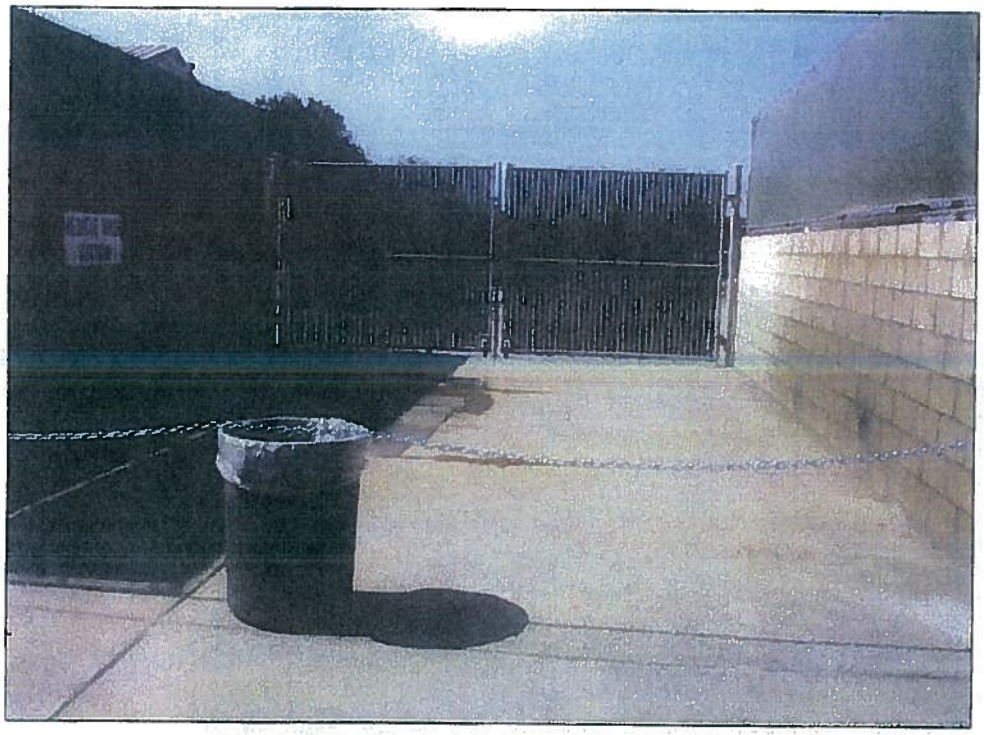


Photo No. 5 - Vehicle wash area on south side of site.

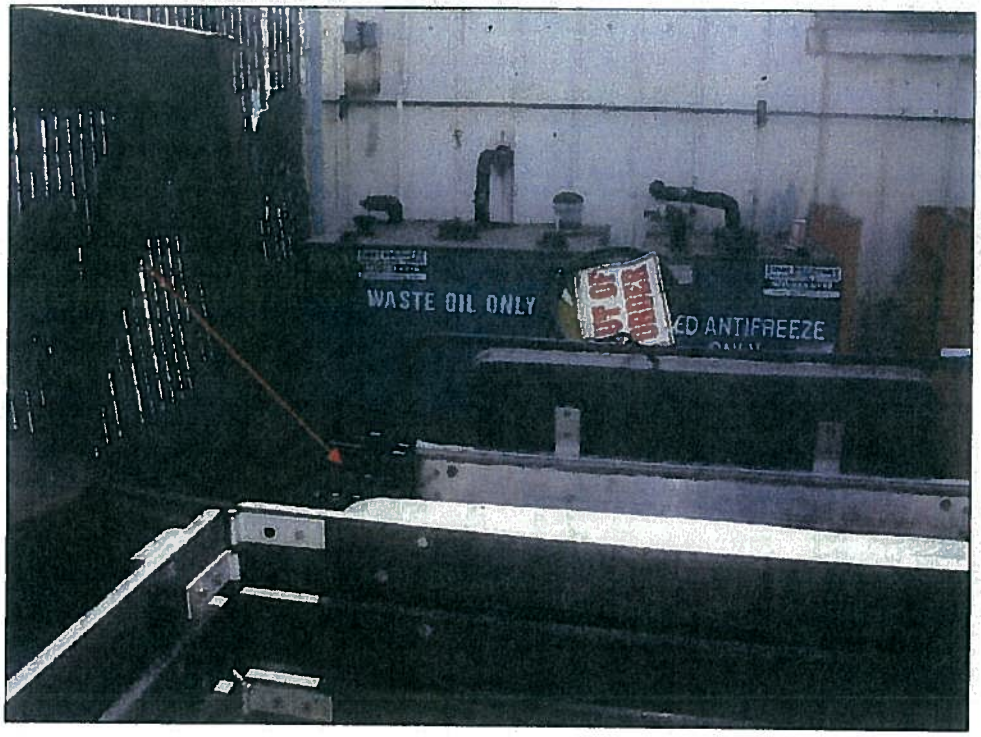


Photo No. 6 - Waste storage area on south side of site. Arrow shows car batteries which should be covered during the rainy season.

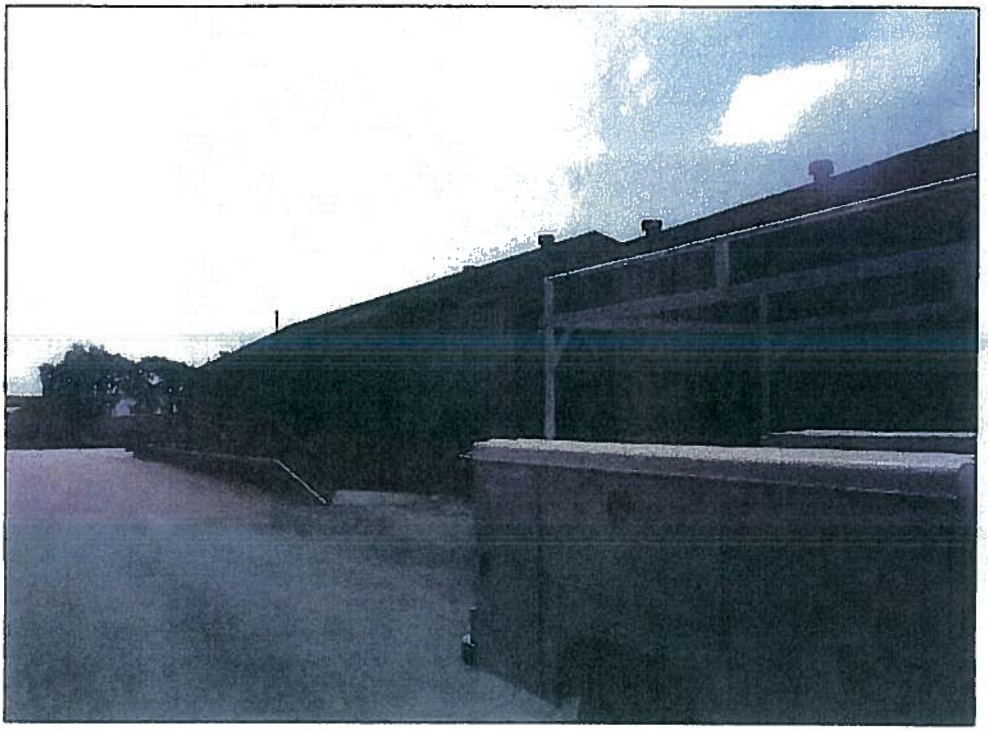


Photo No. 7 – Shops area driveway.

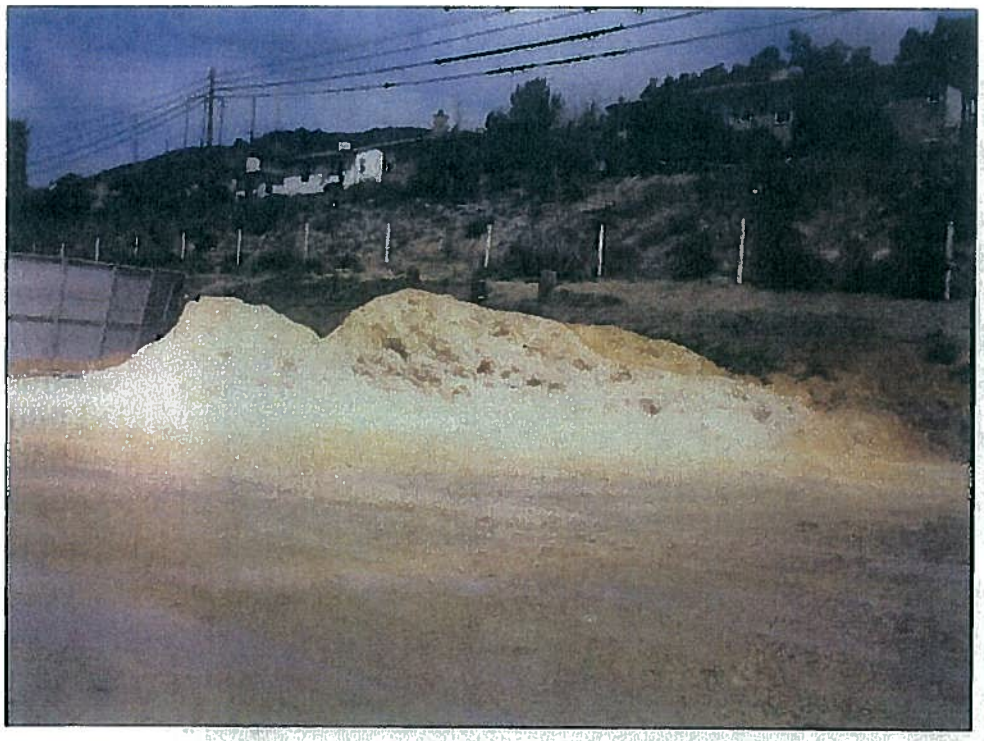


Photo No. 8 – Sawdust bedding pile on north side of Horsepark.

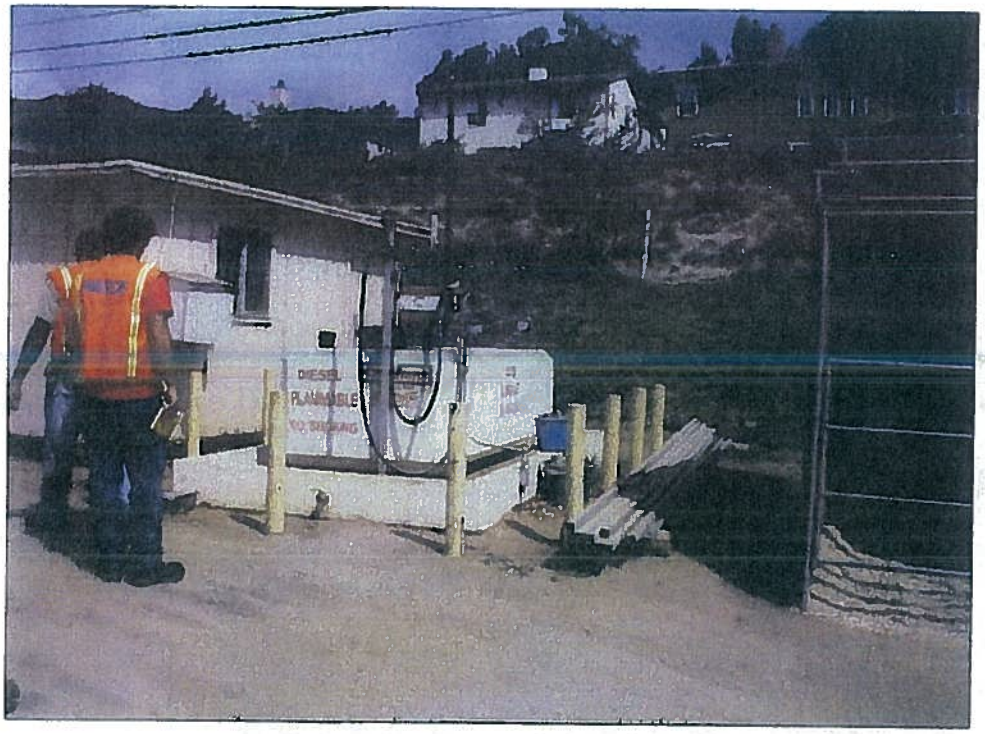


Photo No. 9 – Above-ground fuel storage tank on north side of Horsepark.

Photo No. 10 – Finished and unfinished metals (some rusting) stored on north side of Horsepark – needs overhead coverage and elevation from the ground.

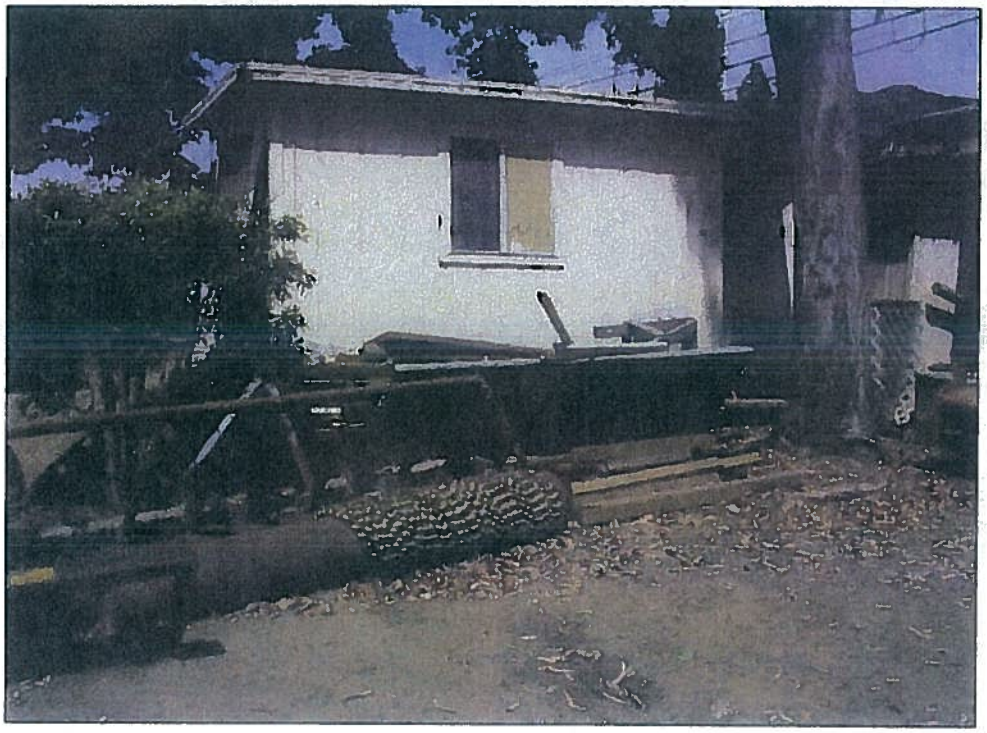


Photo No. 11 – More finished and unfinished metals needing overhead coverage and elevation – just west of area shown in previous picture.

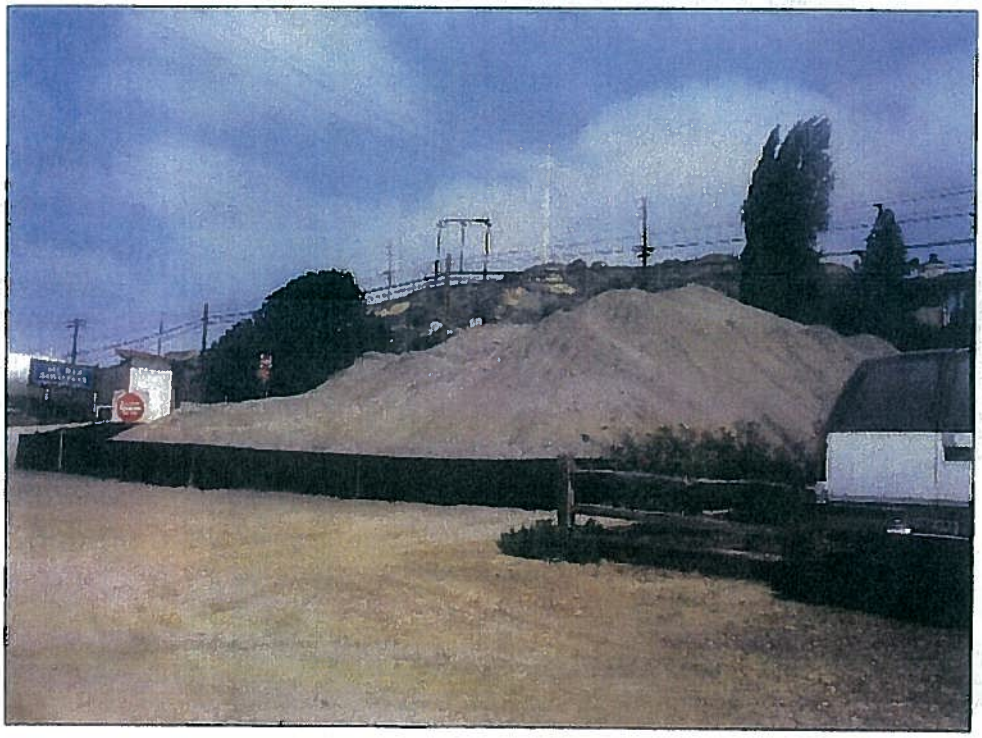


Photo No. 12 - Soil stockpile on the north side of the Horsepark.

Photo No. 13 – Stables on the north side of the Horsepark.

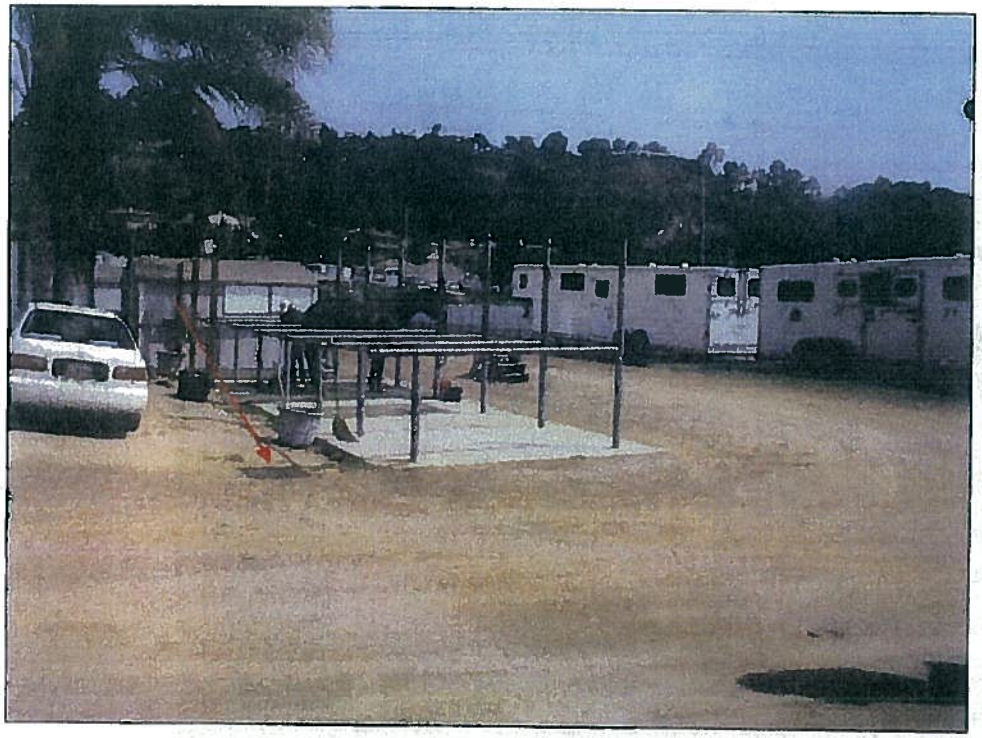


Photo No. 14 – Wash racks on the southwest corner of Horsepark with arrow pointing to storm drain inlet.

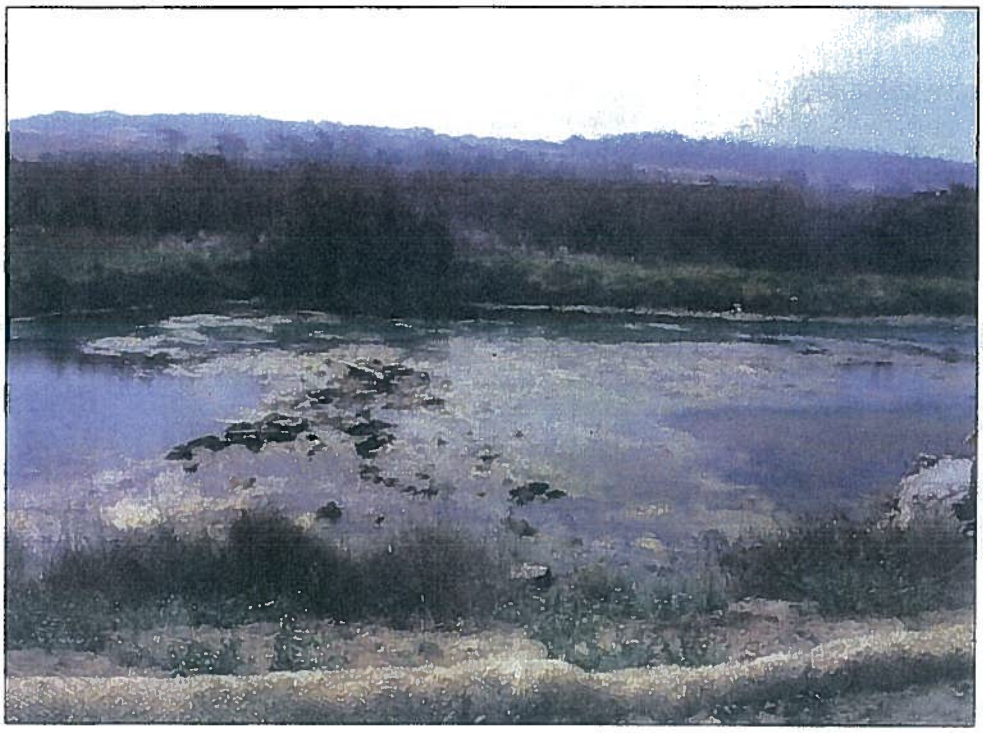


Photo No. 15 – San Diegito River on the southwest boundary of the Horsepark.

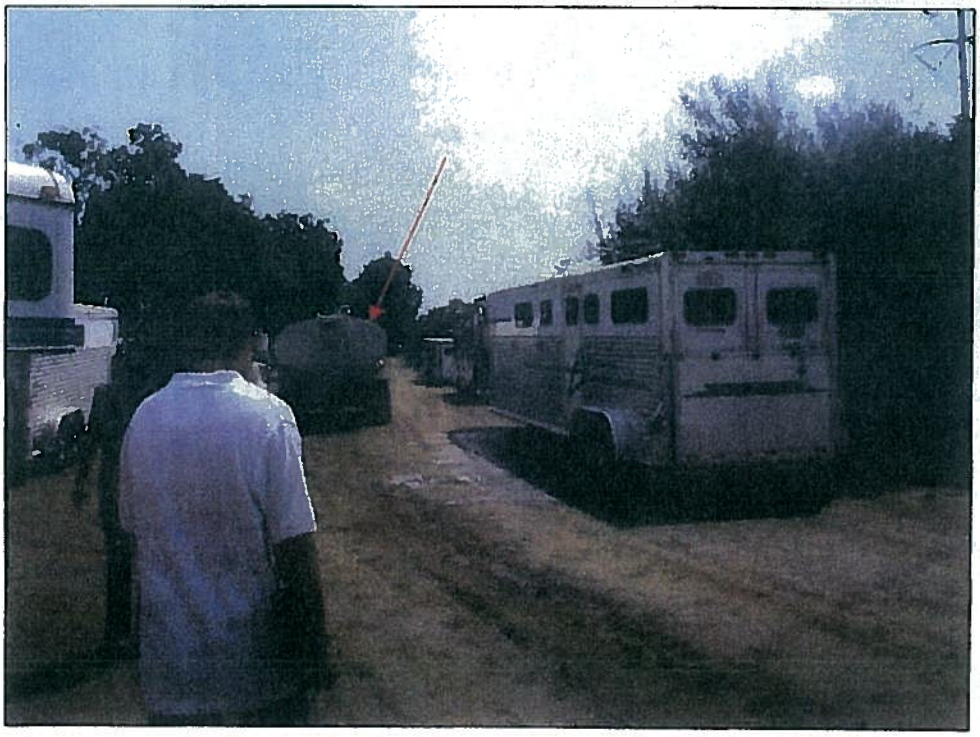


Photo No. 16 – Water truck wetting down dirt road on south side of Horsepark.

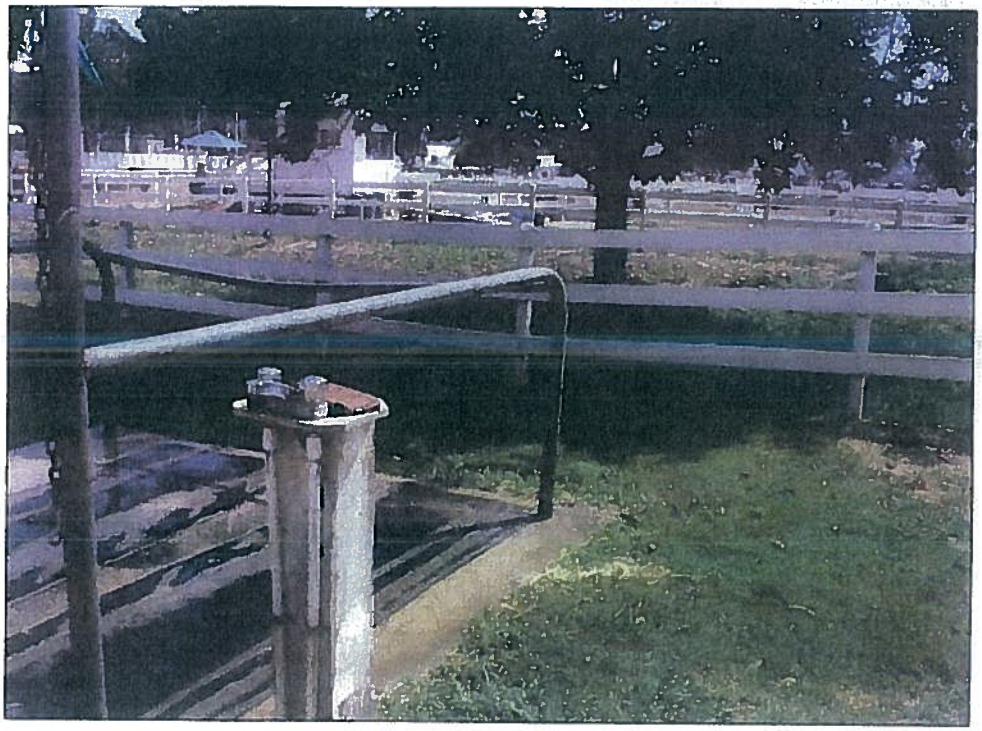


Photo No. 17 – Horse wash rack with drainage directed at vegetated swale.

Photo No. 18 – View of vegetated swale adjacent to wash rack area on south side of Horsepark.

Photo No. 19 – South end of culvert leading from the vegetated swale.

Photo No. 20 – Parking lot west of grandstand.

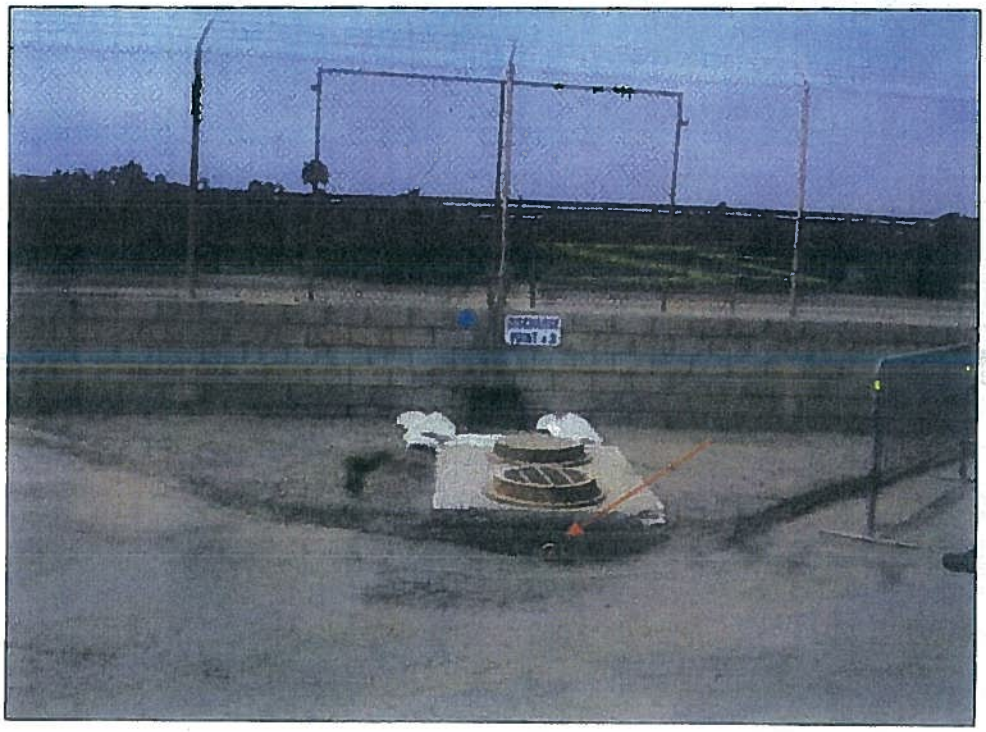


Photo No. 21 – Discharge Point No. 3 with clarifier and check valve.

Photo No. 22 – Parking lot area in the vicinity of Discharge Point No. 3.

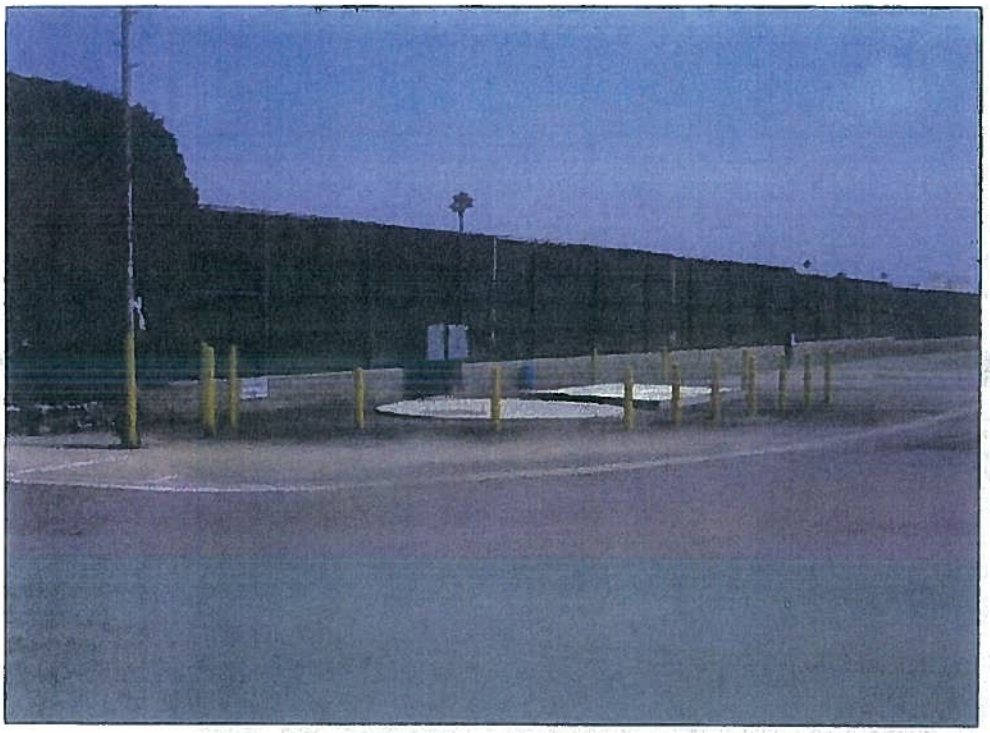


Photo No. 23 – Discharge Point No. 2 with sump for overflow of storm water collection pond.

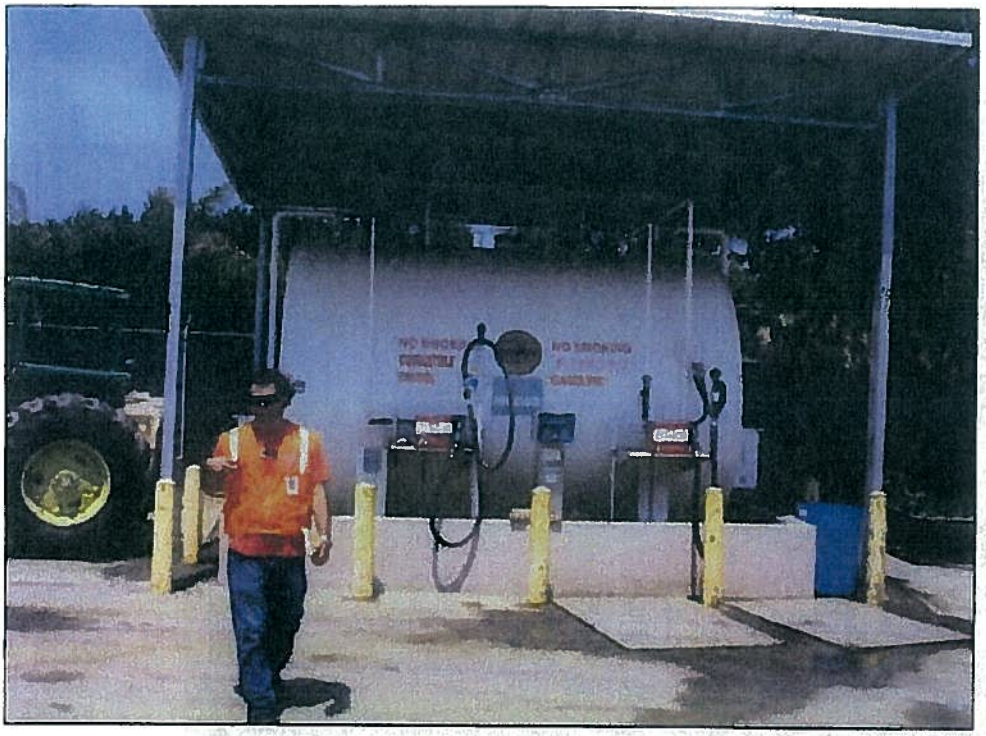
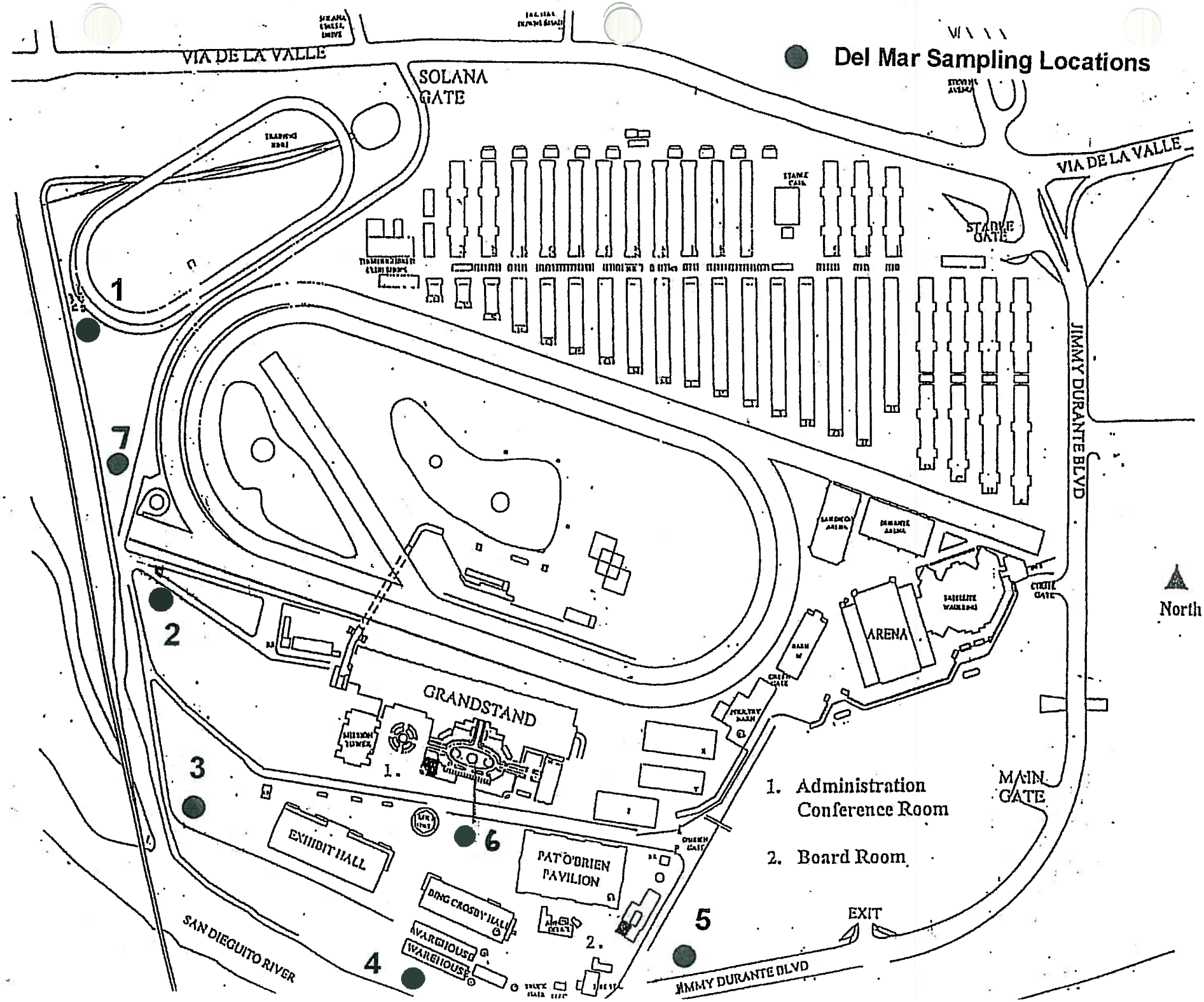


Photo No. 24 – Large above-ground gasoline & diesel tank on north side of racetrack.

Photo No. 25 – Stevens Creek near the Solana Gate culvert.

APPENDIX 5

SUMMARY OF EXISTING WATER QUALITY MONITORING DATA


Del Mar Sampling Locations
VIA DE LA VALLE
SOLANA GATE
VIA DE LA VALLE
STABLE GATE
JIMMY DURANTE BLVD
1
7
2
3
4
5
6
GRANDSTAND
ARENA
North
1. Administration Conference Room
2. Board Room
MAIN GATE
EXHIBIT HALL
PAT O'BRIEN PAVILION
BING CROSBY HALL
WAREHOUSE
WAREHOUSE
EXIT
SAN DIEGUITO RIVER
JIMMY DURANTE BLVD

SITE 1	*pump station at Discharge Point #1*													
		Sampling Event												
Parameter ↓	**Units**	**2/28/2006**	***2/11/2005***	***12/28/2004***	**2/23/2004**	**12/27/2007**	**1/30/2007**	**Min**	**Max**	**Mean**	**#ND**	**n**	**WQO**	**# Exceed WQO**
Hexavalent Chromium	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6		
Chloride	mg/l	100	170	180	120	**530**	**400**	100	**530**	250	0	6	250*	2
Fluoride	mg/l	ND	0.76	0.58	0.26	ND	ND	ND	0.76	0.267	3	6	1*	0
Nitrogen, Nitrite	mg/l	ND	ND	ND	ND	ND	**8.7**	ND	**8.7**	**1.45**	5	6	0.68***	1
Nitrogen, Nitrate (as N)	mg/l	1.6	1.6	1.6	1.6	1.3	3.1	1.3	3.1	1.8	0	6		
Sulfate	mg/l	110	190	120	73	**260**	200	73	**260**	158.8	0	6	250*	1
Specific Conductance	mmhos/cm	670	970	880	560	2300	2000	560	2300	1230	0	6		
pH		7.6	7.43	7.84	7.99	7.5	7.2	7.2	7.99	7.59	0	6	6.5-8.5*	0
Suspended Solids	mg/l	**240**	**200**	**380**	**500**	**420**	**360**	**200**	**500**	**350**	0	6	100***	6
BOD	mg/l	ND	6.9	26	ND	ND	11.6	6.9	26	7.42	3	6	30***	0
Oil & Grease	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	15***	0
Total Pet. Hydrocarbons	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6		
Phosphorus	mg/l	0.56	0.45	0.74	0.79	0.64	0.9	0.45	0.9	0.68	0	6	2***	0
Nitrogen, Ammonia	mg/l	**0.17**	**0.96**	**0.52**	**0.34**	**0.63**	**1**	**0.17**	**1**	**0.603**	0	6	0.025*	0
Phenolics	mg/l	ND	ND	0.13	0.075	ND	ND	0.075	0.13	0.034	4	6	****	
TOC	mg/l	8	7.7	7.3	4.9	10	13	4.9	13	8.48	0	6		
COD	mg/l	68	91	250	52	67	49	49	250	96.17	0	6		
SVOCs	µg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	****	
Antimony	mg/l	ND	ND	ND	0.0058	ND	ND	ND	0.0058	0.0058	5	6	****	
Arsenic	mg/l	ND	ND	ND	0.011	0.034	ND	ND	0.034	0.0075	4	6	****	
Beryllium	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	****	
Cadmium	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	****	
Chromium	mg/l	0.003	0.015	0.023	0.015	0.016	0.0039	0.003	0.023	0.01265	0	6	****	
Copper	mg/l	0.021	0.036	0.048	0.059	0.043	0.027	0.021	0.059	0.039	0	6	****	
Lead	mg/l	0.0099	ND	0.0054	0.013	0.0094	0.0074	ND	0.013	0.0075	1	6	****	
Nickel	mg/l	0.0067	0.0086	0.011	0.0096	0.0085	0.0057	0.0057	0.011	0.00835	0	6	****	
Selenium	mg/l	ND	0.014	0.02	ND	ND	0.014	ND	0.02	0.008	3	6	****	
Silver	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	****	
Thallium	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	****	
Zinc	mg/l	0.22	0.15	0.18	0.46	0.32	0.5	0.15	0.5	0.305	0	6	****	
Mercury	µg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	****	
VOCs	µg/l	ND	ND	ND	ND		ND	ND	ND	ND	5	5		
Ethylene Glycol MBE	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6		
GRO	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6		
DRO	mg/l	0.32	ND	0.21	0.21	ND	ND	ND	0.32	0.123	3	6		
PCBs EPA 3510C	µg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6		
Cyanide	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	****	
Fecal Coliforms	MPN/100 mL		**>1600**	**1600**		**>1600**	**>16000**	**1600**	**>16000**	**8400**	0	4	400**	4
Total Coliforms	MPN/100 mL		>1600	1600		>1600	3000	1600	3000		0	4	10000**	0

* Basin Plan Limit. Tables 3-2 & C-1

** California Ocean Plan Limit

*** USEPA Industrial Permit

**** Basin plan objective applies only to surface waters with MUN beneficial use. Fairgrounds is located in area excepted from MUN.

SITE 2	*Grandstand and main track drainage area*											
		Sampling Event										
Parameter ↓	**Units**	***2/28/2006***	***2/11/2005***	***12/28/2004***	***1/27/2006***	**MIN**	**MAX**	**MEAN**	**#ND**	**n**	**WQO**	**# Exceed WQO**
Hexavalent Chromium	mg/l	ND	ND	ND	ND	ND	ND	ND	4	4		
Chloride	mg/l	30	25	25	120	25	120	50	0	4	250*	0
Fluoride	mg/l	0.28	0.19	0.12	ND	ND	0.28	0.148	1	4	1*	0
Nitrite	mg/l	ND	ND	ND	ND	ND	ND	ND	4	4	0.68***	0
Nitrate	mg/l	0.84	0.81	0.62	0.37	0.37	0.84	0.66	0	4		
Sulfate	mg/l	17	22	12	29	12	29	20	0	4	250*	0
Specific Conductance	mmhos/cm	140	220	110	210	110	220	170	0	4		
pH		7.5	7.44	7.14	7.7	7.14	7.7	7.45	0	4	6.5-8.5*	0
Suspended Solids	mg/l	37	**230**	72	65	37	**230**	**101**	0	4	100***	1
BOD	mg/l	ND	ND	ND	ND	ND	ND	ND	4	4	30***	0
Oil & Grease	mg/l	ND	ND	ND	ND	ND	ND	ND	4	4	15***	0
Total Pet. Hydrocarbons	mg/l	ND	ND	ND	ND	ND	ND	ND	4	4		
Phosphorus	mg/l	0.2	0.47	0.19	0.37	0.19	0.47	0.3075	0	4	2***	0
Nitrogen, Ammonia	mg/l	**0.21**	**0.45**	**0.28**	**0.37**	**0.21**	**0.45**	**0.3275**	0	4	0.025*	4
Phenolics	mg/l	ND	0.15	0.52	ND	ND	0.52	0.167	2	4	****	
TOC	mg/l	8.8	5.7	3.9	9	3.9	9	6.85	0	4		
COD	mg/l	42	220	44	44	42	220	78.4	0	4		
SVOCs	µg/l	ND	ND	ND	ND	ND	ND	ND	4	4	****	
Antimony	mg/l	ND	ND	ND	ND	ND	ND	ND	4	4	****	
Arsenic	mg/l	ND	ND	ND	0.012	ND	0.012	0.003	3	4	****	
Beryllium	mg/l	ND	ND	ND	ND	ND	ND	ND	4	4	****	
Cadmium	mg/l	ND	ND	ND	ND	ND	ND	ND	4	4	****	
Chromium	mg/l	0.0033	0.016	0.0057	0.0042	0.0033	0.016	0.0073	0	4	****	
Copper	mg/l	0.011	0.016	0.01	0.017	0.01	0.017	0.0135	0	4	****	
Lead	mg/l	0.0062	ND	ND	ND	ND	0.0062	0.002	3	4	****	
Nickel	mg/l	ND	0.0068	ND	ND	ND	0.0068	0.0017	3	4	****	
Selenium	mg/l	ND	ND	ND	ND	ND	ND	ND	4	4	****	
Silver	mg/l	ND	ND	ND	ND	ND	ND	ND	4	4	****	
Thallium	mg/l	ND	ND	ND	ND	ND	ND	ND	4	4	****	
Zinc	mg/l	0.075	0.072	0.072	0.08	0.072	0.08	0.07475	0	4	****	
Mercury	µg/l	ND	ND	ND	ND	ND	ND	ND	4	4	****	
VOCs	µg/l	ND	ND	ND		ND	ND	ND	3	3		
Ethylene Glycol MBE	mg/l	ND	ND	ND	ND	ND	ND	ND	4	4		
GRO	mg/l	ND	ND	ND	ND	ND	ND	ND	4	4		
DRO	mg/l	0.6	ND	ND	0.24	ND	0.6	0.21	3	4		
PCBs EPA 3510C	µg/l	ND	ND	ND	ND	ND	ND	ND	4	4		
Cyanide	mg/l	ND	ND	ND	ND	ND	ND	ND	4	4	****	
Fecal Coliforms	MPN/100 mL		**500**	70	**>1600**	70	**>1600**	**723**	0	3	400**	2
Total Coliforms	MPN/100 mL		>1600	1600	>1600	1600	>1600	1600	0	3	10000**	0

* Basin Plan Limit. Tables 3-2 & C-1

** California Ocean Plan Limit

*** USEPA Industrial Permit

**** Basin plan objective applies only to surface waters with MUN beneficial use. Fairgrounds is located in area excepted from MUN.

SITE 3	*West parking lot at Discharge Point #3*														
		Sampling Event													
Parameter ↓	**units**	***2/28/2006***	***2/11/2005***	***12/28/2004***	***11/12/2003***	***12/27/2006***	***1/30/2007***	**MIN**	**MAX**	**MEAN**	**#ND**	**n**	**WQO**	**# Exceed WQO**
Hexavalent Chromium	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6		
Chloride	mg/l	15	9.8	17	150	41	51	9.8	150	47.3	0	6	250*	0
Fluoride	mg/l	0.35	0.13	0.15	0.71	0.1	0.44	0.1	0.71	0.31	0	6	1*	0
Nitrite	mg/l	ND	0.1	ND	ND	ND	**1**	ND	**1**	0.18	4	6	0.68***	1
Nitrate	mg/l	0.64	0.52	0.77	3.3	0.48	0.95	0.48	3.3	1.11	0	6		
Sulfate	mg/l	6.9	4.8	ND	47	33	19	4.8	47	22.14	0	6	250*	0
Specific Conductance	mmhos/cm	82	32	79	780	530	290	32	780	298.83	0	6		
pH		7.2	7.21	7.14	7	7.4	7.2	7	7.4	7.19	0	6	6.5-8.5*	0
Suspended Solids	mg/l	42	32	74	**110**	49	38	32	**110**	57.5	0	6	100***	1
BOD	mg/l	ND	ND	ND	13	ND	11.5	ND	13	4.08	4	6	30***	0
Oil & Grease	mg/l	ND	ND	ND	4.5	ND	ND	ND	4.5	0.75	5	6	15***	0
Total Pet. Hydrocarbons	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6		
Phosphorus	mg/l	0.28	0.03	0.17	0.8	0.26	0.553	0.03	0.8	0.35	0	6	2***	0
Nitrogen, Ammonia	mg/l	**0.18**	**1.6**	**0.35**	**0.78**	**0.26**	**0.73**	0.18	1.6	0.65	0	6	0.025*	6
Phenolics	mg/l	ND	0.55	0.031	0.17	0.37	ND	ND	0.55	0.187	2	6	****	
TOC	mg/l	8.8	ND	6.1	39	18	24	ND	39	15.98	1	6		
COD	mg/l	55	200	42	170	63	80	42	200	101.67	0	6		
SVOCs	µg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	****	
Antimony	mg/l	ND	0.0065	ND	ND	ND	0.044	ND	0.044	0.008	4	6	****	
Arsenic	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	****	
Beryllium	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	****	
Cadmium	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	****	
Chromium	mg/l	0.018	0.0049	0.0054	0.01	0.0053	0.0041	0.0041	0.018	0.008	0	6	****	
Copper	mg/l	0.013	0.011	0.018	0.06	0.022	0.057	0.011	0.06	0.030	0	6	****	
Lead	mg/l	0.0067	ND	ND	0.0058	ND	ND	ND	0.0067	0.002	4	6	****	
Nickel	mg/l	0.011	ND	ND	0.01	ND	0.0056	ND	0.011	0.004	3	6	****	
Selenium	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	****	
Silver	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	****	
Thallium	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	****	
Zinc	mg/l	0.13	0.062	0.086	0.22	0.089	0.44	0.062	0.44	0.171	0	6	****	
Mercury	µg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	****	
VOCs	µg/l	ND	ND	ND	ND		ND	ND	ND	ND	5	5		
Ethylene Glycol MBE	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6		
GRO	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6		
DRO	mg/l	0.9	ND	ND	1.6	0.53	0.39	ND	1.6	0.57	2	6		
PCBs EPA 3510C	µg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6		
Cyanide	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	****	
Fecal Coliforms	MPN/100 mL		**900**	300		**>1600**	**>16000**	300	**>16000**	**4700**	0	4	400**	3
Total Coliforms	MPN/100 mL		>1600	300		>1600	300	300	>1600	950	0	4	10000**	0

blue font denotes replacement sample

* Basin Plan Limit. Tables 3-2 & C-1

** California Ocean Plan Limit

*** USEPA Industrial Permit

**** Basin plan objective applies only to surface waters with MUN beneficial use. Fairgrounds is located in area excepted from MUN.

SITE 4	*Discharge Point #4 behind exhibit halls*											
		Sampling Event										
Parameter ↓	**units**	***2/28/2006***	***11/12/2003***	***12/27/2006***	***1/30/2007***	**MIN**	**MAX**	**MEAN**	**#ND**	**n**	**WQO**	**# Exceed WQO**
Hexavalent Chromium	mg/l	ND	ND	ND	ND	ND	ND	ND	4	4		
Chloride	mg/l	85	**990**	**450**	17	17	990	385.5	0	4	250*	2
Fluoride	mg/l	0.55	ND	ND	0.18	ND	0.55	0.183	2	4	1*	0
Nitrite	mg/l	ND	ND	ND	0.45	ND	0.45	0.113	3	4	0.68***	0
Nitrate	mg/l	1.3	2.9	0.4	0.32	0.32	2.9	1.23	0	4		
Sulfate	mg/l	43	210	99	5.2	5.2	210	89.3	0	4	250*	0
Specific Conductance	mmhos/cm	440	2700	1800	130	130	2700	1267.5	0	4		
pH		7.7	7.48	7.5	7.3	7.3	7.7	7.495	0	4	6.5-8.5*	0
Suspended Solids	mg/l	**470**	**100**	54	**120**	54	**470**	**186**	0	4	100***	3
BOD	mg/l	6.2	15	ND	11.2	ND	15	8.1	1	4	30***	0
Oil & Grease	mg/l	ND	ND	ND	ND	ND	ND	ND	4	4	15***	0
Total Pet. Hydrocarbons	mg/l	ND	ND	ND	ND	ND	ND	ND	4	4		
Phosphorus	mg/l	0.72	0.54	0.26	0.44	0.26	0.72	0.49	0	4	2***	0
Nitrogen, Ammonia	mg/l	**0.44**	**0.67**	**0.52**	**0.27**	**0.27**	**0.67**	**0.475**	0	4	0.025*	4
Phenolics	mg/l	ND	0.066	ND	ND	ND	0.066	0.017	3	4	****	
TOC	mg/l	22	41	12	18	12	41	23.25	0	4		
COD	mg/l	180	230	50	52	50	230	128	0	4		
SVOCs	µg/l	ND	ND	ND		ND	ND	ND	3	3	****	
Antimony	mg/l	ND	ND	ND	ND	ND	ND	ND	4	4	****	
Arsenic	mg/l	0.017	ND	0.021	ND	0.017	0.021	0.0095	2	4	****	
Beryllium	mg/l	ND	ND	ND	ND	ND	ND	ND	4	4	****	
Cadmium	mg/l	ND	ND	ND	ND	ND	ND	ND	4	4	****	
Chromium	mg/l	0.029	0.01	0.0053	0.0065	0.0053	0.029	0.0127	0	4	****	
Copper	mg/l	0.05	0.02	0.02	0.023	0.02	0.05	0.02825	0	4	****	
Lead	mg/l	0.024	0.0061	ND	0.0081	ND	0.024	0.013	1	4	****	
Nickel	mg/l	0.018	0.0063	ND	0.0062	ND	0.018	0.01	1	4	****	
Selenium	mg/l	ND	ND	ND	ND	ND	ND	ND	4	4	****	
Silver	mg/l	ND	ND	ND	ND	ND	ND	ND	4	4	****	
Thallium	mg/l	ND	ND	ND	ND	ND	ND	ND	4	4	****	
Zinc	mg/l	0.32	0.54	0.14	0.4	0.14	0.54	0.35	0	4	****	
Mercury	µg/l	ND	ND	ND	ND	ND	ND	ND	4	4	****	
VOCs	µg/l	?	ND		ND				2	2		
Ethylene Glycol MBE	mg/l	ND	ND	ND	ND	ND	ND	ND	4	4		
GRO	mg/l	ND	ND	ND	ND	ND	ND	ND	4	4		
DRO	mg/l	0.69	0.97	0.31	0.45	0.31	0.97	0.605	0	4		
PCBs EPA 3510C	µg/l	ND	ND	ND	ND				4	4		
Cyanide	mg/l	ND	ND	ND	ND	ND	ND	ND	4	4	****	
Fecal Coliforms	MPN/100 mL			**1100**	**9000**	**11000**	**9000**	**5050**	0	2	400**	2
Total Coliforms	MPN/100 mL			>1600	50	50	>1600	825	0	2	10000**	0

* Basin Plan Limit. Tables 3-2 & C-1

** California Ocean Plan Limit

*** USEPA Industrial Permit

**** Basin plan objective applies only to surface waters with MUN beneficial use. Fairgrounds is located in area excepted from MUN.

SITE 5	*Manhole in parking lot near Jimmy Durante Bridge*													
		Sampling Event												
Parameter ↓	**Units**	***2/28/2006***	***2/11/2006***	***12/28/2004***	***11.12.03***	***12/27/2006***	***1/30/2007***	**MIN**	**MAX**	**MEAN**	**#ND**	**n**	**WQO**	**# Exceed WQO**
Hexavalent Chromium	mg/l	ND	ND		ND	ND	ND	ND	ND	ND	5	5		
Chloride	mg/l	140	27	51	29	150	17	17	150	69	0	6	250*	0
Fluoride	mg/l	0.71	0.17	0.19	0.5	**1.8**	0.32	0.17	**1.8**	0.615	0	6	1*	1
Nitrite	mg/l	ND	ND	ND	ND	ND	0.37	ND	0.37	0.062	5	6	0.68***	0
Nitrate		1	0.82	0.95	2	0.26	0.42	0.26	2	0.908	0	6		
Sulfate	mg/l	63	30	46	18	66	7.2	7.2	66	38.37	0	6	250*	0
Specific Conductance	mmhos/cm	690	160	280	270	820	130	130	820	391.67	0	6		
pH		6.9	8.05	7.78	7.35	7.6	7.2	6.9	8.05	7.48	0	6	6.5-8.5*	0
Suspended Solids	mg/l	52	**190**	**280**	72	**710**	**130**	52	**710**	239.0	0	6	100***	4
BOD	mg/l	5.2	ND	29	9.5	ND	6.86	5.2	29	12.640	0	6	30***	0
Oil & Grease	mg/l	ND	ND	ND	ND	4.7	ND	ND	4.7	0.78	5	6	15***	0
Total Pet. Hydrocarbons	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6		
Phosphorus	mg/l	0.22	0.37	0.44	0.56	0.89	0.33	0.22	0.89	0.468	0	6	2***	0
Nitrogen, Ammonia	mg/l	**0.39**	**0.39**	**0.55**	**0.72**	**0.51**	**0.22**	**0.22**	**0.72**	**0.463**	0	6	0.025*	6
Phenolics	mg/l	ND	0.086	0.043	0.056	ND	ND	ND	0.086	0.031	3	6	****	
TOC	mg/l	13	4.9	6.2	20	14	11	4.9	20	11.52	0	6		
COD	mg/l	74	94	130	110	130	32	32	130	95.00	0	6		
SVOC	µg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	****	
Antimony	mg/l	ND	ND	ND	0.01	ND	ND	ND	0.01	0.002	5	6	****	
Arsenic	mg/l	ND	ND	ND	0.0086	0.018	ND	ND	0.018	0.004	4	6	****	
Beryllium	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	****	
Cadmium	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	****	
Chromium	mg/l	0.0057	0.015	0.021	0.0074	0.021	0.0077	0.0057	0.021	0.013	0	6	****	
Copper	mg/l	0.015	0.022	0.03	0.03	0.049	0.028	0.015	0.049	0.029	0	6	****	
Lead	mg/l	ND	0.0069	0.0069	0.0054	0.014	0.0063	ND	0.014	0.007	1	6	****	
Nickel	mg/l	0.0077	0.0073	0.0088	0.0096	0.013	ND	ND	0.013	0.008	1	6	****	
Selenium	mg/l	ND	ND	0.018	ND	ND	ND	ND	0.018	0.003	5	6	****	
Silver	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	****	
Thallium	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	****	
Zinc	mg/l	0.12	0.13	0.14	0.13	0.24	0.55	0.12	0.55	0.218	0	6	****	
Mercury	µg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	****	
VOC	µg/l	ND	ND	ND	ND		ND				5	5		
Ethylene Glycol MBE	mg/l	ND	ND		ND	ND	ND	ND	ND	ND	5	5		
GRO	mg/l	ND	ND		ND	ND	ND	ND	ND	ND	5	5		
DRO	mg/l	1.3	ND		0.71	1.1	0.37	ND	1.3	0.696	1	5		
PCBs EPA 3510C	µg/l	ND	ND		ND	ND	ND	ND	ND	ND	5	5		
Cyanide	mg/l	ND	ND		ND	ND	ND	ND	ND	ND	5	5	****	
Fecal Coliforms	MPN/100 mL		**1600**	220		**>1600**	**>16000**	220	**>16000**	4855	0	4	400**	3
Total Coliforms	MPN/100 mL		>1600	900		>1600	3000	900	3000	1775	0	4	10000**	0

blue font denotes replacement sample

* Basin Plan Limit. Tables 3-2 & C-1

** California Ocean Plan Limit

*** USEPA Industrial Permit

**** Basin plan objective applies only to surface waters with MUN beneficial use. Fairgrounds is located in area excepted from MUN.

SITE 6	*in between grandstand and bing crosby hall*										
		Sampling Event									
Parameter ↓	**Units**	***2/11/2006***	***12/28/2004***	***11/12/2003***	**MIN**	**MAX**	**MEAN**	**#ND**	**n**	**WQO**	**# Exceed WQO**
Hexavalent Chromium	mg/l	ND	ND	ND	ND	ND	ND	3	3		
Chloride	mg/l	11	24	36	11	36	23.67	0	3	250*	0
Fluoride	mg/l	0.32	0.19	0.57	0.19	0.57	0.36	0	3	1*	0
Nitrite	mg/l	ND	ND	ND	ND	ND	ND	3	3	0.68***	0
Nitrate	mg/l	0.57	1.2	2.5	0.57	2.5	1.42	0	3		
Sulfate	mg/l	7.5	21	41	7.5	41	23.17	0	3	250*	0
Specific Conductance	mmhos/cm	54	160	400	54	400	204.67	0	3		
pH		7.2	7.15	7.45	7.15	7.45	7.27	0	3	6.5-8.5*	0
Suspended Solids	mg/l	52	26	**190**	26	**190**	89.33	0	3	100***	1
BOD	mg/l	ND	ND	11	ND	11	3.66	2	3	30***	0
Oil & Grease	mg/l	ND	ND	ND	ND	ND	ND	3	3	15***	0
Total Pet. Hydrocarbons	mg/l	ND	ND	ND	ND	ND	ND	3	3		
Phosphorus	mg/l	0.23	0.57	1.3	0.23	1.3	0.7	0	3	2***	0
Nitrogen, Ammonia	mg/l	**0.29**	**0.71**	**0.63**	**0.29**	**0.71**	**0.54**	0	3	0.025*	3
Phenolics	mg/l	ND	0.06	0.055	ND	0.06	0.038	1	3	****	
TOC	mg/l	4.9	13	31	4.9	31	16.3	0	3		
COD	mg/l	44	46	170	44	170	86.67	0	3		
SVOCs	µg/l	ND	ND	ND	ND	ND	ND	3	3	****	
Antimony	mg/l	0.039	0.1	0.07	0.039	0.1	0.070	0	3	****	
Arsenic	mg/l	ND	ND	0.0078	ND	0.0078	0.0026	2	3	****	
Beryllium	mg/l	ND	ND	ND	ND	ND	ND	3	3	****	
Cadmium	mg/l	ND	ND	ND	ND	ND	ND	3	3	****	
Chromium	mg/l	0.0036	0.0032	0.0084	0.0032	0.0084	0.005	0	3	****	
Copper	mg/l	0.016	0.022	0.2	0.016	0.2	0.079	0	3	****	
Lead	mg/l	ND	ND	0.01	ND	0.01	0.003	2	3	****	
Nickel	mg/l	0.0079	ND	0.0085	ND	0.0085	0.0054	1	3	****	
Selenium	mg/l	ND	ND	ND	ND	ND	ND	3	3	****	
Silver	mg/l	ND	ND	ND	ND	ND	ND	3	3	****	
Thallium	mg/l	ND	ND	ND	ND	ND	ND	3	3	****	
Zinc	mg/l	0.12	0.17	0.54	0.12	0.54	0.277	0	3	****	
Mercury	µg/l	ND	ND	ND	ND	ND	ND	3	3	****	
VOCs	µg/l	ND	ND	ND	ND	ND	ND	3	3		
Ethylene Glycol MBE	mg/l	ND	ND	ND	ND	ND	ND	3	3		
GRO	mg/l	ND	ND	ND	ND	ND	ND	3	3		
DRO	mg/l	0.28	ND	0.41	ND	0.41	0.23	1	3		
PCBs EPA 3510C	µg/l	ND	ND	ND	ND	ND	ND	3	3		
Cyanide	mg/l	ND	ND	ND	ND	ND	ND	3	3	****	
Fecal Coliforms	MPN/100 mL	**500**	80		80	**500**	290	0	2	400**	1
Total Coliforms	MPN/100 mL	>1600	1600		1600	1600	1600	0	2	10000**	0

* Basin Plan Limit. Tables 3-2 & C-1

** California Ocean Plan Limit

*** USEPA Industrial Permit

**** Basin plan objective applies only to surface waters with MUN beneficial use. Fairgrounds is located in area excepted from MUN.

SITE 7	*parking lot at end of race track*								
Parameter ↓	**Units**	***2/11/2005***	**MIN**	**MAX**	**MEAN**	**#ND**	**n**	**WQO**	**# Exceed WQO**
Hexavalent Chromium	mg/l	ND			ND	1	1		
Chloride	mg/l	24			24	0	1	250*	0
Fluoride	mg/l	0.16			0.16	0	1	1*	0
Nitrite	mg/l	ND			ND	1	1	0.68***	0
Nitrate	mg/l	0.78			0.78	0	1		
Sulfate	mg/l	22			22	0	1	250*	0
Specific Conductance	mmhos/cm	120			120	0	1		
pH		7.01			7.01	0	1	6.5-8.5*	0
Suspended Solids	mg/l	63			63	0	1	100***	0
BOD	mg/l	ND			ND	1	1	30***	0
Oil & Grease	mg/l	ND			ND	1	1	15***	0
Total Pet. Hydrocarbons	mg/l	ND			ND	1	1		
Phosphorus	mg/l	0.1			0.1	0	1	2***	0
Nitrogen, Ammonia	mg/l	1			1	0	1	0.025*	1
Phenolics	mg/l	ND			ND	1	1	****	
TOC	mg/l	3.1			3.1	0	1		
COD	mg/l	120			120	0	1		
SVOCs	µg/l	ND			ND	1	1	****	
Antimony	mg/l	ND			ND	1	1	****	
Arsenic	mg/l	ND			ND	1	1	****	
Beryllium	mg/l	ND			ND	1	1	****	
Cadmium	mg/l	ND			ND	1	1	****	
Chromium	mg/l	0.0047			0.0047	0	1	****	
Copper	mg/l	0.0072			0.0072	0	1	****	
Lead	mg/l	ND			ND	1	1	****	
Nickel	mg/l	ND			ND	1	1	****	
Selenium	mg/l	ND			ND	1	1	****	
Silver	mg/l	ND			ND	1	1	****	
Thallium	mg/l	ND			ND	1	1	****	
Zinc	mg/l	0.048			0.048	0	1	****	
Mercury	µg/l	ND			ND	1	1	****	
VOCs	µg/l	ND			ND	1	1		
Ethylene Glycol MBE	mg/l	ND			ND	1	1		
GRO	mg/l	ND			ND	1	1		
DRO	mg/l	ND			ND	1	1		
PCBs EPA 3510C	µg/l	ND			ND	1	1		
Cyanide	mg/l	ND			ND	1	1	****	
Fecal Coliforms	MPN/100 mL	110			110	0	1	400**	0
Total Coliforms	MPN/100 mL	900			900	0	1	10000**	0

* Basin Plan Limit. Tables 3-2 & C-1

** California Ocean Plan Limit

*** USEPA Industrial Permit

**** Basin plan objective applies only to surface waters with MUN beneficial use. Fairgrounds is located in area excepted from MUN.

Ammonia as N **County Data - Mass Loading Stations**

Location	Units	WQO	2001-2002					2002-2003					2003-2004					2004-2005				Mean	Max	Min
			11/29/01	1/19/02	2/17/02	3/8/02	3/17/02	11/8/02	12/16/02	2/11/03	2/25/03	3/15/03	11/12/03	1/19/03	2/3/04	2/18/04	3/2/04	10/17/04	10/27/04	2/11/05	2/18/05			
San Dieguito	mg/L		0.2	0.13	<0.1					0.52	0.2	0.13			<0.1	0.17	1.7	<0.1		0.17	0.16	0.38	1.70	<0.1
Carlsbad - Esc.	mg/L		0.4		0.19	0.18		0.29		0.32	0.41		<0.1		0.18		1.2	0.33		0.26	0.32	0.37	1.20	<0.1
Carlsbad - A.H.	mg/L				<0.1	0.1	0.1	0.25		0.25	0.62		0.43	<0.1		0.3		0.82		0.23	0.18	0.33	0.82	<0.1
Pensaquitos	mg/L		0.02		<0.1		<0.1	<0.1	<0.1	<0.1			<0.1		<0.1	<0.1		<0.1		0.14	<0.1	0.08	0.14	<0.1
San Diego River	mg/L		0.9		0.7		0.2	0.34	0.13	0.19			<0.1		<0.1		1.8		0.38	0.28	0.95	0.59	1.80	<0.1

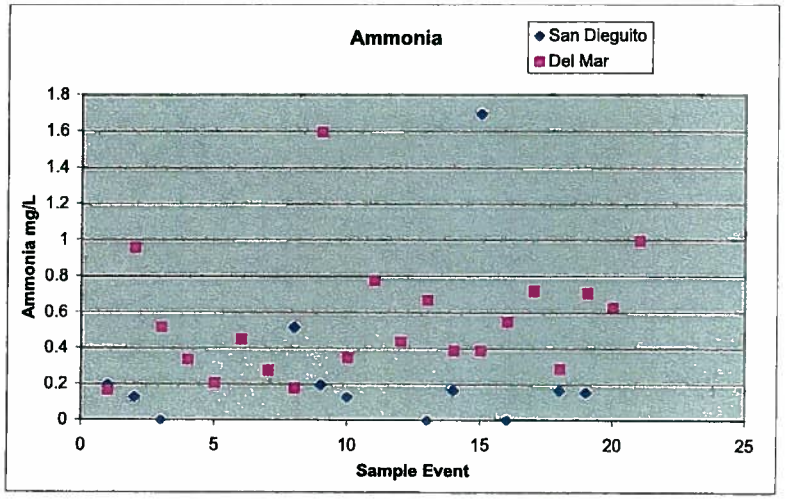
-- not sampled
N/A data not available

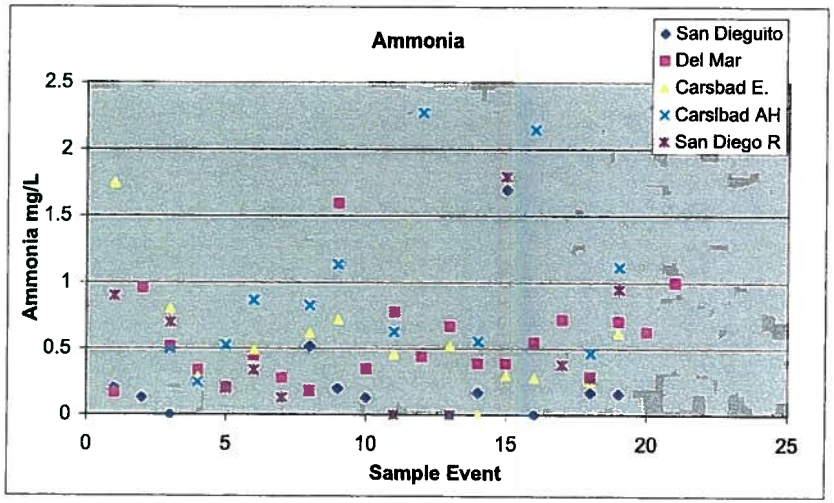
Total Phosphorous **County Data - Mass Loading Stations**

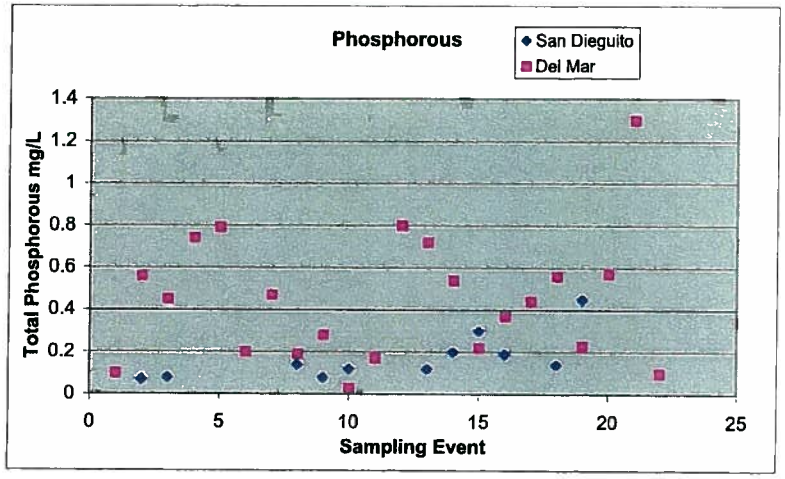
Location	Units	WQO	2001-2002					2002-2003					2003-2004					2004-2005				Mean	Max	Min
			11/29/01	1/19/02	2/17/02	3/8/02	3/17/02	11/8/02	12/16/02	2/11/03	2/25/03	3/15/03	11/12/03	1/19/03	2/3/04	2/18/04	3/2/04	10/17/04	10/27/04	2/11/05	2/18/05			
San Dieguito	mg/L	2	0.1	0.07	0.08					0.14	0.08	0.12			0.12	0.2	0.3	0.19		0.14	0.45	0.17	0.45	0.07
Carlsbad - Esc.	mg/L	2	1.75		0.8	0.29		0.49		0.62	0.72		0.46		0.52	--	0.3	0.28		0.26	0.62	0.59	1.75	0.26
Carlsbad - A.H.	mg/L	2			0.5	0.25	0.53	0.87		0.83	1.14		0.63	**2.28**		0.56		**2.15**		0.47	1.12	0.94	2.28	0.25
Pensaquitos	mg/L	2	0.1		1.15		0.23	0.73	0.6	0.39			0.23		0.2	0.17		0.14		0.28	0.69	0.41	1.15	0.1
San Diego River	mg/L	2	1.21		0.4		0.28	0.57	1.01	0.33			0.34		0.23		0.35		0.85	0.28	0.44	0.52	1.21	0.23

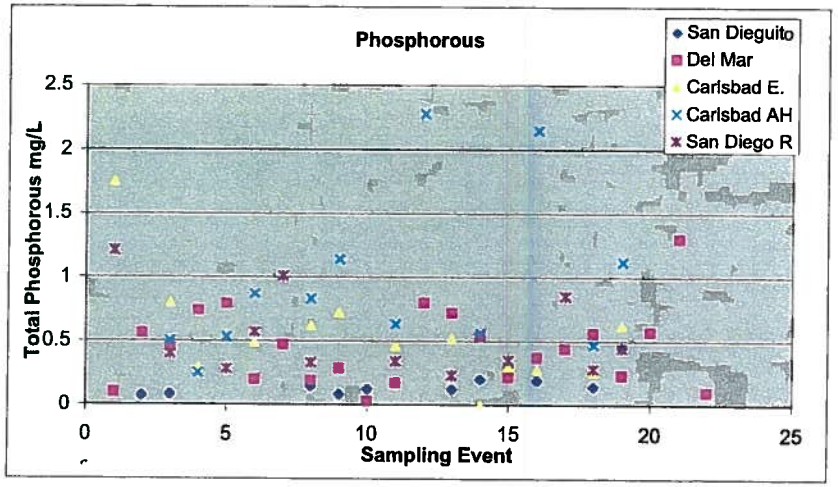
WQO Source: USEPA

Del Mar Data			Site 1				Site 2			Site 3			Site 4		Site 5				Site 6			Site 7
Parameter ↓	units	WQO	2/28/06	2/11/05	12/28/04	2/23/04	2/28/06	2/11/05	12/28/04	2/28/06	2/11/05	12/28/04	11/12/03	2/28/06	11/12/03	2/28/06	2/11/06	12/28/04	11/12/03	2/11/06	12/28/04	11/12/03	2/11/05
Phosphorus	mg/l	0.1	0.56	0.45	0.74	0.79	0.2	0.47	0.19	0.28	0.03	0.17	0.8	0.72	0.54	0.22	0.37	0.44	0.56	0.23	0.57	1.3	0.1
Nitrogen, Ammonia	mg/l		0.17	0.96	0.52	0.34	0.21	0.45	0.28	0.18	1.6	0.35	0.78	0.44	0.67	0.39	0.39	0.55	0.72	0.29	0.71	0.63	1
Phenolics	mg/l		ND	ND	0.13	0.075	ND	0.15	0.52	ND	0.55	0.031	0.17	ND	0.066	ND	0.086	0.043	0.056	ND	0.06	0.055	ND


Ammonia
San Dieguito
Del Mar
Ammonia mg/L
Sample Event
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
0
5
10
15
20
25


Ammonia
San Dieguito
Del Mar
Carsbad E.
Carslbad AH
San Diego R
Ammonia mg/L
Sample Event
0
0.5
1
1.5
2
2.5
0
5
10
15
20
25


Phosphorous
San Dieguito
Del Mar
Total Phosphorous mg/L
Sampling Event
0
0.2
0.4
0.6
0.8
1
1.2
1.4
0
5
10
15
20
25


Phosphorous
San Dieguito
Del Mar
Carlsbad E.
Carlsbad AH
San Diego R
Total Phosphorous mg/L
Sampling Event
0
0.5
1
1.5
2
2.5
0
5
10
15
20
25

APPENDIX 6

EXISTING MONITORING PROGRAMS

DEL MAR FAIRGROUNDS AND RACETRACK

INDUSTRIAL
STORM WATER POLLUTION
PREVENTION PLAN

AUGUST 2001
AMENDED AUGUST 2002
AMENDED AUGUST 8, 2002

FINAL

PREPARED FOR:

22ND DISTRICT AGRICULTURAL ASSOCIATION
2260 JIMMY DURANTE BOULEVARD
DEL MAR, CALIFORNIA 92014

PREPARED BY:

NOLTE ASSOCIATES, INC.
15090 AVENUE OF SCIENCE,
SUITE 101
SAN DIEGO, CALIFORNIA 92128

CHAPTER 6
MONITORING AND RECORD KEEPING

6.1 Checking on New BMP Implementation

Documentation of an annual inspection is required in each reporting period (July 1 – June 30). The Manager will carry out this inspection with the respective supervisors assisting in their areas. Upon completion of the annual inspection, The Manager will consider how well the existing BMPs are working, evaluate progress with future or uncompleted BMPs, and document changes to the SWPPP.

The Manager will conduct weekly inspections of new BMPs to ensure their effectiveness. Inspections will be performed using a checklist to denote if BMP's are in place, their overall condition, and solutions to potential problems. Inspections will continue until new BMPs are functioning efficiently for three consecutive inspections. The Manager will incorporate these checklists into the SWPPP.

6.2 Monitoring of Storm Water

A. Introduction

This portion of the SWPPP constitutes compliance with the third step of the State Permit for preparation of a monitoring program. This program has been developed in accordance with Section B of the State's General Permit for storm water discharges associated with industrial activities, adopted by the State Water Board on April 17, 1997. A copy of the general permit can be found in Appendix F of this manual.

This program will describe the rationale for the selection of monitoring methods; a description of sampling locations, sampling methods, and frequency and type of monitoring; a description of what sampling procedures and equipment are being used, what pollutants are being analyzed for, the frequency of sampling, and the laboratory procedures and tests being utilized to analyze samples.

B. Rationale for Selection of Monitoring Methods

1. Storm and Sampling Criteria

Section B of the General Permit established the criteria for the type of storm event that must be sampled. Samples will only be taken during the first hour of discharge. This will ensure that adequate flow will be discharged. This storm must be preceded by at least three (3) working days of dry weather. This will allow a potential build-up of pollutants during this interval.

2. Sampling

Grab sample will be the method of sampling.

3. Location

The Fairgrounds low elevation adjacent to the San Dieguito River mouth results in significant inflow of river/lagoon water into the Fairgrounds storm drain system during major rainfall events. Consequently, samples taken at the storm drain outfalls are contaminated by receiving waters (e.g. salt).

The Site Plan (Appendix A) shows the site in its entirety and the location of the sampling stations. This exhibit shows that the portion of the facility where potential pollutants are located, and the direction the pollutants drain. The drainage system has been described in Section 2.4. The Site map shows five sampling points to accurately monitor storm water quality impacts from the Fairgrounds. Samples from these locations will accurately represent the quality of the storm water discharging from this site.

Given the salt-water intrusion prevalent in the existing samples, the sampling points should be moved from the actual discharge point to a point further upstream within the on-site storm drain system. If the sampling point is selected such that no additional flows are added at downstream, such as a manhole or catch basin in the system, the sample will remain representative of the Fairground's discharges. Unfortunately, in several cases there is a grease trap immediately upstream of the discharge point. Therefore, in these locations the sample must be taken at the actual discharge point (downstream of all BMPs). In these cases, an additional sample will be taken from the receiving water immediately upstream of the discharge point. This will provide a means of comparing the discharge test results and receiving water test results. If the salt content in the receiving water

upstream of the discharge point matches that in the discharge runoff, then the salt content will have been shown not to originate from the Fairgrounds' runoff.

C. Methodology

1. Visual Observations

   a. Non-storm Water Discharge

   - Facility operators shall visually observe all drainage areas within their facilities for the presence of unauthorized non-storm water discharges.

   - Facility operators shall visually observe the facility's authorized non-storm water discharges and their sources.

   - 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 responses 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 the General Permit.

   b. Wet Season: (October 1st through May 1st) visual observations will be performed at all storm water discharge locations during the first hour of a storm event. Observations should be conducted to determine the presence of floating and suspended materials, oil and grease, discolorations, turbidity, odor, and the presence of any of the potentially polluting substances listed in Table 1 of this manual. By combining the information gathered by these observations and lab analysis results, the source of any significant quantity of pollutants entering the storm water runoff may be determined more easily. Records of these observations shall be kept and maintained per Section 6.2.D of this SWPPP.

2. Sampling

   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 in such a manner as to minimize salt-water intrusion. 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.

b. Sample collection is only required of storm water discharges that occur during scheduled facility operating hours that are preceded by at least (3) three working days without storm water discharge.

If the storm is not of the required minimum longevity of one hour, whatever sample has been collected will be discarded. All sampling and sample preservation will be done in accordance with the current edition of "Standard Methods for the Examination of Water and Wastewater" (American Public Health Association).

3. Analysis

Table 1 lists the potential pollutants. Storm water runoff from this site will be analyzed for the existence of these pollutants listed along with the four required tests for pH, total suspended solids (TSS), specific conductance, and total organic carbon (TOC). Table 3 lists the potential pollutant(s) and the appropriate test(s) for that pollutant(s) based on Publication SW-846 "EPA Test Methods for Evaluation of Solid and Hazardous Waste" and "Standard Methods for the Examination of Water and Wastewater" (American Public Health Association). The laboratory conducting these tests will be certified by the State Department of Health Services to conduct the listed tests and analysis.

At Discharge Point # 6 located at the northeast corner of the site, storm water run on comes from the nearby streets Stevens Avenue and Via de la Valle. Storm water testing at this location will be limited to an Oil and Grease test along with a Metals test.

TABLE 3 – TOXIC POLLUTANT ANALYSIS

POTENTIAL POLLUTANT	STANDARD TEST	MP #1	MP #2	MP #3	MP #4	MP #5
Aromatic Hydrocarbons	8020, 8240	X	X	X	X	X
Biological & Chemical Oxygen Demand	BOD, COD	X	X	X	X	X
Chlorides	9252	X	X	X	X	X
Chlorinated Hydrocarbons	8010, 8240	X	X	X	X	X
Glycol Ethers	8270	X	X	X	X	X
Inorganic Nitrogen	9200	X	X	X	X	X
Ketones	8015, 8260	X	X	X	X	X
Metals	6010	X	X	X	X	X
Oil & Grease	413	X	X	X	X	X
Organic Carbons	9060	X	X	X	X	X
Phosphates	Phosphates	X	X	X	X	X
Polynuclear Aromatics (PNA)	8270	X	X	X	X	X
Sulfates	9038	X	X	X	X	X

4. Quality Control and Assurance

It is the responsibility of the Manager, as listed in Section 1.2 of this manual to ensure that this facility is in compliance with this monitoring program and the General Permit. The Manager is responsible for all documentation, training, and implementation of this monitoring program. Annual training of facility employees is conducted to present updated information and to maintain a level of employee awareness regarding this program. Each new employee shall receive training on pertinent aspects of this monitoring program. A copy of this Plan is located on-site and is available for all employees to read. Trained consultants are utilized in the interpretation of sampling analysis results.

5. Effectiveness Evaluation

Following any inspection, observation, or laboratory report, an evaluation of the effectiveness of the BMPs will be performed. Those pollutants found to be in significant quantities in the storm water discharge will be traced back to all potential sources. The BMPs for handling, storage, use, and disposal of these materials will be evaluated for their proper implementation. If these BMPs are

being strictly adhered to, then additional BMPs will be developed and/or additional or new structural controls will be constructed.

D. Documentation

All inspections, observations, and sampling data records required by the General permit are kept in Appendix D of this plan and will be kept for at least five years from the date of the inspection, observation, sample, or report.

1. Annual Comprehensive Site Compliance Evaluation

The facility operator shall conduct one comprehensive site compliance 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, (1) identification of personnel performing the evaluation, (2) the date(s) of the evaluation, (3) necessary SWPPP revisions, (4) schedule, as required in Section A.10.e of the Storm Water Pollution Prevention Plan Requirement, for implementing SWPPP revisions, (5) any incidents of non-compliance and the corrective actions taken, and (6) a certification that the facility operator is in compliance with the General Permit. If the above certification cannot be provided, explain in the evaluation report why the facility operator is not in compliance with the 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 the General Permit.

2. Non-Storm Observation

The visual observations required shall occur quarterly, during daylight hours, on days with no storm water discharges, and during scheduled facility operating hours. 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. A record shall be maintained in Appendix D of the date and time of observation, the individual(s) performing the observation, locations observed, and observation results. A sample "Non-Storm Observation " form is contained in Appendix E.

3. Wet Season Visual Observation

No less than once a month during the wet season (October through May) a visual observation will be performed in accordance with Section 6.2.C.1.b of this plan. A record shall be maintained in Appendix D of the date, place and time of the observation, the individual(s) performing the observation, and the observation results. A sample "Non-Storm Observation" form is kept in Appendix E.

4. Sampling Data

During (October through May) 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. The collection and analyzation shall be in accordance with Sections 6.2.C.2 and 3.

5. Facility Operator Compliance Responsibilities

There are many ways to comply with the General Permit, but in the end it is the facility operator that is responsible for compliance with the General Permit. This compliance recognizes, encourages, and mandates an iterative self-evaluation process that is necessary to consistently comply with the General Permit. In general, facility operators that develop and implement SWPPPs that comply with the 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.

6. Annual Report

An annual report will be submitted by July 1st of each year to the Executive Officer of the Regional Water Board. This report will include a summary of visual observations and sampling results (including comparisons to benchmark data), annual site inspection certification, and any documentation regarding observation and sampling exemptions. This report will be signed and certified in accordance with Standard Provisions 9 and 10 of Section C of the General Permit.

DEL MAR FAIRGROUNDS RACETRACK ENGINEERED SURFACE PROJECT
MONITORING AND REPORTING PROGRAM
REFERENCE NO. _____

I. Introduction

This Monitoring and Reporting Program (MRP) has been developed to summarize the proposed sampling and reporting activities for effluent discharges from the racetrack engineered surface drainage system at the Del Mar Fairgrounds in the City of Del Mar, CA. This MRP exists outside of the existing Del Mar Fairgrounds Monitoring and Reporting Program developed under the General NPDES Permit (SWRCB Order No. 97-03-DWQ) and the proposed Del Mar Fairgrounds Master Plan Update. This MRP was prepared to provide supplemental information on the isolated racetrack engineered surface drainage system for the purpose of obtaining Coastal Development Permit (CDP) approval from the California Coastal Commission for the Project.

II. Reporting Requirements

A. The 22nd District Agricultural Association (22nd DAA), hereinafter Discharger, shall implement this monitoring program on the effective date of this Monitoring and Reporting Program (MRP) for a period of 5 years. The monitoring report shall be submitted annually and must be received by the California Coastal Commission by November 1 of each year. All monitoring reports should be addressed to the Coastal Commission, Attention: Water Quality Division. The first monitoring report under this Program is due by November 1, 2008 and shall correspond to the period starting July 1, 2007 through June 30, 2008. If there is no discharge during any reporting period, the report shall so state.

B. The Discharger shall submit, as part of the annual monitoring report, a discussion of the previous fiscal year's effluent monitoring data (July 1 through June 30), as well as graphical and tabular summaries of the data. The data shall be submitted to the Coastal Commission on hard copy and on electronic copy (compact disc). Submitted data must be IBM compatible, preferably using EXCEL software. This annual report is to be received by the Coastal Commission by November 1 of each year following the fiscal year of data collection.

C. Each monitoring report shall contain a separate section titled "Summary of Non-Compliance" which discusses the compliance record and corrective actions taken or planned that may be needed to bring the discharge into full compliance with waste discharge requirements. This section shall clearly list all non-compliance with waste discharge requirements, as well as all excursions of effluent limitations.

III. Effluent Monitoring Requirements

A. Effluent monitoring shall take place at the effluent discharges for a period of 5 years after the effective date of this MRP (July 1, 2007). This MRP requires the Discharger to collect the effluent (i.e. storm water) samples from the racetrack engineered surface drainage system prior to the effluent discharging into Stevens Creek at Outlet 1. The discharge through Outlet 1 shall be sampled at Sampling Point SP-1, which is located at the pump station immediately upstream of Outlet 1. The following table is a list of the outfalls (see Attachment E).

Discharge Point	Sampling Point	Location	Drainage Area
Outlet-1	SP-1	At the 12" storm drain outlet from the pump station immediately upstream of Outlet-1 to Stevens Creek	Racetrack engineered surface drainage system

B. The Coastal Commission shall be notified in writing of any proposed changes in the sampling stations prior to establishment or in the methods for determining the quantities of pollutants in the individual waste streams.

C. Pollutants shall be analyzed using the analytical methods described in 40 CFR Sections 136.3, 136.4, and 136.5 (revised May 14, 1999); or, where no methods are specified for a given pollutant, by the Coastal Commission or the Regional Water Quality Control Board. Laboratories analyzing effluent samples shall be certified by the California Department of Health Services Environmental Laboratory Accreditation Program (ELAP) or approved by the Regional Board Executive Officer for the specific pollutants monitored to comply with this MRP and must include quality assurance/quality control (QA/QC) in their reports. A copy of the laboratory certification shall be provided each time a new certification and/or renewal of the certification is obtained from ELAP.

The monitoring reports shall specify the analytical method used, the Method Detection Limit (MDL), the Minimum Level (ML), and the Water Quality Objective for each pollutant. For the purpose of reporting compliance with numerical limitations, performance goals, and receiving water limitations, analytical data shall be reported by one of the following methods, as appropriate:

1. An actual numerical value for sample results greater than or equal to the ML; or,
2. "Detected, but Not Quantified (DNQ)" if results are greater than or equal to the laboratory's MDL but less than the ML; or,
3. "Not-Detected (ND)" for sample results less than the laboratory's MDL, with the MDL indicated for the analytical method used.

Current MLs (Attachment A) are those published by the State Water Resources Control Board (SWRCB) in the *Policy for the Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of*

California, March 2, 2000. Current Water Quality Objectives are provided as Attachment F.

D. Where possible, the MLs employed for effluent analyses shall be lower than the MRP limitations established for a given parameter. If the ML is not below the effluent limitation, then the lowest ML value and its associated analytical method shall be selected for compliance purposes. As part of the monitoring report, the Discharger shall submit a list of the analytical methods employed for each test and associated laboratory QA/QC procedures.

E. Effluent samples must be analyzed within allowable holding time limits as specified in 40 CFR Section 136.3. All QA/QC items must be run on the same dates the samples were actually analyzed, and the results shall be submitted with the laboratory reports. Proper chain of custody procedures must be followed, and a copy of the chain of custody shall be submitted with the monitoring report.

F. Sampling shall be performed within the reporting periods described in Section II.A. and II.B of this MRP. Once per year, prior to the start of the wet season (October 1), the racetrack engineered surface drainage system will be manually "flushed" to remove any contaminants that may have built up during the dry season. The effluent from these manual flushing events will be diverted to the infield lake system for infiltration and treatment, and will not discharge into the storm drain system. Therefore, annual effluent analyses per this MRP shall be performed during the first discharge during the wet season (October 1 – April 30) after the manual flushing event has occurred. Results of all analyses shall be reported in the appropriate annual monitoring report.

G. All laboratory analytical reports shall be accompanied by the chain of custody, including but not limited to date and time of sampling, sample identification, name of person who performed the sampling, date of analysis, name of person who performed the analysis, QA/QC data, method detection limits, analytical methods, copy of laboratory certification, and a perjury statement executed by the person responsible for the laboratory.

IV. Effluent Monitoring Program

A. The Discharger must monitor the effluent for potential pollutants to determine reasonable potential. Pursuant to this MRP, the Discharger is required to submit data for: (1) determining if the effluent discharges contribute to any exceedances to water quality objectives as designated in the Basin Plan, and (2) determining if water-quality based effluent limitations for potential pollutants are required. The Discharger shall monitor effluent water for acute/chronic toxicity once every two years for discharges from the racetrack engineered surface drainage system as outlined in Section V of this MRP. Additional monitoring parameters have been selected to account for all potential compounds of the engineered surface track runoff. The results for monitoring for reasonable potential determination shall be submitted in accordance with Section II.A. of this MRP.

Discharges from the racetrack engineered surface drainage system through Outlet 1 at SP-1 shall be monitored at the minimum frequency shown below.

Effluent samples shall be collected immediately prior to exiting the property, prior to discharging into Stevens Creek at SP-1.

Constituent	Units	Type of Sample	Sampling Frequency [2]
Flow	gal/day	--	Once per discharge
Temperature	°F	Grab	Once per discharge
pH	Standard units	Grab	Once per discharge
BOD_5 @ 20°C [1]	mg/L	Grab	Once per discharge
Oil and Grease	mg/L	Grab	Once per discharge
Fecal Coliform	MPN per 100 ml	Grab	Once per discharge
Enterococcus	MPN per 100 ml	Grab	Once per discharge
Total Coliform	MPN per 100 ml	Grab	Once per discharge
Phosphorous	mg/L	Grab	Once per discharge
Nitrate + Nitrite as N	mg/L	Grab	Once per discharge
Ammonia	mg/L	Grab	Once per discharge
Total dissolved solids	mg/L	Grab	Once per discharge
Total suspended solids	mg/L	Grab	Once per discharge
Settleable solids	ml/L	Grab	Once per discharge
SVOCs [3]	µg/L	Grab	Annually
Total Phenolics	mg/L	Grab	Annually
Total Magnesium	mg/L	Grab	Annually
MBAS [5]	mg/L	Grab	Annually
Dimethylacetamide	µg/L	Grab	Annually
Polydimethylacetamide	µg/L	Grab	Annually
Acute/chronic toxicity	N/A[4]	Grab	Once per 2 years

1. 5-day biochemical oxygen demand at 20 °C.
2. During periods of storm water discharge into Stevens Creek, samples shall be collected during the first hour of the discharge. Each separate storm event that results in a discharge of effluent shall be sampled, but no more than one sample per 2 weeks is required. Storm events must be preceded by at least 72 hours of dry weather or no discharge.
3. See Attachment A for list of Semi-Volatile Organic Compounds (SVOCs) to be sampled.
4. Not applicable, dependent upon test performed as identified in Section V of this MRP.
5. Methylene blue activated substances.

V. Toxicity Monitoring Requirements

A. Acute/Chronic Toxicity Effluent Monitoring Program

1. The Discharger shall conduct acute/chronic toxicity tests on effluent grab samples by methods specified in 40 CFR Part 136 which cites USEPA's *Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms*, Fifth Edition, October, 2002

(EPA/821-R-02-012) or a more recent edition to ensure compliance in 100% effluent.

2. The test species for effluent shall include the Mediterranean mussel (*Mytilus galloprovincialis*), giant kelp (*Macrocystis pyrifera*), Pacific topsmelt (*Atherinops affinis*), and mysid shrimp (*Americamysis bahia).* The method for Mediterranean mussel, giant kelp, and topsmelt is found in USEPA's *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms*, Third Edition, October 2002 (EPA/821/R-02-014). The method for mysid shrimp is found in USEPA's *Short-term Methods for Estimating Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms*, August 2005 (EPA/600/R-95/136).

B. Quality Assurance

1. Concurrent testing with a reference toxicant shall be conducted. Reference toxicant testing shall be conducted using the same test conditions as the effluent toxicity tests (e.g., same test duration, etc.).

2. If either the reference test or effluent test does not meet all the test acceptability criteria (TAC) as specified in the test methods manuals (EPA/821/R-02-014 and EPA/600/R-95/136), then the Discharger must re-sample and re-test at the earliest time possible.

3. Control and dilution water should be receiving water or laboratory water, as appropriate, as described in the test methods manuals(EPA/821/R-02-014 and EPA/600/R-95/136). If the dilution water used is different from the culture water, a second control using culture water shall be used.

C. Reporting

1. The discharger shall submit a full report of the toxicity test results, including any accelerated testing conducted during the month as required by this MRP. Test results shall be reported as percent (%) survival with the annual monitoring report for the year in which the test is conducted.

2. If an initial investigation indicates the source of toxicity and accelerated testing is unnecessary, then those results also shall be submitted with the annual monitoring report for the period in which the investigation occurred.

    a. The full report shall be submitted on or before the end of the month in which the annual monitoring report is submitted.

    b. The full report shall consist of (1) the results; (2) the dates of sample collection and initiation of each toxicity test; (3) the acute toxicity average limit or chronic toxicity limit or trigger.

3. Test results for toxicity tests also shall be reported according to the appropriate test methods manual chapter on Report Preparation and shall be attached to the annual monitoring report. Routine reporting shall include, at a minimum, as applicable, for each test:

a. Sample date(s);

b. Test initiation date;

c. Test species;

d. End point values for each dilution (e.g. number of young, growth rate, percent survival);

e. NOEC value(s) in percent effluent;

f. IC_{15}, IC_{25}, IC_{40}, and IC_{50} values in percent effluent;

g. TU_c values ($TU_c = 100 \div NOEC$);

h. Mean percent mortality (± standard deviation) after 96 hours in 100% effluent (if applicable);

i. NOEC and LOEC values for reference toxicant test(s);

j. C_{25} values for reference toxicant test(s);.

k. Any applicable charts; and

l. Available water quality measurements for each test (e.g., pH, D.O., temperature, conductivity, hardness, salinity, ammonia).

The discharger shall provide a compliance summary, which includes a summary table of toxicity data from at least eleven of the most recent samples.

VI. Manual Drainage System Flushing Monitoring Program

A. At the discretion of the Del Mar Fairgrounds, prior to the start of the wet season (October 1), the racetrack engineered surface drainage system may be manually "flushed" with water to remove any contaminants that may have built up during the dry season. The effluent from these manual flushing events will be diverted to the infield lake system for infiltration and treatment, and will not discharge into the storm drain system. In the event that any flushing effluent is discharged into the storm drain system, the Discharger must monitor the flushing effluent at SP-1 for potential pollutants to determine reasonable potential. The results for monitoring for reasonable potential determination shall be submitted in accordance with Section II.A. of this MRP.

Discharges from the manual flushing of the racetrack engineered surface drainage system through Outlet 1 at SP-1:

Constituent	Units	Type of Sample	Sampling Frequency [2]
Flow	gal/day	--	Once per discharge
Temperature	°F	Grab	Once per discharge
pH	Standard units	Grab	Once per discharge
BOD_5 @ 20°C [1]	mg/L	Grab	Once per discharge
Oil and Grease	mg/L	Grab	Once per discharge
Fecal Coliform	MPN per 100 ml	Grab	Once per discharge
Enterococcus	MPN per 100 ml	Grab	Once per discharge

Constituent	Units	Type of Sample	Sampling Frequency [2]
Total Coliform	MPN per 100 ml	Grab	Once per discharge
Phosphorous	mg/L	Grab	Once per discharge
Nitrate + Nitrite as N	mg/L	Grab	Once per discharge
Ammonia	mg/L	Grab	Once per discharge
Total dissolved solids	mg/L	Grab	Once per discharge
Total suspended solids	mg/L	Grab	Once per discharge
Settleable solids	ml/L	Grab	Once per discharge
SVOCs [3]	µg/L	Grab	Once per discharge
Total Phenolics	mg/L	Grab	Once per discharge
Total Magnesium	mg/L	Grab	Once per discharge
MBAS	mg/L	Grab	Once per discharge
Dimethylacetamide	µg/L	Grab	Once per discharge
Polydimethylacetamide	µg/L	Grab	Once per discharge

1. 5-day biochemical oxygen demand at 20 °C.
2. During periods flushing effluent discharge, samples shall be collected during the first hour of the discharge.
3. See Attachment A for list of Semi-Volatile Organic Compounds (SVOCs) to be sampled.
4. Not applicable, dependent upon test performed.

B. Results of all analyses shall be reported in the appropriate annual monitoring report. All analyses shall be accompanied by the chain of custody, including but not limited to data and time of sampling, sample identification, name of person who performed the sampling, date of analysis, name of person who performed the analysis, QA/QC data, method detection limits, analytical methods, copy of laboratory certification, and a perjury statement executed by the person responsible for the laboratory.

VII. Record-Keeping and Inspection Requirements

A. The Discharger is required to inspect all storm water diversion devices, runoff diversion structures, and devices channeling contaminated storm water after every storm event. Any deficiency shall be corrected as soon as possible.

B. The Discharger must conduct wet season (October 1 through April 30) observations of all storm water locations in the racetrack area during the first hour of the first storm event of the wet season that produces significant storm water discharge (continuous discharge of storm water for one hour or more) to observe the presence of floating and suspended materials, discolorations, turbidity, odor, etc.

C. The Discharger must maintain on-site for a period of 5 years from the date they are created all records required by this MRP to include:

1. Records documenting all inspections;
2. Rainfall records;

3. Records documenting any actions taken to correct deficiencies found during inspections of facilities; and
4. Records of the date, time, and estimated volume of any overflow to surface waters.

ATTACHMENT A – MINIMUM LEVELS

The Minimum Levels (MLs) in this appendix are for use in reporting and compliance determination purposes in accordance with Section 2.4 of the State Implementation Policy. These MLs were derived from data for priority pollutants provided by State certified analytical laboratories in 1997 and 1998. These MLs shall be used until new values are adopted by the SWRCB and become effective. The following table present MLs for semi-volatile substances (SVOCs).

TABLE 2B – SEMI-VOLATILE SUBSTANCES*	GC	GCMS	LC	COLOR
Benzo (a) Anthracene	10	5		
1,2-Dichlorobenzene	2	2		
1,2-Diphenylhydrazine		1		
1,2,4-Trichlorobenzene	1	5		
1,3- Dichlorobenzene	2	1		
1,4- Dichlorobenzene	2	1		
2-Chlorophenol	2	5		
2,4-Dichlorophenol	1	5		
2,4-Dimethylphenol	2	2		
2,4- Dinitrophenol	5	5		
2,4-Dinitrotoluene	10	5		
2,4,6-Trichorophenol	10	10		
2,6- Dinitrotoluene		5		
2-Nitrophenol		10		
2-Chloroethyl vinyl ether	1	1		
2-Chloronapthalene		10		
3,3'- Dichlorobenzidine		5		
Benzo (b) Fluoranthene		10	10	
3-Methyl-Chlorophenol	5	1		
4,6-Dinitro-2-methylphenol	10	5		
4- Nitrophenol	5	10		
4-Bromophenyl Phenyl Ether	10	5		
4-Chlorophenyl Phenyl Ether		5		
Acenaphthene	1	1	0.5	
Acenaphthylene		10	0.2	
Anthracene		10	2	
Benzidine		5		
Benzo (a) Pyrene		10	2	
Benzo (g,h,i) Perylene		5	0.1	
Benzo (k) Fluoranthene		10	2	
Bis (2-Chloroethoxyl) Methane		5		
Bis (2-Chloroethyl) Ether	10	1		
Bis (2-Chloroisopropyl) Ether	10	2		
Bis (2-Ethylhexyl) Phthalate	10	5		
Butyl Benzyl Phthalate	10	10		

TABLE 2B – SEMI-VOLATILE SUBSTANCES*	GC	GCMS	LC	COLOR
Chrysene		10	5	
Di-n-Butyl Phthalate		10		
Di-n-Octyl Phthalate		10		
Dibenzo (a,h) Anthracene		10	0.1	
Diethyl Phthalate	10	2		
Dimethyl Phthalate	10	2		
Fluoranthene	10	1	0.05	
Fluorene		10	0.1	
Hexachlorocyclopentadiene	5	5		
Hexachlorobenzene	5	1		
Hexachlorobutadiene	5	1		
Hexachloroethane	5	10		
Indeno (1,2,3-cd) Pyrene		10	0.05	
Isophorone	10	1		
N-Nitrosodiphenylamine	10	1		
N-Nitrosodimethylamine	10	5		
N-Nitrosodi-n-Propylamine	10	5		
Naphthalene	10	1	0.2	
Nitrobenzene	10	1		
Pentachlorophenol	1	5		
Phenanthrene		5	0.05	
Phenol**	1	1		50
Pyrene		10	0.05	

* With the exception of phenol by colorimetric technique, the normal method-specific factor for these substances is 1,000; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance multiplied by 1,000.

** Phenol by colorimetric technique has a factor of 1

Techniques:
GC – Gas Chromatography
GCMS – Gas Chromatography/Mass Spectrometry
LC – High Pressure Liquid Chromatography
COLOR - Colorimetric

ATTACHMENT B

ANALYTICAL METHODS FOR MONITORING

# COMPOUND	POLLUTANT ID	TOXIC POLLUTANT	EPA ANALYTICAL METHOD [1]
45	34586	2-Chlorophenol	604, 625, 8041, 8270C
46	34601	2,4-Dichlorophenol	604, 625, 8041, 8270C
47	34606	2,4-Dimethylphenol	604, 625, 8041, 8270C
48	34452	2-Methyl-4,6-Dinitrophenol	604, 625, 8041, 8270C
49	34616	2,4- Dinitrophenol	604, 625, 8041, 8270C
50	34591	2-Nitrophenol	604, 625, 8041, 8270C
51	34646	4- Nitrophenol	604, 625, 8041, 8270C
52		3-Methyl-4-Chlorophenol	604, 625, 8041, 8270C
53	39032	Pentachlorophenol	604, 625, 8041, 8270C
54	34694	Phenol	604, 625, 8041, 8270C
55	34624	2,4,6-Tricholophenol	604, 625, 8041, 8270C
56	34205	Acenaphthene	610, 625, 8100, 8270C
57	34200	Acenaphthylene	610, 625, 8100, 8270C
58	34220	Anthracene	610, 625, 8100, 8270C
59	39120	Benzidine	625, 8270C
60	34526	Benzo (a) Anthracene	610, 625, 8100, 8270C
61	34247	Benzo (a) Pyrene	610, 625, 8100, 8270C
62	34230	Benzo (b) Fluoranthene	610, 625, 8100, 8270C
63	34521	Benzo (g,h,i) Perylene	610, 625, 8100, 8270C
64	34242	Benzo (k) Fluoranthene	610, 625, 8100, 8270C
65	34278	Bis (2-Chloroethoxy) Methane	611, 625, 8270C
66	34283	Bis (2-Chloroethyl) Ether	611, 625, 8111, 8270C
67	34273	Bis (2-Chloroisopropyl) Ether	611, 625, 8111, 8270C
68	39100	Bis (2-Ethylhexyl) Phthalate	606, 625, 8061A, 8270C
69	34636	4-Bromophenyl Phenyl Ether	611, 625, 8111, 8270C
70	34292	Butylbenzyl Phthalate	606, 625, 8061A, 8270C
71	34581	2-Chloronapthalene	612, 625, 8100, 8270C
72	34641	4-Chlorophenyl Phenyl Ether	611, 625, 8111, 8270C
73	34320	Chrysene	610, 625, 8100, 8270C
74	34556	Dibenzo (a,h) Anthracene	610, 625, 8100, 8270C
75	34536	1,2-Dichlorobenzene	601, 602, 612, 624, 625, 8021B, 8270C
76	34566	1,3- Dichlorobenzene	601, 602, 612, 624, 625, 8021B, 8270C
77	34571	1,4- Dichlorobenzene	601, 602, 612, 624, 625, 8021B, 8270C
78	34631	3,3'- Dichlorobenzidine	625, 8270C
79	34336	Diethyl Phthalate	606, 625, 8061A, 8270C
80	34341	Dimethyl Phthalate	606, 625, 8061A, 8270C

# COMPOUND	POLLUTANT ID	TOXIC POLLUTANT	EPA ANALYTICAL METHOD [1]
81	34596	Di-n-Octyl Phthalate	606, 625, 8061A, 8270C
82	34611	2,4-Dinitrotoluene	609, 625, 8091, 8270C
83	34626	2,6- Dinitrotoluene	609, 625, 8091, 8270C
84	39110	Di-n-Butyl Phthalate	606, 625, 8061A, 8270C
85	34346	1,2-Diphenylhydrazine	625, 8270C
86	34376	Fluoranthene	610, 625, 8100, 8270C
87	34381	Fluorene	610, 625, 8100, 8270C
88	39700	Hexachlorobenzene	612, 625, 8120A, 8270C
89	39702	Hexachlorobutadiene	612, 625, 8120A, 8270C
90	34386	Hexachlorocyclopentadiene	612, 8120A, 8270C
91	34396	Hexachloroethane	616, 625, 8120A, 8270C
92	34403	Indeno (1,2,3-cd) Pyrene	610, 625, 8100, 8270C
93	34408	Isophorone	609, 625, 8270C
94	34696	Naphthalene	610, 625, 8100, 8270C
95	34447	Nitrobenzene	609, 625, 8091, 8270C
96	34438	N-Nitrosodimethylamine	607, 625, 8070A, 9270C
97	34428	N-Nitrosodi-n-Propylamine	607, 625, 8070A, 9270C
98	34433	N-Nitrosodiphenylamine	607, 8070A, 9270C
99	34461	Phenanthrene	610, 625, 8100, 8270C
100	34469	Pyrene	610, 625, 8100, 8270C
101	34551	1,2,4-Trichlorobenzene	612, 625, 8120A, 8270C

1 Analytical Method selected must be capable of achieving an ML that is lower than the lowest criterion for the pollutant, as shown on Attachment B.

2 You shall report for each congener the analytical results of the effluent monitoring, including the quantifiable limit and the MDL, and the measured or estimated concentration. In addition you shall multiply each measured or estimated congener concentration by its respective TEF value above and report the sum of these values.

Discharger:	
Contact Name:	
Phone Number:	
Compliance File CI #	

Name of Laboratory:	
Laboratory Contact:	
Phone Number:	

Name of Constituent	Date Sample Collected	Date Sample Analyzed	USEPA Method Used	Analytical Results (ug/L)	Detected? 1=yes 0=no	ML (ug/L)	MDL (ug/L)	RDL (ug/L)	Source	Location	Outfall Name (for Effluent Only)	Outlier? 1=yes 0=no	Comments
MISCELLANEOUS POLLUTANTS													
Flow													
Temperature													
pH													
BOD @ 20 C													
Oil and Grease													
Fecal Coliform													
Enterococcus													
Total Coliform													
Phosphorous													
Nitrate + Nitrite as N													
Ammonia													
Total dissolved solids													
Total suspended solids													
Settleable solids													
Total Phenolics													
Oil and Grease													
Total Magnesium													
MBAS													
Dimethylacetamide													
Polydimethylacetamide													
SEMI_VOLATILE POLLUTANTS													
Benzo (a) Anthracene													
1,2-Dichlorobenzene													
1,2-Diphenylhydrazine													
1,2,4-Trichlorobenzene													
1,3- Dichlorobenzene													
1,4- Dichlorobenzene													
2-Chlorophenol													
2,4-Dichlorophenol													
2,4-Dimethylphenol													
2,4- Dinitrophenol													
2,4-Dinitrotoluene													
2,4,6-Trichorophenol													
2,6- Dinitrotoluene													
2-Nitrophenol													
2-Chloroethyl vinyl ether													
2-Chloronapthalene													
3,3'- Dichlorobenzidine													
Benzo (b) Fluoranthene													
3-Methyl-Chlorophenol													
4,6-Dinitro-2-methylphenol													
4- Nitrophenol													
4-Bromophenyl Phenyl Ether													
4-Chlorophenyl Phenyl Ether													
Acenaphthene													
Acenaphthylene													
Anthracene													
Benzidine													

Name of Constituent	Date Sample Collected	Date Sample Analyzed	USEPA Method Used	Analytical Results (ug/L)	Detected? 1=yes 0=no	ML (ug/L)	MDL (ug/L)	RDL (ug/L)	Source	Location	Outfall Name (for Effluent Only)	Outlier? 1=yes 0=no	Comments
Benzo (a) Pyrene													
Benzo (g,h,i) Perylene													
Benzo (k) Fluoranthene													
Bis (2-Chloroethoxyl) Methane													
Bis (2-Chloroethyl) Ether													
Bis (2-Chloroisopropyl) Ether													
Bis (2-Ethylhexyl) Phthalate													
Butyl Benzyl Phthalate													
Chrysene													
Di-n-Butyl Phthalate													
Di-n-Octyl Phthalate													
Dibenzo (a,h) Anthracene													
Diethyl Phthalate													
Dimethyl Phthalate													
Fluoranthene													
Fluorene													
Hexachlorocyclopentadiene													
Hexachlorobenzene													
Hexachlorobutadiene													
Hexachloroethane													
Indeno (1,2,3-cd) Pyrene													
Isophorone													
N-Nitrosodiphenylamine													
N-Nitrosodimethylamine													
N-Nitrosodi-n-Propylamine													
Naphthalene													
Nitrobenzene													
Pentachlorophenol													
Phenanthrene													
Phenol**													
Pyrene													

ATTACHMENT D

APPROVED TESTS – CHRONIC TOXICITY

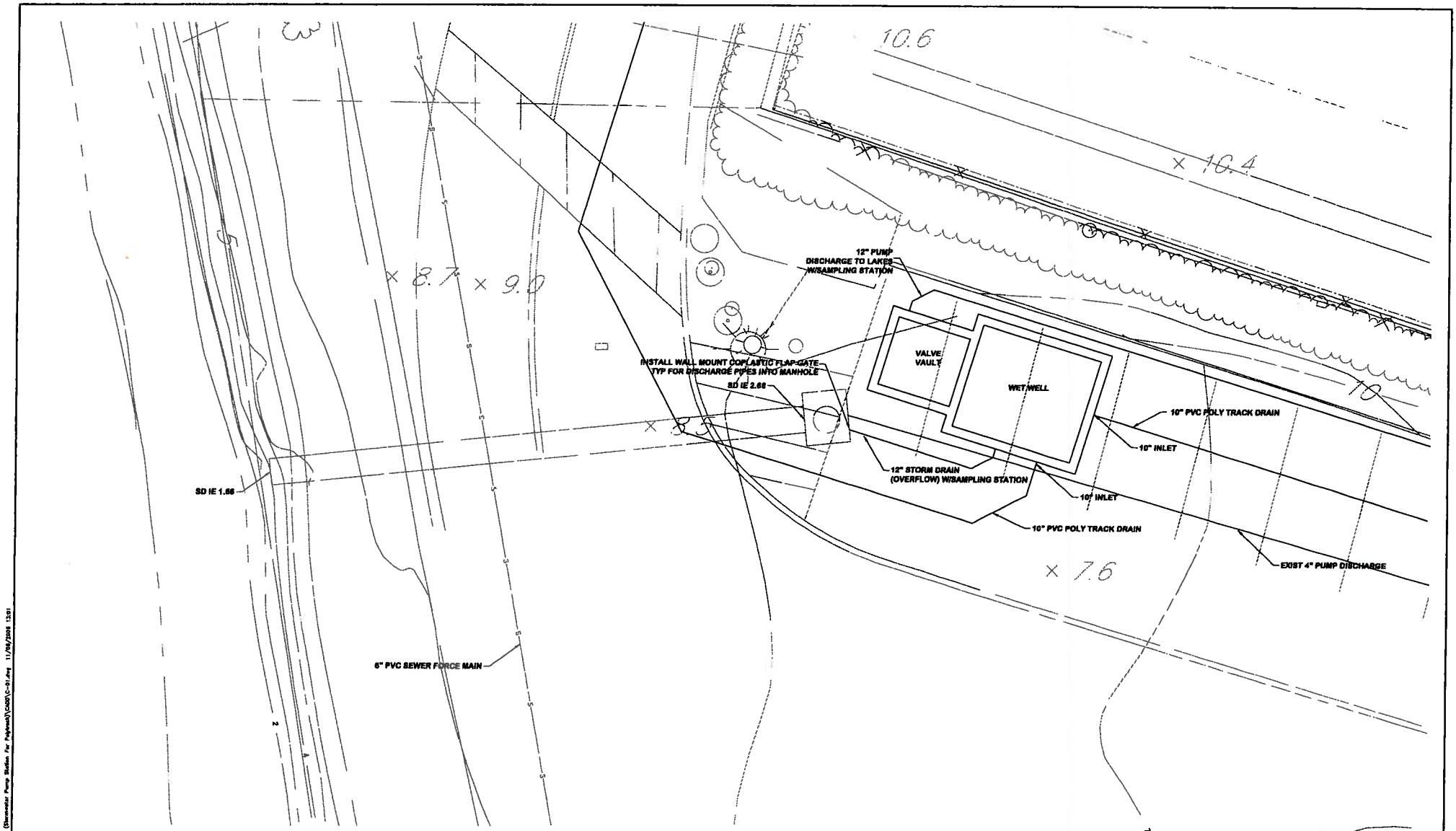
SPECIES	EFFECT	TIER	REFERENCE
giant kelp, *Macrocystis pyrifera*	percent germination; germ tube length	1	1,3
red abalone, *Haliotis rufescens*	Abnormal shell development	1	1,3
oyster, *Crassostrea gigas*; mussels, *Mytilus spp.*	Abnormal shell development; percent survival	1	1,3
urchin, *Strongylocentrotus purpuratus*; sand dollar, *Dendraster excentricus*	Percent normal development	1	1,3
urchin, *Strongylocentrotus purpuratus*; sand dollar, *Dendraster excentricus*	Percent fertilization	1	1,3
shrimp, *Holmesimysis costata*	Percent survival; growth	1	1,3
shrimp, *Mysidopsis bahia*	Percent survival; growth; fecundity	2	2,4
topsmelt, *Atherinops affinis*	Larval growth rate; percent survival	1	1,3
Silversides, *Menidia beryllina*	Larval growth rate; percent survival	2	2,4

The first tier test methods are the preferred toxicity tests for compliance monitoring. A Regional Board can approve the use of a second tier test method for waste discharges if first tier organisms are not available.

Protocol References

1. Chapman, G.A., D.L. Denton, and J.M. Lazorchak. 1995. Short-term methods for estimating the chronic toxicity of effluents and receiving waters to west coast marine and estuarine organisms. U.S. EPA Report No. EPA/600/R-95/136.
2. Klemm, D.J., G.E. Morrison, T.J. Norberg-King, W.J. Peltier, and M.A. Heber. 1994. Short-term methods for estimating the chronic toxicity of effluents and receiving water to marine and estuarine organisms. U.S. EPA Report No. EPA-600-4-91-003.
3. SWRCB 1996. Procedures Manual for Conducting Toxicity Tests Developed by the Marine Bioassay Project. 96-1WQ.
4. Weber, C.I., W.B. Horning, I.I., D.J. Klemm, T.W. Nieheisel, P.A. Lewis, E.L. Robinson, J. Menkedick and F. Kessler (eds). 1988. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms. EPA/600/4-87/028. National Information Service, Springfield, VA.

Source: State Water Resources Control Board (SWRCB). Water Quality Control Plan Ocean Waters Of California, 2005.



PRELIMINARY

NO.	DESCRIPTION	DATE	APPROVED

DESIGNED BY: XXX
DRAWN BY: XXX
CHECKED BY: XXX

Infrastructure
14271 Danielson Street
Poway, California 92064
T 858.413.2400 F 858.413.2440
www.iecorporation.com

MO/DY/YR

DEL MAR THOROUGHBRED CLUB
DEL MAR
P.O. BOX 700
DEL MAR CA 92014

POLY TRACK STORM WATER PUMP STATION

SITE PLAN

DRAWING NO. C-1
SHEET NO. XX OF X
CLIENT JOB NO. XXXXX

ATTACHMENT F

WATER QUALITY OBJECTIVES

Designated beneficial uses for San Dieguito River as identified in the Basin Plan:

- REC 1 Contact Water Recreation
- REC 2 Non- Contact Water Recreation
- WARM Warm Freshwater Habitat
- COLD Cold Freshwater Habitat
- WILD Wildlife Habitat
- SPWN Spawning, Reproduction, and/or Early Development

Potential Beneficial Uses as identified in the Basin Plan:

- AGR Agricultural Supply
- IND Industrial Service Supply

POLLUTANT	WATER QUALITY OBJECTIVE	SOURCE
pH	6.5 – 8.5 pH units	Basin Plan [1]
BOD_5 @ 20°C	30 mg/L	USEPA MSGP [2]
Oil and Grease	15 mg/L	USEPA MSGP
Fecal Coliform	400 MPN/100 ml	Ocean Plan [3]
Enterococcus	104 MPN/100 ml	Ocean Plan
Total Coliform	10,000 MPN/100 ml	Ocean Plan
Phosphorous	2 mg/l	USEPA MSGP
Nitrate + Nitrite as N	0.68 mg/l	USEPA MSGP
Ammonia as N	10:1 ratio N:P	Basin Plan
Total dissolved solids	500 mg/l	Basin Plan
Total suspended solids	100 mg/l	USEPA MSGP
Settleable solids		
SVOCs		
Total Phenolics		
Total Magnesium		
MBAS [4]	0.5 mg/l	Basin Plan
Dimethylacetamide		
Polydimethylacetamide		

1 San Diego Regional Water Quality Control Board. Water Quality Control Plan for the San Diego Basin. September 8, 1994.

2 US Environmental Protection Agency, Multi-Sector General Permit for Industrial Activities. 65 FR 64746, October 30, 2000.

3 State Water Resources Control Board. California Ocean Plan: Water Quality Control Plan for Ocean Waters of California. February 14, 2006.

4 Methylene blue activated substances

ATTACHMENT 2

CITY OF DEL MAR SUSMP

CITY OF DEL MAR SUSMP

Standard Urban Stormwater Mitigation Plan
Requirements for Development Applications

January 14, 2011

Visit www.delmar.ca.us for updates.

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Figures

Tables

Checklists

Glossary

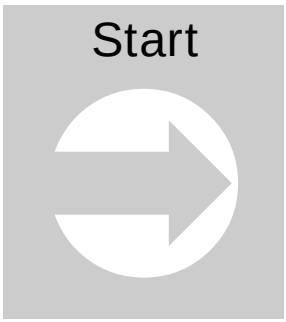
Best Management Practice (BMP)	Any procedure or device designed to minimize the quantity of pollutants that enter the storm drain system.
California Association of Stormwater Quality Agencies (CASQA)	Publisher of the California Stormwater Best Management Practices Handbooks, available at www.cabmphandbooks.com. 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 municipality 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).
Copermittee	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.
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).
Direct Infiltration	Infiltration via methods or devices, such as dry wells or infiltration trenches, designed to bypass unsaturated surface soils and transmit runoff directly to groundwater.
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 City of Del Mar.
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 Regional Plan implemented by the City 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.
Interim Hydromodification Criteria	Pursuant to NPDES permit Provision D.1.d.g.(6), the Copermittees prepared Interim Hydromodification Management criteria, which apply to projects disturbing 50 acres or more. The criteria are described in Chapter 2 and in memoranda on the Project Clean Water website.
Jurisdictional Urban Runoff Management Plan (JURMP)	A written description of the specific jurisdictional urban runoff management measures and programs that the City implements to comply with the stormwater NPDES 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."
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 San Diego RWQCB's stormwater NPDES permit.

Operation and Maintenance (O&M)	Refers to requirements in the Stormwater NPDES Permit to inspect treatment BMPs and implement preventative and corrective maintenance in perpetuity. See Chapter Five.
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 NPDES Permit Provision D.1.d.(1). See Chapter One.
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 municipality in connection with an application for development approval and demonstrating compliance with Stormwater NPDES Permit requirements for the project. Specific requirements vary from municipality to municipality.
Proprietary	A proprietary device is one marketed under legal right of the manufacturer.
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.
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 (Regional Water Board or 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	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 Regional Water Board in identifying development sites subject to regulation under the NPDES 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 stormwater NPDES permit mandate to control pollutants from new development and redevelopment. Each discharger will adapt this model countywide 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.



How to Use the SUSMP

Review Chapters 1 and 2 to get a general understanding of the requirements. Then follow step-by-step instructions in Chapter 3 to prepare your Project Submittal.

This *Standard Urban Stormwater Mitigation Plan (SUSMP)* will help you ensure your project complies with the City's requirements. Most applicants will require the assistance of a qualified civil engineer, architect, and/or landscape architect. Because every project is different, you should begin by checking specific requirements with City staff.

To use the *SUSMP,* start by reviewing Chapter One to find out whether and how stormwater quality requirements apply to your project. Chapter One also provides an overview of the process of planning, design, construction, operation, and maintenance leading to compliance.

If there are terms and issues you find puzzling, try finding answers in the glossary or in Chapter Two. Chapter Two provides background on key stormwater concepts and water quality regulations, including design criteria.

Then proceed to Chapter Three and follow the step-by-step guidance to prepare a Project Submittal for your site.

Chapter Four, the Low Impact Development Design Guide, includes design procedures, calculation procedures, and instructions for presenting your design and calculations in your Project Submittal.

In Chapter Five you'll find a detailed description of the process for ensuring operation and maintenance of your stormwater facilities over the life of the project. The chapter includes step-by-step instructions for preparing a Stormwater Facilities Operation and Maintenance Plan.

Throughout each Chapter, you'll find references and resources to help you understand the regulations, complete your Project Submittal, and design stormwater control measures for your project.

► PLAN AHEAD TO AVOID THE THREE MOST COMMON MISTAKES

Construction-Phase Controls

Your Project Submittal for SUSMP compliance is a separate document from the Storm Water Pollution Prevention Plan (SWPPP). A SWPPP provides for temporary measures to control sediment and other pollutants during construction at sites that disturb one acre or more. See the Construction Handbook at www.cabmphandbooks.org for more information on SWPPPs.

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. You should think about your strategy for stormwater quality compliance before completing a conceptual site design or sketching a layout of subdivision lots (Chapter 3).

2. Assuming proprietary stormwater treatment facilities will be adequate for compliance. Most aren't (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 your municipality (Chapter 5).

Chapter

1

Policies and Procedures

Determine if your development project must comply with stormwater quality requirements, and review the steps to compliance.

A Low Impact Development Design Procedure

The San Diego Regional Water Board reissued a municipal stormwater NPDES permit to the municipal Copermittees in January 2007. The permit updates and expands stormwater requirements for new developments and redevelopments. Stormwater treatment requirements have been made more stringent, minimum standards for Low Impact Development (LID) have been added, and the Copermittees are required to develop and implement criteria for the control of runoff peaks and durations from development sites.

To assist the land development community, streamline project reviews, and maximize cost-effective environmental benefits, the Copermittees have developed 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, applicants can develop a single integrated design which complies with the complex and overlapping NPDES permit LID requirements, stormwater treatment requirements, and flow-control (hydromodification management) requirements.

The design approach is detailed in Chapter 4. General instructions for preparing a complete Project Submittal are in Chapter 3, and specific submittal requirements are available from municipal staff.

Applicants may choose not to use this design procedure, in which case they will need to demonstrate, in their submittal, compliance with applicable LID criteria, stormwater treatment criteria, and flow-control criteria. These criteria are described in Chapter 2 and in the NPDES 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.
- 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.

Municipal staff may also require additional controls appropriate to the project, which may include stormwater treatment controls. LID treatment controls such as infiltration or bioretention are preferred. See "Selection of Stormwater Treatment Facilities" on page 31. If treatment facilities are included, provisions must be made to ensure their long-term maintenance.

Priority Development Projects

The NPDES permit requires that more specific runoff treatment controls be incorporated into Priority Development Projects.

► NEW DEVELOPMENT

Projects on previously undeveloped land are Priority Development Projects if they are in one or more of the categories listed in Table 1-1. If a 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. To use the table, review each definition A through J. If any of the definitions match, 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.

► 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 also are in one of the categories listed in Table 1-1.

TABLE 1-1. Priority Development Projects.

			Is the project or any element of the project in any of these categories?
Yes ❑	No ❑	A	**Housing subdivisions of 10 or more dwelling units.** Examples: single-family homes, multi-family homes, condominiums, and apartments.
Yes ❑	No ❑	B	**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.
Yes ❑	No ❑	C	**Heavy industry—greater than one acre.** Examples: manufacturing plants, food processing plants, metal working facilities, printing plants, and fleet storage areas (bus, truck, etc.).
Yes ❑	No ❑	D	**Automotive repair shops.** A facility categorized in any one of Standard Industrial Classification (SIC) codes 5013, 5014, 5541, 7532-7534, or 7536-7539.
Yes ❑	No ❑	E	**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 [project footprint] 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.
Yes ❑	No ❑	F	**Hillside development greater than 5,000 square feet.** Any development that creates 5,000 square feet of impervious surface and 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.
Yes ❑	No ❑	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.
Yes ❑	No ❑	H	**Parking lots 5,000 square feet or more** or with 15 or more parking spaces and potentially exposed to urban runoff.
Yes ❑	No ❑	I	**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.
Yes ❑	No ❑	J	**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.

The "50% Rule" for previously developed projects. 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.

Redevelopment projects 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, pedestrian ramps, or bike lanes on existing roads, and routine replacement of damaged pavement such as pothole repair are not subject to treatment requirements. However, other requirements, including incorporation of appropriate source controls, still apply. If your project is exempt, the project is still obligated to meet the Requirements for All Development Projects outlined in the previous section.

► POLLUTANT GENERATING PROJECTS WHICH DISTRUB 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. In most cases linear pathway projects that are for infrequent vehicle use (such as emergency or maintenance access) or for pedestrian or bicycle 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.

Compliance Process at a Glance

For development project approval, stormwater compliance follows these general steps:

1. Discuss requirements during a pre-application meeting with municipal staff.
2. Review the instructions in this SUSMP before you prepare your tentative map, preliminary site plan, drainage plan, and landscaping plan.
3. Prepare your Project Submittal, which is made with your application for development approvals (entitlements).
4. Create your detailed project design, incorporating the features described in your Project Submittal.
5. In a table on your 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 (O + M) Plan for approval.

7. Maintain stormwater facilities during construction and following construction in accordance with required warranties.

8. When applicable, following construction, formally transfer responsibility for maintenance to the owner.

9. The owner must maintain the facilities in accordance with the O + M Plan.

10. 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 review of your project. Instructions for preparing your Project Submittal are in Chapter 3.

Phased Projects

When determining whether SUSMP requirements apply, a "project" should be defined consistent with California Environmental Quality Act (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.

CEQA
Preparers of CEQA documents may wish to visit the Project Clean Water website for guidanSketch conceptuBegin with general project requirements and program studies and Environmental Impact Reports.

Municipal staff may require, as part of an application for approval of a phased development project, 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 discretionary approvals.

New Subdivisions

If a tentative map approval would potentially entitle future owners to construct new or replaced impervious area which, in aggregate, could exceed one of the SUSMP thresholds (Table 1-1), then the applicant must take steps to ensure SUSMP requirements can and will be implemented as the subdivision is built out.

If the tentative map application does not include plans for site improvements, the applicant should nevertheless identify the type, size, location, and final ownership of stormwater treatment and flow-control facilities adequate to serve common private roadways and any other common areas, and to also manage runoff from an expected reasonable estimate of the square footage of future roofs, driveways, and other impervious surfaces on each individual lot. The City may condition approval of the map on implementation of stormwater treatment and other SUSMP measures when construction occurs on the individual lots. At the City's discretion, this condition may be enforced by a grant deed of development rights or by a development agreement.

If the City deems it necessary, the future impervious area of one or more lots may be limited by a deed restriction. This might be necessary when a project is exempted from one or all SUSMP provisions because the total impervious area is below a threshold, or to ensure runoff from impervious areas added after the project is approved does not overload a stormwater treatment and flow-control facility.

The City may require subdivision maps to dedicate an "open space easement, as defined by Government Code Section 51075," to suitably restrict the future building of structures at each stormwater facility location if necessary.

In general, in new subdivisions stormwater treatment, infiltration, or flow-control facilities should not be located on individual single-family residential lots, particularly when those facilities manage runoff from other lots, from streets, or from common areas. A better alternative is to locate stormwater facilities on one or more separate, jointly owned parcels.

After consulting with the Planning Department, applicants for subdivision approvals will propose one of the following four options, depending on project characteristics:

1. Show the number of parcels and the total impervious area to be created on all parcels could not, in the future, exceed any of the thresholds in Table 1-1.

2. Show that, for each and every lot, the intended use can be achieved with a design which disperses runoff from roofs, driveways, streets, and other impervious areas to self-retaining pervious areas, using the criteria in Chapter 4.

3. Prepare improvement plans showing drainage to treatment and/or flow-control facilities designed in accordance with this SUSMP, and commit to constructing the facilities prior to transferring the lots.

4. Prepare improvement plans showing drainage to treatment and/or flow-control facilities designed in accordance with this SUSMP, and provide appropriate legal instruments to ensure the proposed facilities will be constructed and maintained by subsequent owners.

For the option selected, municipal staff will determine the appropriate conditions of approval, easements, deed restrictions, or other legal instruments necessary to assure future compliance.

Compliance with Flow-Control Requirements

Priority Development Projects (Table 1-1) must be designed so that runoff rates and durations are controlled to maintain or reduce downstream erosion conditions and protect stream habitat.

► HMP APPLICABILITY REQUIREMENTS

To determine if a proposed project must implement hydromodification controls, refer to the HMP Decision Matrix in Figure 1-1. The HMP Decision Matrix can be used for all projects. For redevelopment projects, flow controls would only be required if the redevelopment project increases impervious area or peak flow rates as compared to pre-project conditions.

It should be noted that all Priority Development Projects will be subject to the Permit's LID and water quality treatment requirements even if hydromodification flow controls are not required.

As noted in Figure 1-1, projects may be exempt from HMP criteria under the following conditions.

- If the project is not a Priority Development Project
- If the proposed project does not increase the impervious area or peak flows to any discharge location.
- If the proposed project discharges runoff directly to an exempt receiving water such as the Pacific Ocean, an exempt river reach, or a tidally-influenced area.
- If the proposed project discharges to a stabilized conveyance system that extends to the Pacific Ocean, a tidally-influenced area, or an exempt river reach.
- If the contributing watershed area to which the project discharges has an impervious area percentage greater than 70 percent
- If an urban infill project discharges to an existing hardened or rehabilitated conveyance system that extends beyond the "domain of analysis," the potential for cumulative impacts in the watershed are low, and the ultimate receiving channel has a Low susceptibility to erosion as defined in the SCCWRP channel assessment tool.

If the proposed project decreases the pre-project impervious area and peak flows to each discharge location, then a flow-duration analysis is implicitly not required. If continuous simulation flow-frequency and flow duration curves were developed for such a scenario, the unmitigated post-project flows and durations would be less as compared to pre-project curves.

Proposed exemptions for projects discharging runoff directly to the Pacific Ocean or to hardened conveyance systems which transport runoff directly to the Pacific Ocean are referred to the 2007 Municipal Permit. Per the Permit, hardened conveyance systems can include existing concrete channels, storm drain systems, etc.

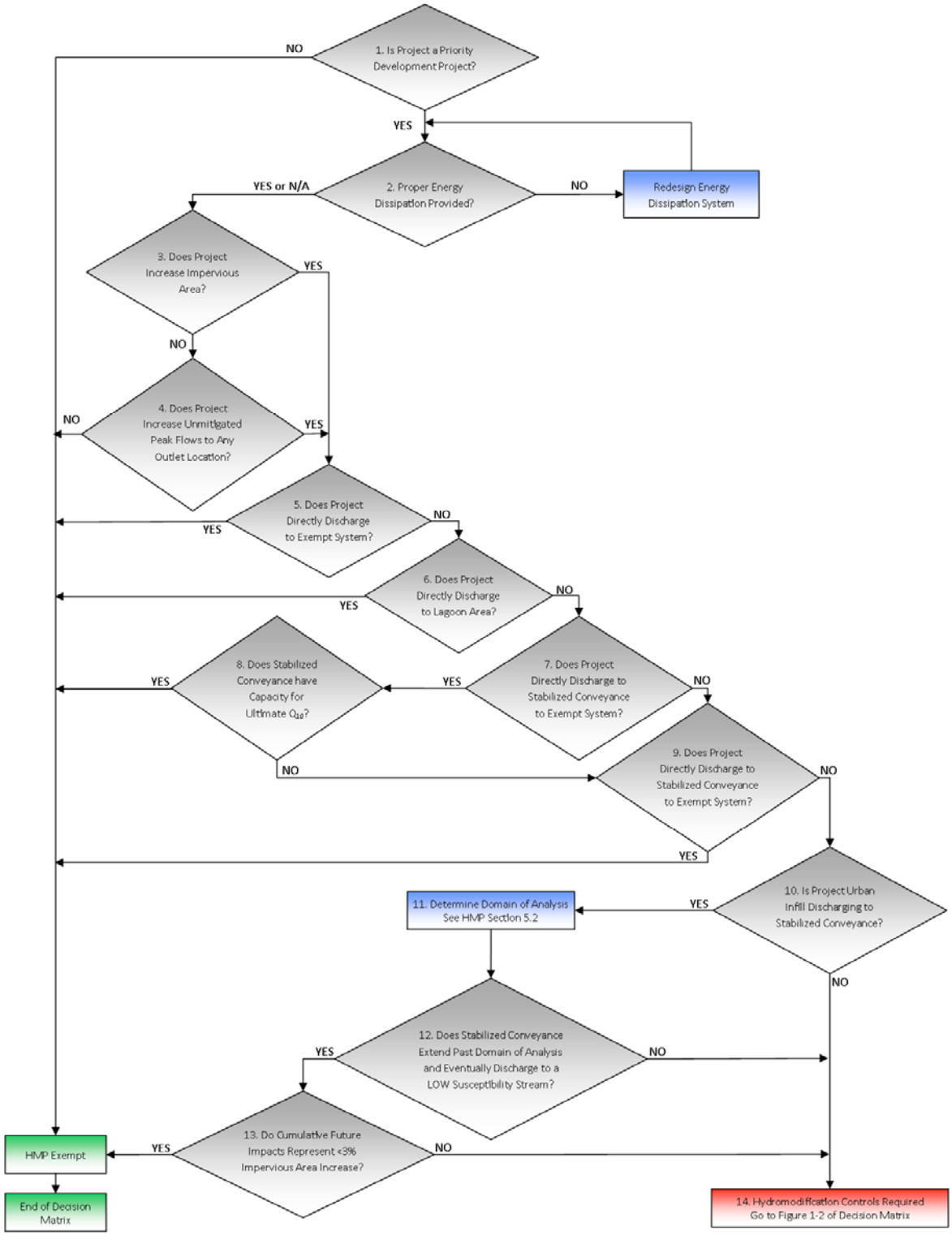


FIGURE 1-1. HMP Applicability Determination

The Municipal Permit also contains language to support exemptions for projects located in highly urbanized areas where the impervious percentage exceeds 70 percent (as calculated for the sub-watershed between the project outfall downstream to the exempt receiving water).

The following are descriptions of the flow diagram nodes in Figure 1-1:

- Figure 1-1, Node 1 – Hydromodification mitigation measures are only required if the proposed project is a Priority Development Project.

- Figure 1-1, Node 2 – Properly designed energy dissipation systems are required for all project outfalls to unlined channels. Such systems should be designed in accordance with the County of San Diego's Drainage Design Manual to ensure downstream channel protection from concentrated outfalls.

- Figure 1-1, Nodes 3 and 4 – Projects may be exempt from hydromodification criteria if the proposed project reduces the pre-project impervious area and if unmitigated post-project outflows (outflows without detention routing) to each outlet location are less as compared to the pre-project condition. The pre and post-project hydrologic analysis should be conducted for the 2 and 10-year design storms and follow single-event methodology set forth in the San Diego County Hydrology Manual. This scenario may apply to redevelopment projects in particular.

- Figure 1-1, Node 5 – Potential exemptions may be granted for projects discharging runoff directly to the Pacific Ocean or the San Dieguito River.

- Figure 1-1, Node 6 – For projects discharging runoff directly to a tidally-influenced lagoon, potential exemptions may also be granted. Regarding the potential exemption, additional analysis would be required to assess the effects of the freshwater / saltwater balance and the resultant effects on lagoon-system biology. This assessment, which would be required by other permitting processes such as the Army Corps of Engineers, California Department of Fish and Game, etc., must be provided by a certified biologist or other specialist as approved by the City of Del Mar. Such discharges would include an energy dissipation system (riprap, etc.) designed to mitigate 100-year outlet velocities based upon a free outfall condition. Such a design would be protective of the channel bed and bank from an erosion standpoint.

- Figure 1-1, Nodes 7 and 8 – For projects discharging runoff directly to a hardened conveyance or rehabilitated stream system that extends to exempt receiving waters detailed in Node 5, potential exemptions from hydromodification criteria may be granted. Such hardened or rehabilitated systems could include existing storm drain systems, existing concrete channels, or stable engineered unlined channels. To qualify for this exemption, the existing hardened or rehabilitated conveyance system must continue uninterrupted to the exempt system. In other words, the hardened or rehabilitated conveyance system cannot discharge to an unlined, non-engineered channel segment prior to discharge to the exempt system. Additionally, the project proponent must demonstrate that the hardened or rehabilitated conveyance system has

capacity to convey the 10-year ultimate condition flow through the conveyance system. The 10-year flow should be calculated based upon single-event hydrologic criteria as detailed in the San Diego County Hydrology Manual.

- Figure 1-1, Node 9 – Projects discharging runoff to a highly urbanized watershed (defined as an existing, pre-project impervious percentage greater than 70 percent) may be eligible for an exemption from hydromodification criteria.

  Watershed impervious area calculations for this potential exemption will be measured between the project site discharge location and the connection to the Pacific Ocean or San Dieguito River. If a tributary area connects with the main line drainage path between the project site and the Pacific Ocean or San Dieguito River, then the entire watershed area contributing to the tributary shall be included in the calculation.

  Percent imperviousness will be calculated based on an area-weighted average of impervious areas associated with commercial, industrial, single-family residential, multi-family residential, open space, and other miscellaneous areas (schools, churches, etc.) representative for the watershed. Representative percent imperviousness values for each land use type may correspond to values recommended in Table 3-1 of the San Diego County Hydrology Manual and detailed below or by more specific representative percent impervious calculations (using GIS, etc.), which are often required to represent impervious area percentages for park, school and church sites.

- Figure 1-1, Nodes 10 through 13 – For urban infill projects discharging runoff to an existing hardened or rehabilitated conveyance system, potential limited exemptions from hydromodification criteria may apply where the existing impervious area percentage in the watershed exceeds 40 percent. For the potential exemption application, the domain of analysis must be determined and the existing hardened or rehabilitated conveyance system must extend beyond the downstream terminus of the domain of analysis. The hardened or rehabilitated conveyance system must discharge to a receiving channel with a Low susceptibility to erosion for this exemption to be granted (channel susceptibility determined using SCCWRP channel assessment tool). Finally, continuous simulation sensitivity analysis shows that an exemption could only be granted if the potential future development impacts in the watershed would increase the watershed's impervious area percentage by less than 3 percent (as compared to the existing condition in the year 2010). If the potential future cumulative impacts in the watershed could increase the impervious area percentage by more than 3 percent (as compared to existing condition), then no exemption could be granted based on this item. Watershed impervious area calculations for this potential exemption, in which a project discharges to a watershed with an existing impervious areas greater than 40 percent, will be measured upstream from the outfall of the urban conveyance system (to a non-crete, non-riprap-lined or non-engineered channel) to the contributing watershed boundary (the entire watershed contributing to the discharge outfall).

  Percent imperviousness will be calculated based on an area-weighted average of impervious areas associated with commercial, industrial, single-family residential, multi-

family residential, open space, and other miscellaneous areas (schools, churches, etc.) representative for the watershed. Representative percent imperviousness values for each land use type may correspond to values recommended in Table 3-1 of the San Diego County Hydrology Manual and detailed below or by more specific representative percent impervious calculations (using GIS, etc.), which are often required to represent impervious area percentages for park, school and church sites.

The final exemption category focuses on small urban infill projects where the potential for future cumulative watershed impacts is minimal.

Urban infill projects may be exempt from HMP criteria if:

1. The potential future development impacts within the sub-watershed, as measured from the entire sub-watershed area draining to the existing conveyance system outfall, would not increase the composite impervious area percentage of the sub-watershed by more than 3 percent

11. The project discharges runoff to an existing hardened or rehabilitated conveyance system (storm drain, concrete channel, or engineered vegetated channel) that extends beyond the Domain of Analysis determined for the project site, and

12. The stabilized conveyance system eventually discharges to a channel with a Low susceptibility to erosion, as designed by the SCCWRP channel assessment tool.

► FLOW CONTROL PERFORMANCE CRITERIA

Figures 1-2 and 1-3, which are part of the HMP Decision Matrix and are presented on the following pages, detail how lower flow thresholds would be determined for a project site. Figures 1-4 and 1-5, which detail the SCCWRP lateral and vertical channel susceptibility requirements, complete the HMP Decision Matrix.

The project applicant must first determine whether field investigations will be conducted pursuant to the SCCWRP channel screening tools. If the screening tools are not completed for a proposed project, then the site must mitigate peak flows and durations based on a pre-project condition lower flow threshold of $0.1Q_2$. While a project applicant would be held to the $0.1Q_2$ standard if channel screening tools and assessments are not conducted, less restrictive standards are possible for more erosion-resistant receiving channel sections if the screening tools are completed and the SCCWRP method indicates either a Medium or Low susceptibility to channel erosion .

In such a scenario, the project applicant would also use the critical shear stress calculator to assist in determination of the predicted lower flow threshold. The SCCWRP screening tools and critical shear stress calculator work in concert to determine the lower flow threshold for a given site. Lower flow limits determined by the calculator have been grouped into one of three thresholds – $0.1Q_2$, $0.3Q_2$ or $0.5Q_2$. "Low" susceptibilities from the SCCWRP tool generally correspond to the $0.5Q_2$ threshold, "Medium" susceptibilities generally correspond to the $0.3Q_2$ threshold, and "High" susceptibilities generally correspond to the $0.1Q_2$ threshold. The

SCCWRP channel screening tools are required to identify channel conditions not considered by the critical shear stress calculator, which focuses on channel material and cross section. Conversely, the SCCWRP channel screening tools considers other channel conditions including channel braiding, mass wasting, and proximity to the erosion threshold. In cases where the critical shear stress calculator and the SCCWRP screening tools return divergent values, then the most conservative value shall be used as the lower flow threshold for the analysis.

Low-Impact Development (LID) and extended detention facilities are required to meet peak flow and duration controls as follows:

1. For flow rates ranging from 10 percent, 30 percent or 50 percent of the pre-project 2-year runoff event ($0.1Q_2$, $0.3Q_2$, or $0.5Q_2$) to the pre-project 10-year runoff event (Q10), the post-project discharge rates and durations shall not deviate above the pre-project rates and durations by more than 10 percent over and more than 10 percent of the length of the flow duration curve. The specific lower flow threshold will depend on results from the SCCWRP channel screening study and the critical flow calculator.

13. For flow rates ranging from the lower flow threshold to Q_5, the post-project peak flows shall not exceed pre-project peak flows. For flow rates from Q_5 to Q_{10}, post-project peak flows may exceed pre-project flows by up to 10 percent for a 1-year frequency interval. For example, post-project flows could exceed pre-project flows by up to 10 percent for the interval from Q_9 to Q_{10} or from $Q_{5.5}$ to $Q_{6.5}$, but not from Q_8 to Q_{10}.

The HMP recommends the use of LID facilities to satisfy both 85th percentile water quality treatment as well as HMP flow control criteria. Detailed standards for LID implementation have been developed and are provided in Chapter 4 of this SUSMP.

The following methods may be used to meet mitigation requirements.

- Install BMPs that meet design requirements to control runoff from new impervious areas. BMPs including bioretention basins, vegetated swales, planter boxes, extended detention basins, etc. shall be designed pursuant to standard sizing and specification criteria detailed in the Chapter 4 and the HMP/LID Sizing Calculator to ensure compliance with hydromodification criteria.

- Use of the automated sizing calculator (San Diego Sizing Calculator) that will allow project applicants to select and size LID treatment devices or flow control basins. The tool uses pre-calculated sizing factors to determine required footprint sizes for flow control BMPs. The Sizing Calculator also includes an automated pond sizing tool to assist in the design of extended detention facilities for mitigation of hydromodification effects. Because of the Sizing Calculator's ease of implementation, and since hydromodification BMPs can also serve as treatment BMPs, project applicants may choose this option instead of seeking compliance through site-specific continuous simulation model preparation.

- Prepare continuous simulation hydrologic models and compare the pre-project and mitigated post-project runoff peaks and durations (with hydromodification flow controls) until compliance to flow control standards can be demonstrated. The project applicant will be required to quantify the long-term pre- and post-project runoff response from the site and establish runoff routing and stage-storage-discharge relationships for the planned flow control devices. Public domain software such as HSPF, HEC-HMS and SWMM can be used for preparation of a continuous simulation hydrologic analysis.

- Points of compliance must be selected to conduct the comparisons of pre-project and post-project flows and durations. Generally, points of compliance are selected at locations along the project boundary where concentrated flows discharge from the project site. If a point of compliance is selected downstream of the project boundary, then the governing municipality should be consulted in advance of the hydromodification analysis. For projects which convey offsite runoff through the site, it is assumed that the offsite runoff would be separated from site runoff. If this is not the case, then the governing municipality should be consulted to further refine the points of compliance for the site (an interior project site point of compliance could be required in such a scenario).

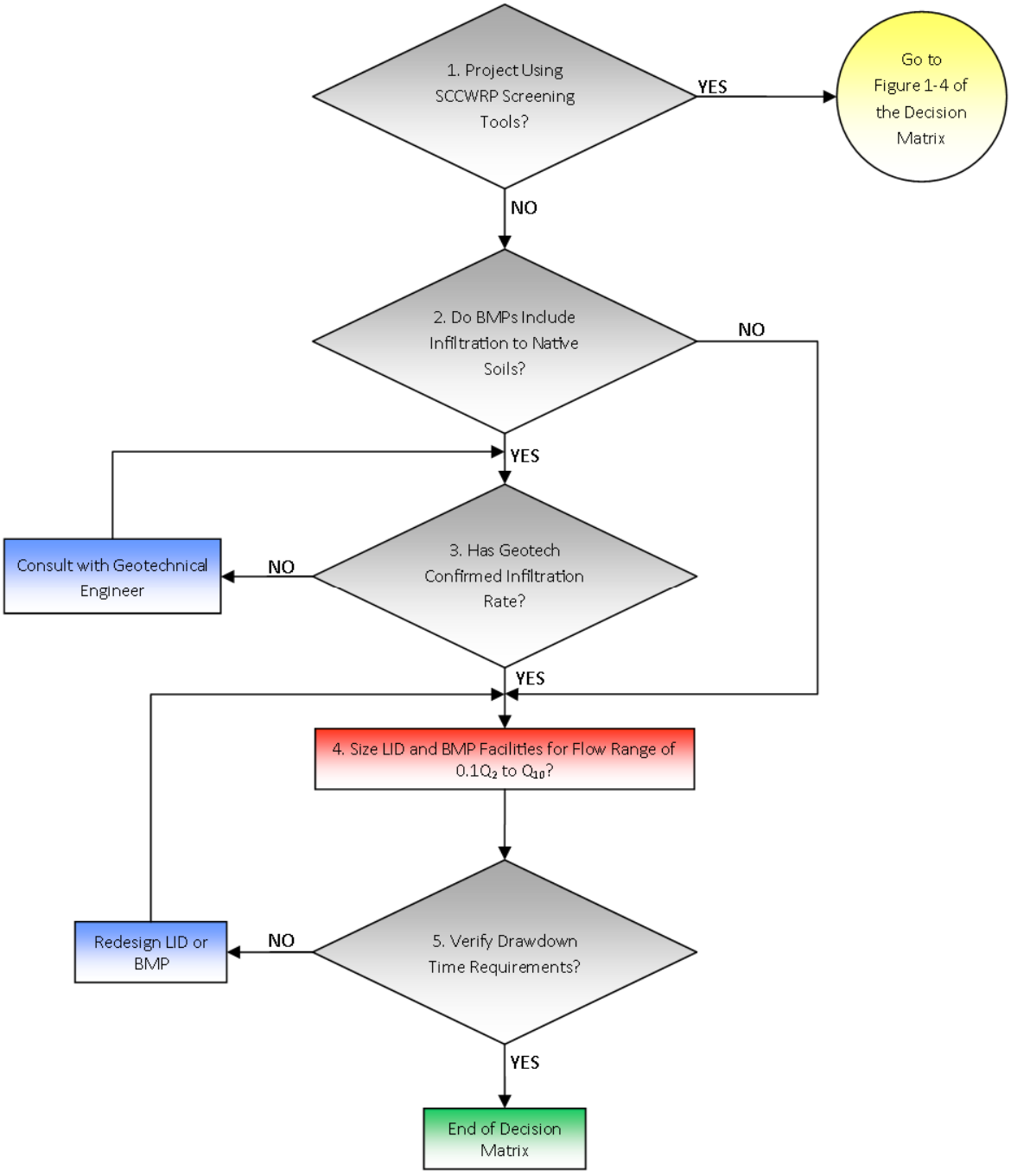


FIGURE 1-2. Mitigation Criteria and Implementation

The following are descriptions of the flow diagram nodes in Figure 1-2:

- Figure 1-2, Node 1 – If the project applicant chooses to complete SCCWRP channel screening tools, then the applicant moves to Figures 1-4 and 1-5 to assess the vertical and lateral susceptibility of the receiving channel systems. Depending on the results of the SCCWRP screening tools and critical flow calculator, it is possible that lower flow thresholds in excess of $0.1Q_2$ may be used. If the project applicant chooses not to complete the SCCWRP channel assessment, then the applicant proceeds with Figure 1-2 of the Decision Matrix.

- Figure 1-2, Node 2 – If the project's LID or BMP approach accounts for the infiltration of runoff to native surrounding soils (below amended soil layers), then consultation with a geotechnical engineer or engineering geologist is required (Node 3). If the project mitigation approach does not account for infiltration of runoff, then the applicant would proceed to Node 4.

- Figure 1-2, Node 3 – A geotechnical engineer should determine the allowable infiltration rates to be used for the design of each LID or BMP facility. The geotechnical assessment should also identify potential portions of the project which are feasible for infiltration of runoff.

- Figure 1-2, Node 4 – In this scenario, the SCCWRP channel assessment was not conducted. Therefore, the project applicant would be held to the $0.1Q_2$ lower flow threshold. LID and extended detention facilities must be sized so that the mitigated post project flows and durations do not exceed pre-project flows and durations for the geomorphically-significant flow range of $0.1Q_2$ to Q_{10}.

- Figure 1-2, Node 5 - The Decision Matrix includes language regarding a drawdown time requirements so that standards set forth by the County's Department of Environmental Health are met. The County's Department of Environmental Health has stated that the drawdown requirement would be applied to underground vaults in addition to extended detention basins and the surface ponding areas of LID facilities. Proper maintenance of hydromodification mitigation facilities is essential to guard against potential vector issues as well potential safety issues resulting from long-term standing water. If mitigation facility outlets clog, then runoff will bypass the system and potentially result in additional erosion problems downstream of a site. The County Department of Environmental Health recently amended its drawdown time requirement to 96 hours.

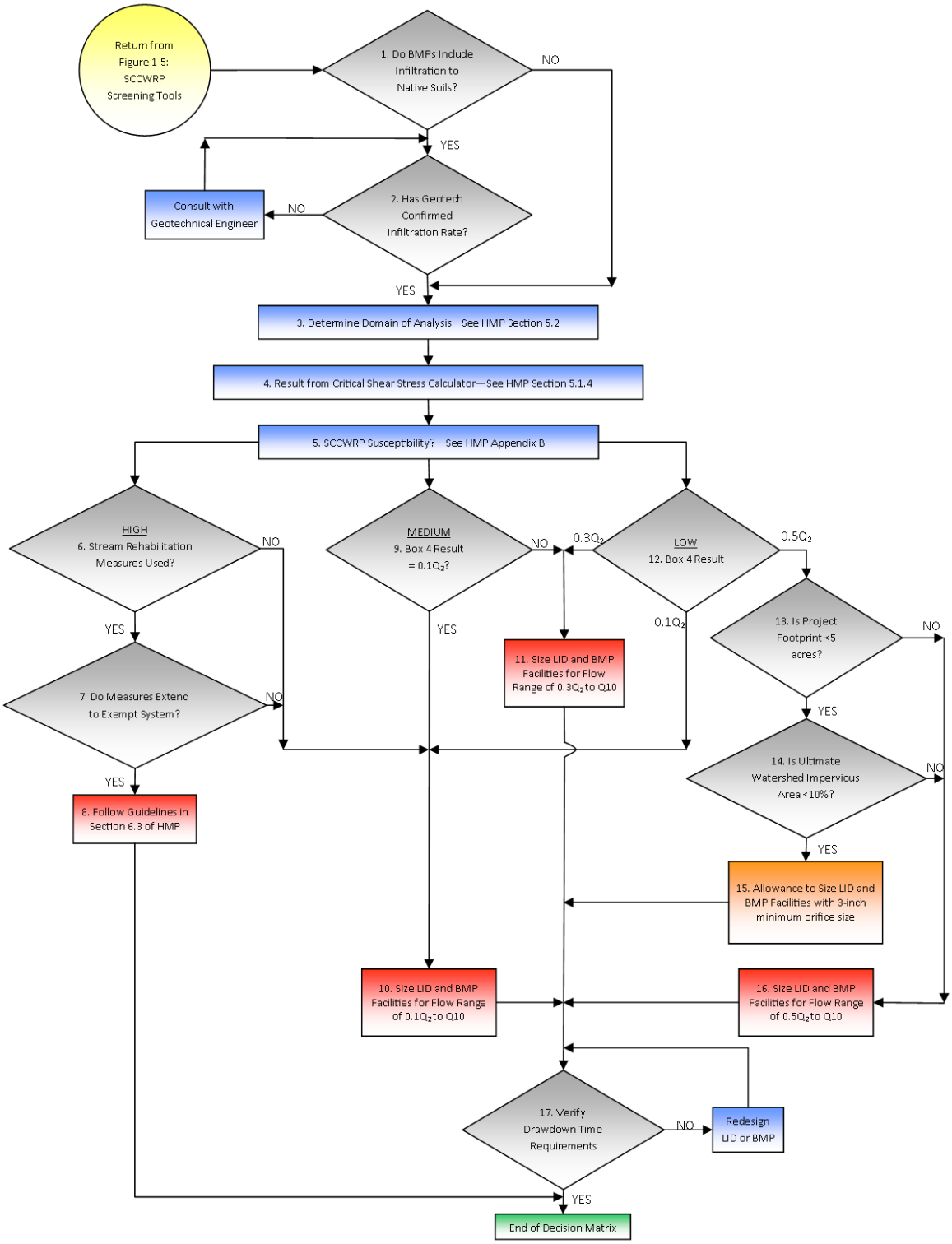


FIGURE 1-3. Mitigation Criteria and Implementation

The following are descriptions of the flow diagram nodes in Figure 1-3:

- Figure 1-3, Node 1 – Use of Figure 1-3 assumes that the project applicant conducted the SCCWRP channel assessment. Node 1 would begin following completion of both the lateral and vertical susceptibility flow charts depicted in Figures 1-4 and 1-5. Node 1 is a decision box asking if the project's LID or BMP approach accounts for the infiltration of runoff to native surrounding soils (below amended soil layers). If the answer is Yes, then consultation with a geotechnical engineer or engineering geologist is required (Node 2). If the project mitigation approach does not account for infiltration of runoff, then the applicant would proceed to Node 3.

- Figure 1-3, Node 2 – A geotechnical engineer or engineering geologist should determine the allowable infiltration rates to be used for the design of each LID or BMP facility. The geotechnical assessment should also identify potential portions of the project which are feasible for infiltration of runoff.

- Figure 1-3, Node 3 – Pursuant to criteria detailed in HMP Section 5.2, the Domain of Analysis is determined downstream and upstream of the project site. This determination is used to ascertain the required reach length for data collection (channel bed and bank material, channel cross section data, etc.) required for the critical flow calculator (see Node 4),

- Figure 1-3, Node 4 – Pursuant to criteria detailed in HMP Section 5.1.4, the project applicant would run the critical shear stress calculator to determine if the recommended critical flow threshold should be $0.1Q_2$, $0.3Q_2$, or $0.5Q_2$. This result will be compared to the result from the SCCWRP screening analysis (Node 5) to determine the final lower flow threshold for the project.

- Figure 1-3, Node 5 – Pursuant to criteria detailed in HMP Appendix B, the project applicant would determine both the lateral and vertical channel susceptibility rating per guidelines set forth by SCCWRP. If the lateral and vertical tools returned divergent results, then the more conservative result would be used. SCCWRP susceptibility ratings include "High," "Medium" and "Low."

- Figure 1-3, Node 6 – A project applicant would arrive at Node 6 if the SCCWRP channel susceptibility rating was determined to be "High." This decision box inquires as to whether stream rehabilitation measures such as grade control and channel widening will be used as a mitigation measure instead of flow control. It should be noted that stream rehabilitation options are only allowed if the existing receiving channel susceptibility is considered to be "High."

- Figure 1-3, Node 7 – Stream rehabilitation measures are only allowed if the proposed mitigation project extends to a downstream exempt system (such as an exempt river system). If the mitigation measure did not extend to an exempt system, then the potential for cumulative watershed impacts would be more pronounced.

- Figure 1-3, Node 8 – If stream rehabilitation measures are allowed, then guidelines outlined in Section 6.3 of the HMP should be followed to design the in-stream mitigation approach.

- Figure 1-3, Node 9 - A project applicant would arrive at Node 9 if the SCCWRP channel susceptibility rating was determined to be "Medium." If the result from the critical shear stress calculator is also "Medium" (or $0.3Q_2$), then the lower flow threshold would be $0.3Q_2$ (Node 11). If the result from the critical shear stress calculator is "High" (or $0.1Q_2$), then the more conservative value would be used and the lower flow threshold would be $0.1Q_2$ (Node 10).

- Figure 1-3, Node 10 – For stream reaches determined by either the critical flow calculator or the SCCWRP screening tools to have a "High" susceptibility to erosion, LID and extended detention flow control facilities should be sized so that the mitigated post project flows and durations do not exceed pre-project flows and durations for the geomorphically-significant flow range of $0.1Q_2$ to Q_{10}.

- Figure 1-3, Node 11 - For stream reaches determined by either the critical flow calculator or the SCCWRP screening tools to have a "Medium" susceptibility to erosion, LID and extended detention flow control facilities should be sized so that the mitigated post project flows and durations do not exceed pre-project flows and durations for the geomorphically-significant flow range of $0.3Q_2$ to Q_{10}.

- Figure 1-3, Node 12 - A project applicant would arrive at Node 12 if the SCCWRP channel susceptibility rating was determined to be "Low." If the result from the critical shear stress calculator is also "Low" (or $0.5Q_2$), then the lower flow threshold would be $0.5Q_2$ (Node 16 – note potential waiver in Node 13). If the result from the critical shear stress calculator is "High" (or $0.1Q_2$), then the more conservative value would be used and the lower flow threshold would be $0.1Q_2$ (Node 10). If the result from the critical flow calculator is "Medium" (or $0.3Q_2$), then the more conservative value would be used and the lower flow threshold would be $0.3Q_2$ (Node 11).

- Figure 1-3, Node 13 – In some limited situations, namely small developments in rural or lightly developed areas, an allowance for a minimum outlet orifice size may be granted when the receiving channel susceptibility is "Low." This criteria may potentially be used for project footprints less than 5 acres. If the project footprint is greater than 5 acres, then the allowance may not be granted and the applicant would proceed to Node 16.

- Figure 1-3, Node 14 – The potential allowance discussed in Node 13 could only be granted if the ultimate potential impervious area in the sub-watershed is less than 10 percent. If there is potential for the sub-watershed impervious area to exceed 10 percent, then the minimum orifice size criteria may not be granted.

- Figure 1-3, Node 15 – If Nodes 12, 13, and 14 are satisfied, then mitigation facilities may be designed using a 3-inch minimum outlet orifice size.

- Figure 1-3, Node 16 - For stream reaches determined by either the critical flow calculator or the SCCWRP screening tools to have a "Low" susceptibility to erosion – and for projects where the minimum outlet orifice criteria does not apply - LID and extended detention flow control facilities should be sized so that the mitigated post project flows and durations do not exceed pre-project flows and durations for the geomorphically-significant flow range of $0.5Q_2$ to Q_{10}.

- Figure 1-3, Node 17 – For all hydromodification mitigation designs, the Decision Matrix includes language regarding drawdown time requirements so that standards set forth by the County's Department of Environmental Health are met. The County's Department of Environmental Health has stated that the drawdown requirement would be applied to underground vaults in addition to extended detention basins and the surface ponding areas of LID facilities. Proper maintenance of hydromodification mitigation facilities is essential to guard against potential vector issues as well potential safety issues resulting from long-term standing water. If mitigation facility outlets clog, then runoff will bypass the system and potentially result in additional erosion problems downstream of a site. The County Department of Environmental Health recently amended its drawdown time requirement to 96 hours.

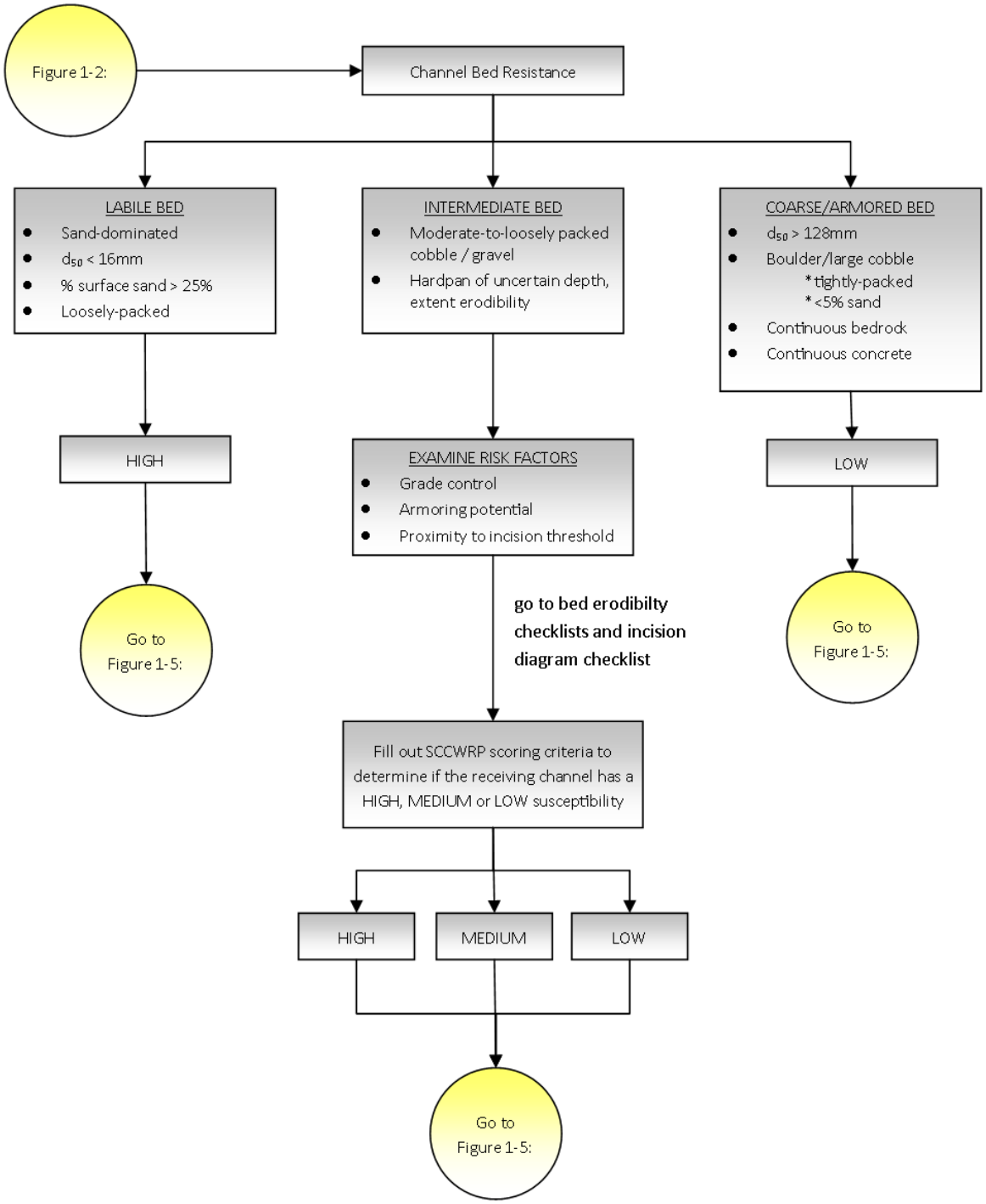


FIGURE 1-4. SCCWRP Vertical Susceptibility

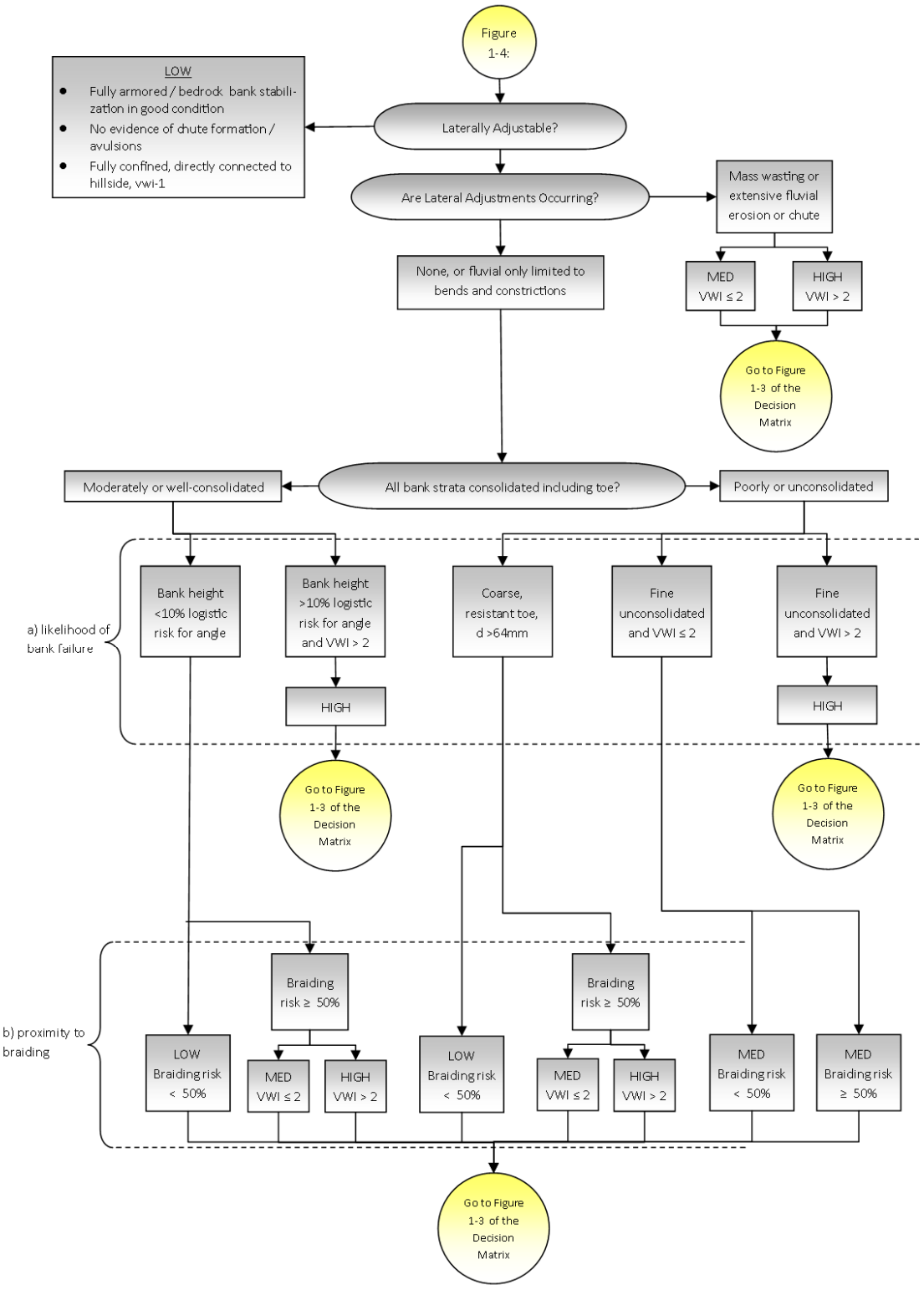


FIGURE 1-5. Lateral Channel Susceptibility

Grandfathering. Projects with prior lawful approval (such as a development agreement, vested tentative map, or a building or grading permit) before January 14, 2010, may not have to meet the hydromodification management requirements. Verify with City staff.

References and Resources:

- RWQCB Order R9-2007-0001 (Stormwater NPDES Permit)
- Project Clean Water web page

Chapter

2

Concepts and Criteria

Technical background and explanations of policies and design requirements

The Regional Water Board reissued a municipal stormwater NPDES permit to San Diego County, its 18 cities, the San Diego Unified Port District, and the San Diego Regional Airport Authority in January 2007. The permit mandates a comprehensive program to prevent stormwater pollution. That program now includes street sweeping, maintenance of storm drains, business inspections, public outreach, construction site inspections, monitoring and studies of stream and ocean health, and control of runoff pollutants from new developments and redevelopments.

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 Regional Water Board's 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 NPDES permit, the Copermittees have adopted final hydromodification criteria. See Chapter One.

Water-Quality Regulations

Provision D.1 requires the Copermittees to condition development approvals on incorporation of specified stormwater controls.

Provision D.1 requires applicable 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 states: "Urban runoff treatment and/or mitigation must occur prior to the discharge of urban runoff to receiving waters. 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."
- 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 municipalities each maintain a database to track approved installations of treatment facilities and to verify facilities are maintained. The Copermittees' annual report to the Regional Water Board 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

The Copermittees must also report the number of violations and enforcement actions taken upon development projects. The Copermittees' programs are subject to audit by the Regional Water Board.

The municipalities—not the Regional Water Board or its staff—are charged with ensuring development projects comply with the D.1 requirements. Regional Water Board staff sometimes 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 streams, creeks, or other 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 and guidance, requirements for controls must be detailed and specific—while also offering the right amount of flexibility or exceptions for special cases. The NPDES permit includes various standards, including hydrologic criteria, which have been found to comprise "maximum extent practicable." This SUSMP is to be continuously improved and refined based on the experience of municipal planners and engineers, with input from land developers and development professionals. By following the SUSMP, applicants can ensure their project design meets "maximum extent practicable."

► 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."

To minimize confusion, this guidebook refers to "facilities," "features," or "controls" to be incorporated into development projects. All of these are BMPs.

Pollutants of Concern

NPDES 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 in Chapters 3 and 4 of this model 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 categories of Priority Development Projects. 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.

► WATERSHEDS WITH SPECIAL POLLUTANT CONCERNS

Local receiving water conditions may require specialized attention. The three local conditions to consider include:

- 303(d) listed waters;
- Waters with established TMDLs; and
- Environmentally Sensitive Areas.

TABLE 2-1. Anticipated and Potential Pollutants Generated by Land Use Type.

	General Pollutant Categories								
Priority Project Categories	Sediment	Nutrients	Heavy Metals	Organic Compounds	Trash & Debris	Oxygen Demanding Substances	Oil & Grease	Bacteria & Viruses	Pesticides
Detached Residential Development	X	X			X	X	X	X	X
Attached Residential Development	X	X			X	P(1)	P(2)	P	X
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)
Hillside Development >5,000 ft2	X	X			X	X	X		X
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.

The NPDES 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 Regional Board 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 municipality affected by the numeric criteria of the TMDL. Currently, the only adopted TMDL for the City is the Indicator Bacteria for beaches and creeks in the San Diego region.

The applicant should meet with City staff to determine if any project characteristics or watershed characteristics affect 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) will ensure your 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 applicant shall utilize the Stormwater Pollutant Sources/Source Control Checklist (Appendix) 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

The SUSMP process groups pollutants of concern by how easily they are removed by various treatment processes (Table 2-2).

Table 2-3 provides a general comparison of how various types of treatment facilities perform for each group of pollutants (Table 2-3).

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

Based on this analysis, 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 and hydromodification flow control 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 water quality runoff event – greater capacity required to provide hydromodification flow control).

- 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 for water quality treatment – a larger sizing factor is required to provide hydromodification flow control).

- 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 water quality runoff event – greater capacity required to provide hydromodification flow control).

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, detention basins, and bioretention facilities to meet NPDES 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 shows that the required maintenance may not 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 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 municipality's stated objective to preserve or enhance a pedestrian-oriented "smart-growth" type of urban design. Municipalities are encouraged to identify areas where this objective applies, based on General Plans or zoning.

- Roadway widening projects.

In these special situations, the following types of facilities should each be evaluated in priority order (depending on the specific characteristics of the site and as determined by the municipal stormwater coordinator) 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).

Proprietary Devices
Many currently available proprietary devices do not meet municipalities' requirements when used alone for stormwater treatment. Consult with municipal staff before proposing these devices.

Many proprietary stormwater treatment devices are currently marketed, and new brands will be introduced. Applicants and applicants' engineers and design professionals should review with City staff any proposals for using proprietary devices for stormwater treatment 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 "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 (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 NPDES 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 meets sizing requirements for stormwater treatment facilities and flow-control (hydromodification management) requirements.

► SIZING REQUIREMENTS FOR STORMWATER TREATMENT FACILITIES

The guidance in Chapter 4 was crafted to ensure LID facilities comply with the NPDES permit's hydraulic sizing requirements for 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 NPDES 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 NPDES 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 be used for sizing flow-based treatment facilities within the Copermittees' 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).

► FLOW-CONTROL (HYDROMODIFICATION MANAGEMENT)

The NPDES permit specifies for applicable projects:

> … post-project runoff flow rates and durations shall not exceed pre-project runoff flow rates and durations 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.

Refer to Appendix B to review the final Hydromodification Management Plan (HMP) developed by the San Diego Copermittees and approved by the RWQCB in July 2010. A summary of the HMP document is provided in Chapter 1 of this SUSMP.

Criteria for Infiltration Devices

The NPDES 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).

Infiltration devices may not be used in:

- Areas west of Camino del Mar and south of 15th Street without geotechnical analysis to determine potential impacts to bluff stability. Infiltration within these areas are subject to approval of the City;
- 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;
- Other areas with pollutant sources that could pose a threat to groundwater, as designated by each City.

The vertical distance from the base of any infiltration device to the seasonal high groundwater mark shall be at least 10 feet. Infiltration devices shall be located a minimum of 100 feet horizontally from any known water supply wells.

In addition, infiltration devices are 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 NPDES 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

Preparing Your Project Submittal

Step-by-step assistance to demonstrate compliance.

Your Project Submittal will demonstrate your project complies with all applicable requirements in the stormwater NPDES 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, your Project Submittal must be coordinated with your 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 Project Submittal will facilitate quicker review and fewer cycles of review.

Be sure to obtain specific submittal requirements from the jurisdiction in which your project is located. Your Project Submittal consists of a report and an exhibit. City staff uses the following checklist to evaluate your Project Submittal:

PROJECT SUBMITTAL CHECKLIST

CONTENTS OF EXHIBIT

Show all of the following on drawings:

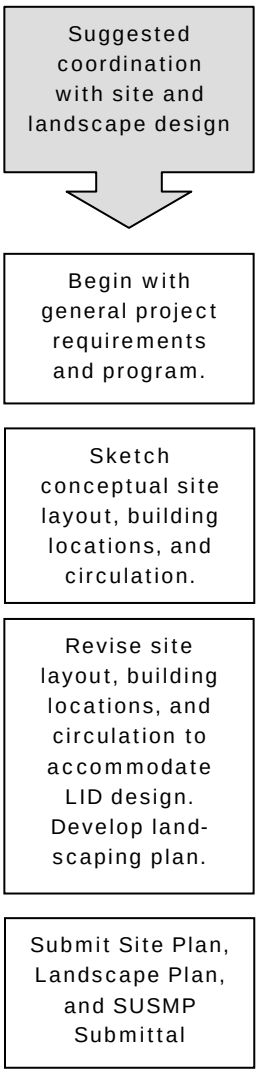
- ❒ Existing natural hydrologic features (depressions, watercourses, floodplains, relatively undisturbed areas) and significant natural resources. (Step 1 in the following step-by-step instructions)
- ❒ Soil types and depth to groundwater. (Step 1)
- ❒ Existing and proposed site drainage network and 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 Appendix A 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 Appendix A. (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)
- ❒ Statement accepting responsibility for interim operation & maintenance of facilities (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 by Step



Plan and design your stormwater controls integrally with the site planning and landscaping for your project. It's best to start with general project requirements and preliminary site design concepts, then prepare the detailed site design, landscape design, and stormwater control design simultaneously. This will help ensure that your site plan, landscape plan, and Project Submittal are congruent.

The following step-by-step procedure should optimize your 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 your project for LID and to develop and document your drainage design.
4. Specify source controls 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.

City staff may recommend you prepare and submit a preliminary site design prior to formally applying for planning and zoning approvals. Your 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 save time and avoid potential delays later in the review process.

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 other local codes governing minimum street widths, sidewalk construction, allowable pavement types, and drainage. These codes may conflict with Low Impact Development objectives to minimize imperviousness and to maintain or restore natural site hydrology. Municipalities are encouraged to review and revise codes to resolve these conflicts 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 municipal storm drain system can be located from site inspection, municipal 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). Note stormwater treatment facilities should not be located within protected riparian areas.

Prepare a brief narrative describing site opportunities and constraints. This narrative will help you as you proceed with LID design and explain your design decisions to others.

Step 3: Prepare and Document Your LID Design

Use the Low Impact Development Design Guide (Chapter 4) to analyze your 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 your project complies with NPDES permit LID requirements (Provision D.1.d.(4)) and stormwater treatment requirements in Provision D.1.d.(6)). The LID Design Guide has been developed so that hydromodification management requirements are also met via this unified design procedure. Chapter 4 includes calculation procedures and formats for presenting your calculations.

As shown in the example checklist above, your Project Submittal may need to 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.

Compliance
The design criteria for DMAs in Chapter 4 ensure the required volume of flow from all developed portions of the project, including landscaped areas, is infiltrated, filtered, or treated (Provision D.1.d.(6)(a).

- 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.

Your Project Submittal may need to 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 may also be required, or may be advisable to assist the reviewer to understand your design:

- A narrative overview of your design and how your 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*
- Your municipality's *General Plan*
- Your municipality's Zoning Ordinance and Development Codes
- *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 your 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 your site:

► IDENTIFY POLLUTANT SOURCES

Review the first column in the Pollutant Sources/Source Control Checklist (Appendix). Check off the potential sources of pollutants that apply to your site.

► NOTE LOCATIONS ON SUBMITTAL DRAWING

Note the corresponding requirements listed in Column 2 of the Pollutant Sources/Source Control Checklist (Appendix). Show the location of each pollutant source and each permanent source control BMP in your submittal drawing.

► PREPARE A TABLE AND NARRATIVE

Check off the corresponding requirements listed in Column 3 in the Pollutant Sources/Source Control Checklist (Appendix). Now, create a table using the format in Table 3-1. In the left column, list each potential source on your site (from Appendix, Column 1). In the middle column, list the corresponding permanent, structural BMPs (from Columns 2 and 3, Appendix) 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.

Potential source of runoff pollutants	*Permanent source control BMPs*	*Operational source control BMPs*

To complete your table, refer once again to the Pollutant Sources/Source Control Checklist (Appendix, Column 4). List in the right column of your 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: 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 4: Source Controls

Step 5: Stormwater Facility Maintenance

As required by NPDES Permit Provision D.1.c.(5), the City requires submittal of proof of a mechanism under which ongoing long-term maintenance of stormwater treatment and flow-control facilities will be conducted. The City requires the following items be included in your Project Submittal:

1. A means to finance and implement facility maintenance in perpetuity.

2. Acceptance of responsibility for maintenance from the time the facilities are constructed until responsibility for operation and maintenance is legally transferred. A warranty covering a period following construction may also be required.

3. An outline of general maintenance requirements for the treatment and flow-control facilities you have selected.

The City also requires that you prepare and submit a detailed plan that sets forth a maintenance schedule for each of the treatment and flow-control facilities built on your 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 Your Project Submittal

Local City staff will provide specific instructions for the content and format of your Project Submittal. Your 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 your design meets the minimum requirements of the NPDES permit, the municipal stormwater pollution prevention ordinance, and this *SUSMP*.

► COORDINATION WITH SITE, ARCHITECTURAL, AND LANDSCAPING PLANS

Before completing your Project Submittal, ensure your stormwater control design is fully coordinated with the site plan, grading plan, and landscaping plan being proposed for the site.

Submittals 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.
- 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 you submit construction plans for City review and approval, the reviewer will compare that submittal with your earlier Project Submittal. By creating a Construction Plan SUSMP Checklist for your project, you can facilitate the reviewer's comparison and speed review of your project.

TABLE 3-2. Format for Construction Plan SUSMP Checklist.

SUSMP Page #	*BMP Description*	*See Plan Sheet #s*

Here's how:

1. Create a table similar to Table 3-2. Number and list each measure or BMP you have specified in your Project Submittal in Columns 1 and 2 of the table. Leave Column 3 blank. Incorporate the table into your Project Submittal.

2. When you submit 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 your 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 your Project Submittal. Planning Department staff can advise you regarding the process required to propose changes to your approved Project Submittal.

► CERTIFICATION

The City requires that your Final Project Submittal be certified by a registered civil engineer.

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."

► EXAMPLE PROJECT SUBMITTALS

Example Project Submittals and templates will be available from City staff. Your submittal will reflect the unique character of your own project and should meet the requirements identified in this *SUSMP*. City staff can assist you to determine how specific requirements apply to your project.

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Chapter

4

Low Impact Development Design Guide

Guidance for designing and documenting your 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 NPDES 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.

Your 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 will help you:

- Analyze your 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 your LID drainage design with your paving and landscaping design.

Alternatives to LID design are discussed in the final section of this chapter.

Analyze Your 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.

3. 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 56). No further management of runoff is necessary. An emergency overflow should be provided for extreme events.

4. Disperse runoff from impervious surfaces on to adjacent pervious surfaces (e.g., direct a roof downspout to disperse runoff onto a lawn).

5. 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 your project. With forethought in design, the four strategies can provide multiple, complementary benefits to your 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.

TABLE 4-1. Ideas for Runoff Management.

Site Features and Design Objectives	*Vegetated Roof*	*Self-retaining Areas*	*Pervious Pavement*	*Bioretention Facility*	*Flow-through Planter*	*Dry Well*	*Cistern with bioretention*
Clayey native soils	✓			✓	✓		✓
Permeable native soils	✓		✓	✓	✓	✓	
Very steep slopes	✓				✓		
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				✓			

► 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 both are defined by the local jurisdiction).

Within each of the previous categories, hillside areas should be considered more sensitive than flatter areas.

Coordination
Chapter One includes a presentation of how review of your project's site design and landscape design is coordinated with review for compliance with stormwater NPDES requirements.

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 your 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

Project Clean Water has developed design criteria for the following IMPs:

- Bioretention facilities, which can be configured as swales, free-form areas, or planters to integrate with your 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 valuts, in combination with a bioretention facility.

See the design sheets at 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 minimum standards set forth by the City (96 hours) creates the potential for mosquito harborage. Cisterns and vaults must be designed to prevent entry by mosquitoes.

- Indoor uses of non-potable water may be restricted or prohibited. Check with municipal staff.

Some references and resources for water harvesting appear at the end of this chapter.

Finding the right location for treatment facilities on your 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 your 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. In particular, avoid locating facilities on private residential lots. 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 local municipality 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 your analysis, include in your Project Submittal a brief narrative documenting the site layout and site design decisions you made. This will provide background and context for how your design meets the quantitative LID design criteria.

Develop and Document Your 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 residential and 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 your drainage design as well as aesthetics, circulation, and use of available area for your site.

You should be able to complete the needed calculations using only the project's site development plan.

► STEP 1: DELINEATE DRAINAGE MANAGEMENT AREAS

This is the key first step. You must 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 your 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 percent 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.

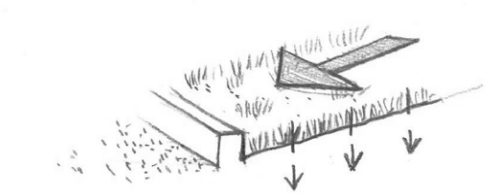


FIGURE 4-1. Self-treating areas are entirely pervious and drain directly off-site or to the storm drain system.

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 in the design sheet "Self Treating and Self-Retaining Areas" following this chapter.

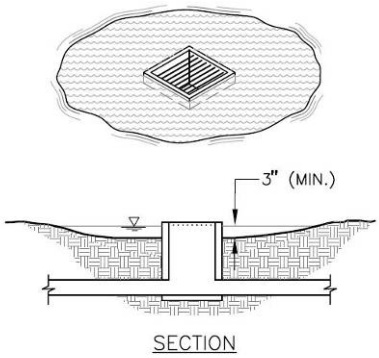


FIGURE 4-2. Self-retaining areas. Berm or depress the grade to retain at least an inch of rainfall and set inlets of any area drains at least 3 inches above low point to allow ponding.

Areas draining to self-retaining areas. Small 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.

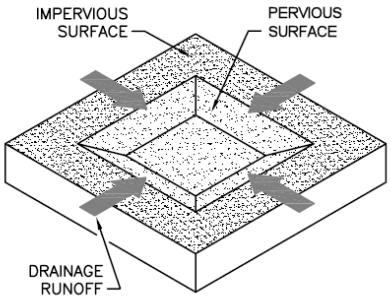


FIGURE 4-3. Relationship of impervious to pervious area for self-retaining areas. Ratio: ***pervious ≥ ½ impervious***

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:

(Runoff factor) x (tributary area) ≤ 2 x (self-retaining area) *Equation 4-1*

Use the runoff factors in Table 4-2.

Prolonged ponding is a potential problem at higher impervious/pervious ratios. In your design, ensure that the pervious area soils can handle the additional run-on and are sufficiently well-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.

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

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 and small-lot residential subdivisions—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.

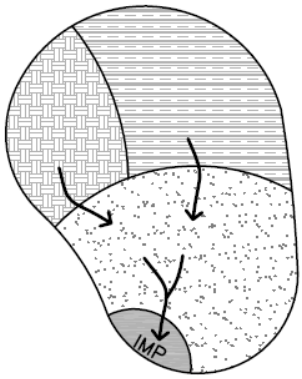


FIGURE 4-4. MORE THAN ONE
Drainage Management Area can drain to a single IMP.

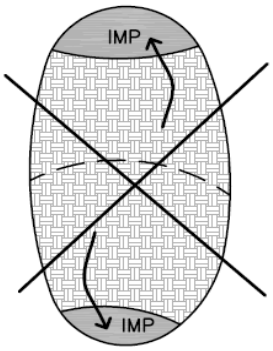


FIGURE 4-5. ONE DRAINAGE
Management Area cannot drain to more than one IMP. Use a grade break to divide the DMA.

Where possible, design site drainage so only impervious areas 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.

DMA Name	*Area (square feet)*

TABLE 4-4. Format for Tabulating Self-Retaining Areas.

DMA Name	*Area (square feet)*

TABLE 4-5. Format for Tabulating Areas Draining to Self-Retaining Areas.

DMA Name	*Area (square feet)*	*Post-project surface type*	*Runoff factor*	*Receiving self-retaining DMA*	*Receiving self-retaining DMA Area (square feet)*

► STEP 4: SELECT AND LAY OUT IMPS ON SITE PLAN

Select from the list of IMPs in Table 4-6. Illustrations, designs, and design criteria for the IMPs are in the "IMP Design Details and Criteria" at the end of this chapter.

Once you have laid out the IMPs, calculate the square footage you have set aside on your site plan for each IMP.

► STEP 5: REVIEW SIZING FOR EACH IMP

For each of the IMPs, use the appropriate "water quality only" sizing factor from Table 4-6. *Sizing factors for integrated facilities that provide both water quality treatment and hydromodification flow control are currently under development and will be included in this document at a later time – please check the City's website at www.delmar.ca.us for updates.*

TABLE 4-6. Sizing Factors (Water Quality Only)

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 and Vaults with Bioretention	See Step 6 to Calculate Min. Volume of Cistern or Vault; 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. *Note that if the IMP is designed to provide hydromodification flow control, then hydromodification sizing factors should be used in lieu of the "water quality only" sizing factors presented in Table 4-6. These sizing factors are currently under development and will be included at a later time – please check the City's website at www.delmar.ca.us for updates.*

Equation 4-7

$$Min.\ IMP\ Area = \sum \begin{pmatrix} DMA \\ Square \\ Footage \end{pmatrix} \times \begin{pmatrix} DMA \\ Runoff \\ Factor \end{pmatrix} \times \begin{pmatrix} IMP \\ Sizing \\ Factor \end{pmatrix}$$

Use the format of Table 4-7 to present the calculations of the required minimum area and volumes for bioretention areas and planter boxes:

TABLE 4-7. Format for Presenting Calculations of Minimum IMP Areas for Bioretention Areas and Planter Boxes.

DMA Name	*DMA Area (square feet)*	*Post-project surface type*	*DMA Runoff factor*	*DMA Area × runoff factor*	*Soil Type:*	*IMP Name*			
					IMP Sizing factor (WQ Only)		*Minimum Area*	*Proposed Area*	
			Total		***0.04***				***IMP Area***

To size dry wells, infiltration basins, or infiltration trenches for the "water quality treatment option, 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

$$Volume = [Tributary\ \ Area] \times [weighted\ runoff\ \ factor] \times [unit\ volume]$$

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 the minimum drawdown time as determined by the governing jurisdiction..

To size a cistern or vault in series with a bioretention facility (criteria below for "water quality treatment: only option):

1. Use Equation 4-8 to calculate the required cistern or vaults 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 YOUR SUMMARY REPORT

Present your IMP sizing calculations in tabular form. Adapt the following format as appropriate to your project. Coordinate your 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 and show it 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.

Format:

Project Name:

Project Location:

APN or Subdivision Number:

Total Project Area (square feet):

Mean Annual Precipitation at Project Site:

I. Self-treating areas:

DMA Name	*Area (square feet)*

II. Self-retaining areas:

DMA Name	*Area (square feet)*

III. Areas draining to self-retaining areas:

DMA Name	*Post-project surface type*	*Runoff factor*	*Area (square feet)*	*Receiving self-retaining DMA*	*Receiving self-retaining DMA Area (square feet)*

IV. Areas draining to IMPs (repeat for each IMP):

DMA Name	*DMA Area (square feet)*	*Post-project surface type*	*DMA Runoff factor*	*DMA Area × runoff factor*	*Soil Type:*	*IMP Name*			
					IMP Sizing factor		*Minimum Area or Volume*	*Proposed Area or Volume*	
			Total						***IMP Area***

Specify Preliminary Design Details

In your Project Submittal, describe your IMPs in sufficient detail to demonstrate the area, volume, and other criteria of each can be met within the constraints of the site.

Ensure these details are consistent with preliminary site plans, landscaping plans, and architectural plans submitted with your 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.

Keep in mind that proper and 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 you believe design of features and facilities as described above is infeasible for your development site, consult with City staff before preparing an alternative design for stormwater treatment, flow control, and LID compliance.

Local Requirements

Cities or the County may have requirements that differ from, or are in addition to, this countywide model SUSMP. Check with local planning and community development staff.

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 that the design achieves the applicable design criteria for each stormwater treatment facility. Alternative treatment facilities are limited to the circumstances and selection criteria identified. The Project Submittal must also show how the project meets the minimum LID criteria (page 35) and ensures runoff rates, durations,

and velocities are controlled to maintain or reduce downstream erosion conditions and protect stream habitat (NPDES Permit Provision D.1.d.(10)).

► 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 municipality).

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.

Sand filters do not provide adequate hydromodification flow controls.

Extended ("Dry") Detention Basins. The required detention volume for water quality treatment based on the 85th percentile 24-hour storm depth. The steps to calculate the required detention volume are:

1. Use the County of San Diego's 85th Percentile Isopluvial Map to determine the unit basin volume.

2. Determine the weighted runoff factor ("C" factor) for the area tributary to the basin. The factors in Table 4-2 may be used.

3. Multiply the weighted runoff factor times the tributary area times the unit basin volume.

For maximum effectiveness the basin should not be sized substantially larger than this volume. If the basin is to be used for hydromodification flow control, then the BMP Sizing Calculator pond sizer or a continuous simulation model must be used to prove the basin meets peak flow and flow duration criteria

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 hours.

"Wet" Detention Ponds and Constructed Wetlands. The required water quality 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. It should be noted that such designs would not provide the required hydromodification flow control benefit.

Conventional vegetated swales may be used to meet NPDES permit treatment requirements and LID requirements (see page 21). 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 (see page 60) 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 beginning on page 31 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.

Such facilities do not provide hydromodification flow control benefit.

References and Resources:

- RWQCB Order R9-2007-0001 (Stormwater NPDES 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

Best Uses

- Heavily landscaped sites

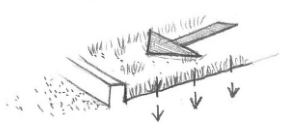
Advantages

- No maintenance verification requirement
- Complements site landscaping

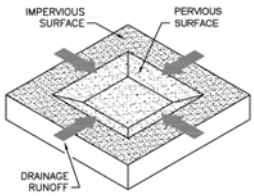
Limitations

- Requires substantial square footage
- Grading requirements must be coordinated with landscape design

► CRITERIA



Rainfall on self-treating areas infiltrates or—during intense storms— drains 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. During intense storms, runoff may drain off-site, to the storm drain system, or to IMPs.

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.

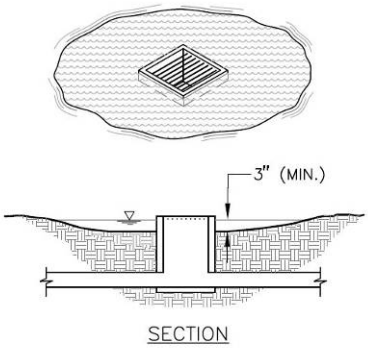
The self-retaining area must be bermed or depressed to retain an inch of rainfall including the flow from the tributary impervious area.

► 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.

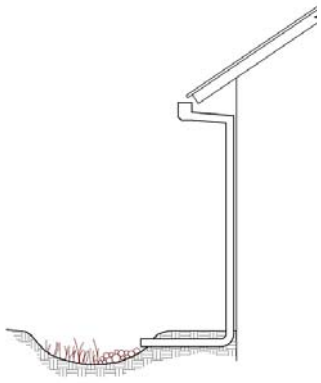
► APPLICATIONS

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.

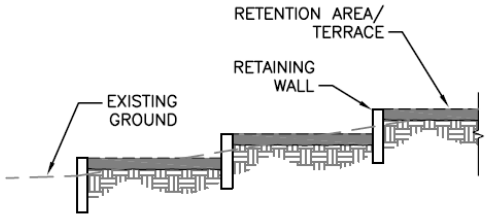
Runoff from walkways or driveways in parks and park-like areas can sheet-flow to self-retaining areas.

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 create[illegible] 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 d" gaps between the pavers. Joints must be filled with an open-graded aggregate free of fines.

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

When draining pervious pavements to an IMP, use the runoff factors in Table 4-2.

► 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.

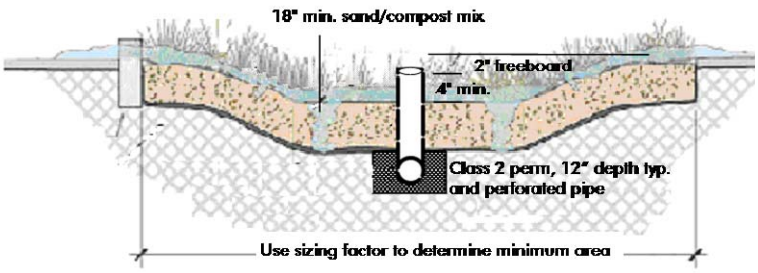
► DESIGN CHECKLIST FOR PERVIOUS PAVEMENTS

- ❒ 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

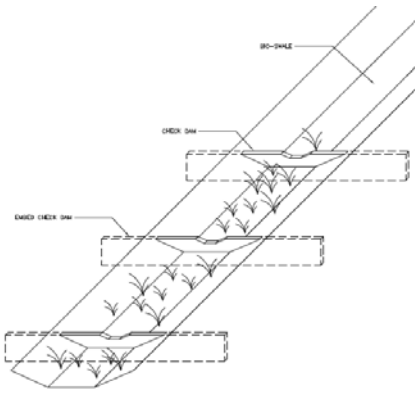
Limitations

- 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

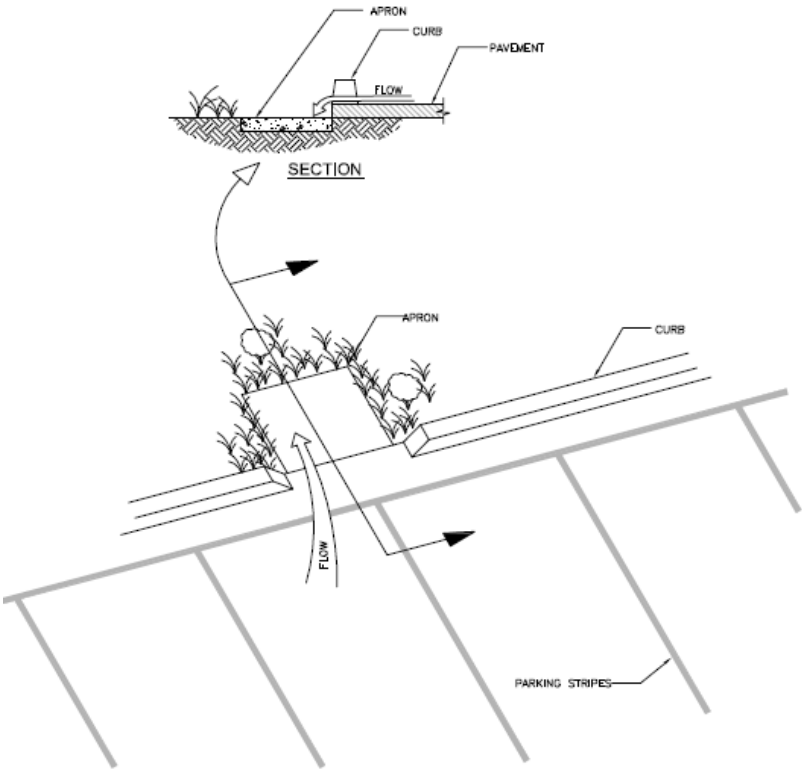
Plan. On the surface, a bioretention facility should be one level, shallow basin—or a series of basins. As runoff enters each basin, it should flood and fill throughout before runoff overflows to the outlet or to the next downstream basin. This will help prevent movement of surface mulch and soil mix.



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 [illegible] 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.

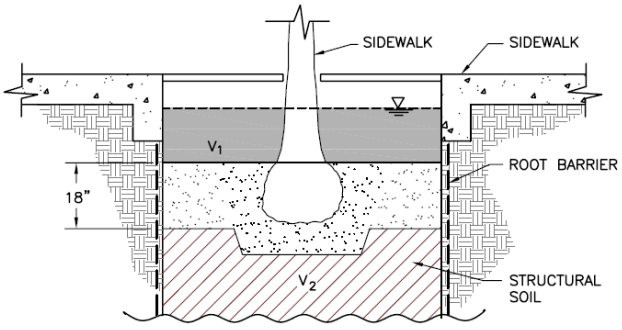
The outlet should be designed to exclude floating mulch and debris.

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.



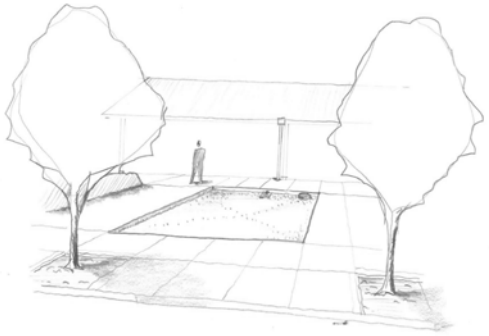
Bioretention facility configured as a tree well.
The root barrier is optional.

► APPLICATIONS

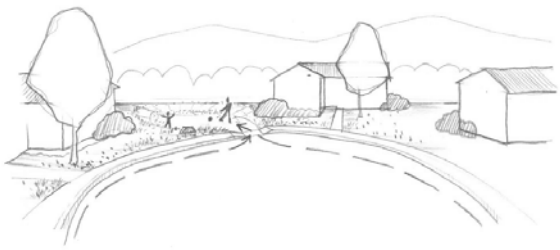
Multi-purpose landscaped areas. Bioretention facilities are easily adapted to serve multiple purposes. The loamy sand soil mix will support turf or a plant palette suitable to the location and a well-drained soil.

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



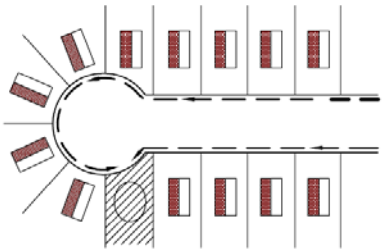
Bioretention facility configured as a recessed decorative lawn with hardscaped edge.



Bioretention facility configured and planted as a lawn/ play area.

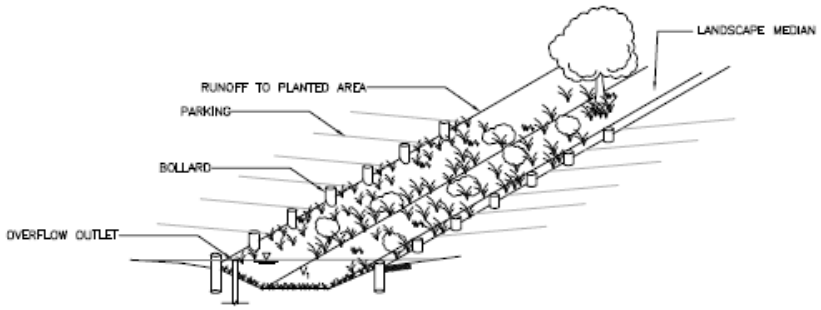
Residential subdivisions. Some subdivisions are designed to drain roofs and driveways to the streets (in the conventional manner) and then drain the streets to bioretention areas, with one bioretention area for each 1 to 6 lots, depending on subdivision layout and topography.

If allowed by the local jurisdiction, bioretention areas can be placed on a separate, dedicated parcel with joint ownership.



Bioretention facility receiving drainage from individual lots and the street in a residential subdivision.

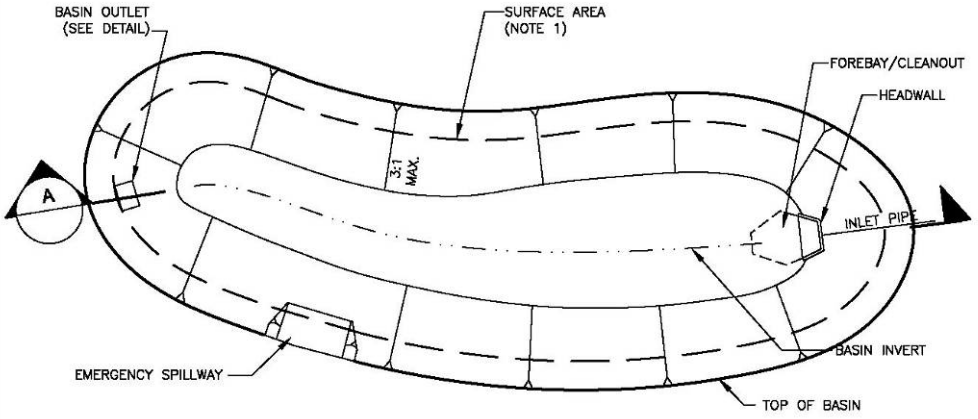
Sloped sites. Bioretention facilities must be constructed as a basin, or series of basins, with the circumference of each basin set level. It may be necessary to add curbs or low retaining walls.



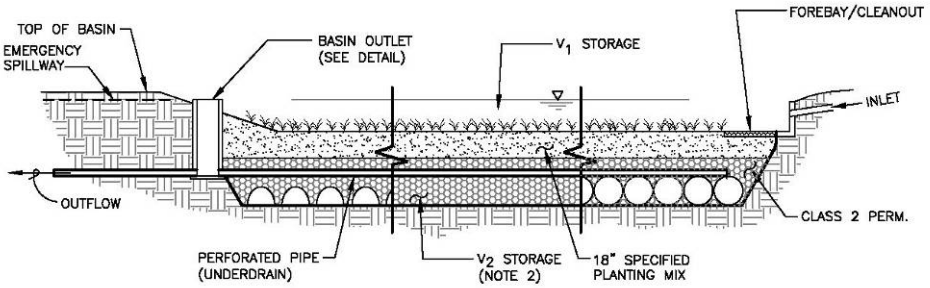
Bioretention facility configured as a parking median.
Note use of bollards in place of curbs, eliminating the need for curb cuts.

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.



PLAN VIEW
NOT TO SCALE



A SECTION
NOT TO SCALE

NOTE

1. SURFACE AREA LIMIT DETERMINED BY EXTENT OF SPECIFIED PLANTING MIX, WHICH IS GOVERNED BY THE OUTLET SPILL ELEVATION. FOR REQUIRED SURFACE AREA REFER TO THE FACTORS AND EQUATIONS IN THE STORMWATER C.3 GUIDEBOOK.
2. V_2 STORAGE ACCOMPLISHED WITH INFILTRATION ARCHES, PERFORATED PIPES, CLASS 2 PERM OR OTHER AT THE DESIGNERS DISCRETION.

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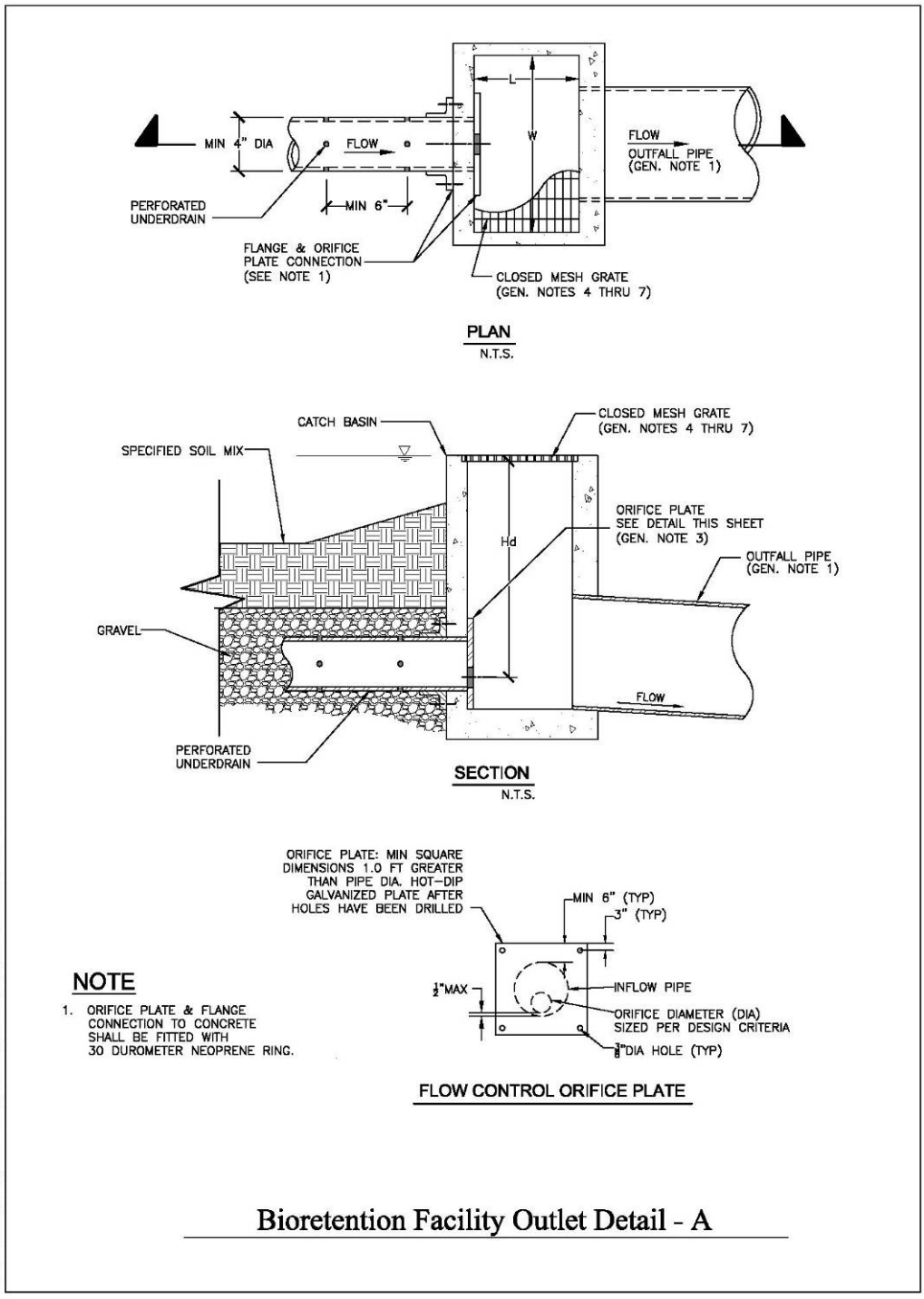
Bioretention Facility


L
W
MIN 4" DIA
FLOW
FLOW
OUTFALL PIPE
(GEN. NOTE 1)
PERFORATED
UNDERDRAIN
MIN 6"
FLANGE & ORIFICE
PLATE CONNECTION
(SEE NOTE 1)
CLOSED MESH GRATE
(GEN. NOTES 4 THRU 7)
PLAN
N.T.S.
CATCH BASIN
CLOSED MESH GRATE
(GEN. NOTES 4 THRU 7)
SPECIFIED SOIL MIX
ORIFICE PLATE
SEE DETAIL THIS SHEET
(GEN. NOTE 3)
Hd
OUTFALL PIPE
(GEN. NOTE 1)
GRAVEL
FLOW
PERFORATED
UNDERDRAIN
SECTION
N.T.S.
ORIFICE PLATE: MIN SQUARE
DIMENSIONS 1.0 FT GREATER
THAN PIPE DIA. HOT-DIP
GALVANIZED PLATE AFTER
HOLES HAVE BEEN DRILLED
MIN 6" (TYP)
3" (TYP)
1/2"MAX
INFLOW PIPE
ORIFICE DIAMETER (DIA)
SIZED PER DESIGN CRITERIA
3/8"DIA HOLE (TYP)
FLOW CONTROL ORIFICE PLATE
NOTE
1. ORIFICE PLATE & FLANGE CONNECTION TO CONCRETE SHALL BE FITTED WITH 30 DUROMETER NEOPRENE RING.
Bioretention Facility Outlet Detail - A

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.

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

► 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)
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.

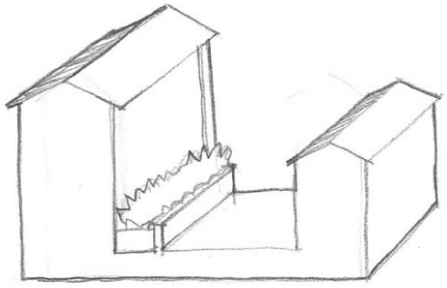
► APPLICATIONS

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.

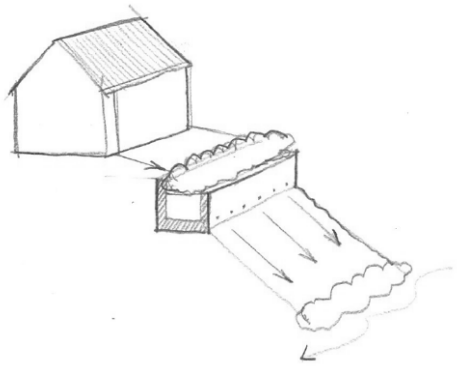
At plaza level. Flow-through planters have been successfully incorporated into podium-style developments, with the planters placed on the plaza level and receiving runoff from the tower

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.



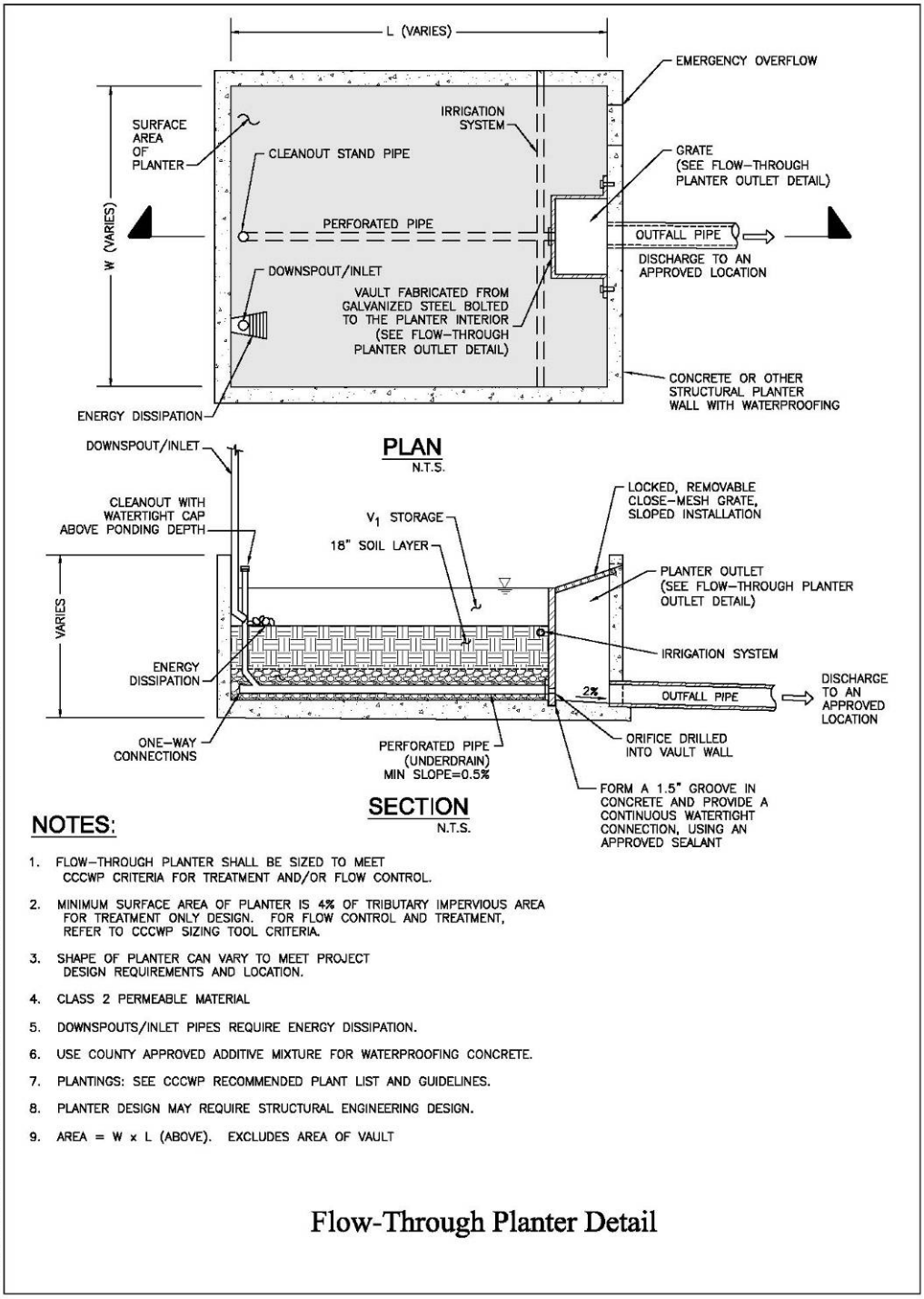
Flow-through planter on the plaza level of a podium-style development.



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. FLOW-THROUGH PLANTER SHALL BE SIZED TO MEET CCCWP CRITERIA FOR TREATMENT AND/OR FLOW CONTROL.
2. MINIMUM SURFACE AREA OF PLANTER IS 4% OF TRIBUTARY IMPERVIOUS AREA FOR TREATMENT ONLY DESIGN. FOR FLOW CONTROL AND TREATMENT, REFER TO CCCWP SIZING TOOL CRITERIA.
3. SHAPE OF PLANTER CAN VARY TO MEET PROJECT DESIGN REQUIREMENTS AND LOCATION.
4. CLASS 2 PERMEABLE MATERIAL
5. DOWNSPOUTS/INLET PIPES REQUIRE ENERGY DISSIPATION.
6. USE COUNTY APPROVED ADDITIVE MIXTURE FOR WATERPROOFING CONCRETE.
7. PLANTINGS: SEE CCCWP RECOMMENDED PLANT LIST AND GUIDELINES.
8. PLANTER DESIGN MAY REQUIRE STRUCTURAL ENGINEERING DESIGN.
9. AREA = W x L (ABOVE). EXCLUDES AREA OF VAULT

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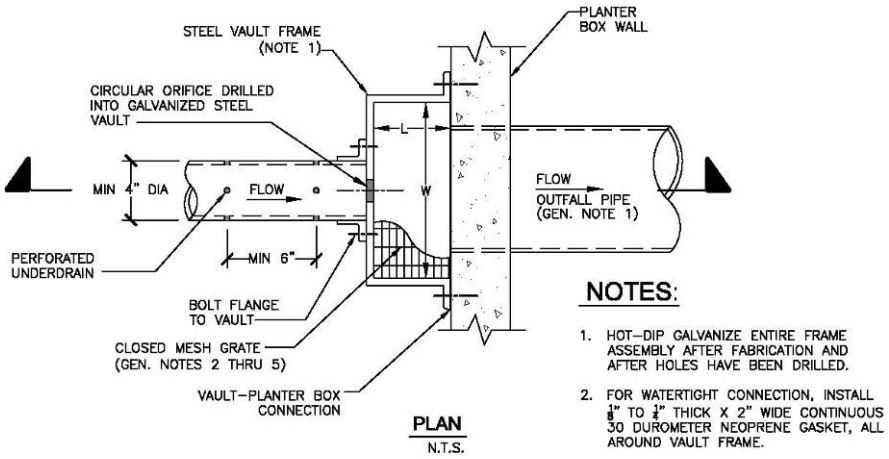
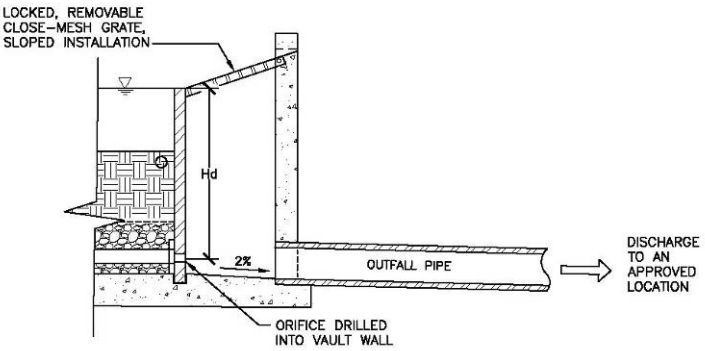
Flow-Through Planter Detail



PLAN
N.T.S.

NOTES:

1. HOT-DIP GALVANIZE ENTIRE FRAME ASSEMBLY AFTER FABRICATION AND AFTER HOLES HAVE BEEN DRILLED.
2. FOR WATERTIGHT CONNECTION, INSTALL $\frac{1}{8}$" TO $\frac{1}{4}$" THICK X 2" WIDE CONTINUOUS 30 DUROMETER NEOPRENE GASKET, ALL AROUND VAULT FRAME.



SECTION
N.T.S.

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 OUTLET PIPE.
5. STRUCTURAL DESIGN OF GRATE SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF GRATE.

Flow-Through Planter Outlet Detail

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, which provides maximum space efficiency, or may be filled in 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 the local jurisdiction engineer regarding the need to verify soil permeability and other site conditions are suitable for dry wells and infiltration basins. Some proposed criteria are on Page 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.

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.

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'.
- ❒ 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

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.

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

► 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 1/16" or larger and will fly for many feet through pipes as small as ¼".

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.

► APPLICATIONS

Shallow ponding on a flat roof. The "cistern" storage volume can be designed in any configuration, including simply 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.

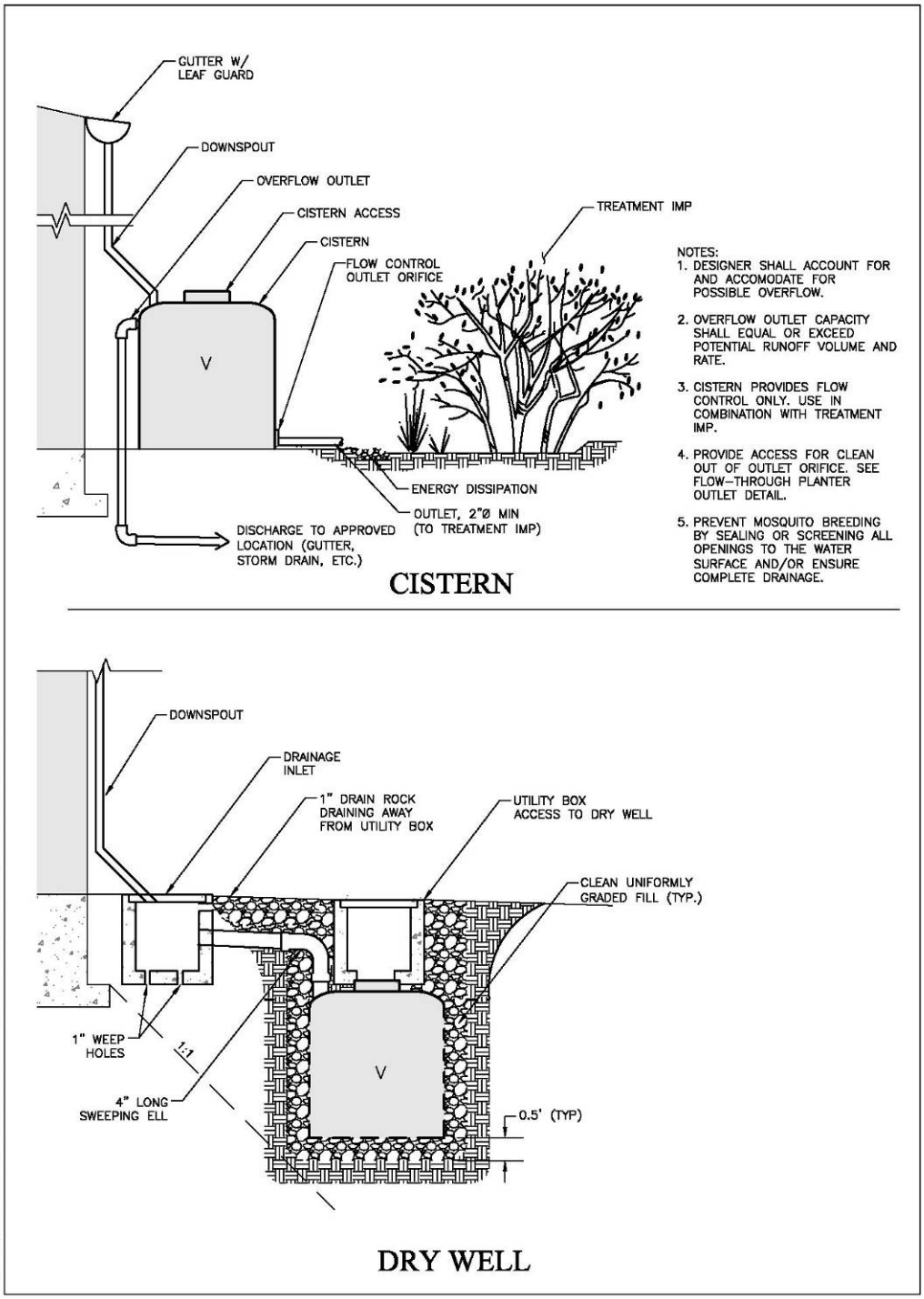
Cistern attached to a building and draining to a planter. This arrangement allows a planter box to be constructed with a smaller area.

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 municipal 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.


GUTTER W/
LEAF GUARD
DOWNSPOUT
OVERFLOW OUTLET
CISTERN ACCESS
CISTERN
FLOW CONTROL
OUTLET ORIFICE
TREATMENT IMP
V
ENERGY DISSIPATION
OUTLET, 2"Ø MIN
(TO TREATMENT IMP)
DISCHARGE TO APPROVED
LOCATION (GUTTER,
STORM DRAIN, ETC.)
NOTES:
1. DESIGNER SHALL ACCOUNT FOR AND ACCOMODATE FOR POSSIBLE OVERFLOW.
2. OVERFLOW OUTLET CAPACITY SHALL EQUAL OR EXCEED POTENTIAL RUNOFF VOLUME AND RATE.
3. CISTERN PROVIDES FLOW CONTROL ONLY. USE IN COMBINATION WITH TREATMENT IMP.
4. PROVIDE ACCESS FOR CLEAN OUT OF OUTLET ORIFICE. SEE FLOW-THROUGH PLANTER OUTLET DETAIL.
5. PREVENT MOSQUITO BREEDING BY SEALING OR SCREENING ALL OPENINGS TO THE WATER SURFACE AND/OR ENSURE COMPLETE DRAINAGE.
CISTERN
DOWNSPOUT
DRAINAGE
INLET
1" DRAIN ROCK
DRAINING AWAY
FROM UTILITY BOX
UTILITY BOX
ACCESS TO DRY WELL
CLEAN UNIFORMLY
GRADED FILL (TYP.)
1" WEEP
HOLES
1:1
4" LONG
SWEEPING ELL
V
0.5' (TYP)
DRY WELL

Chapter

5

Operation & Maintenance of Stormwater Facilities

How to prepare a customized Stormwater Maintenance Plan for the treatment BMPs on your site.

The stormwater NPDES Permit requires the City to verify all treatment and flow-control facilities are adequately maintained. Facilities you install as part of your project will be verified for effectiveness and proper performance. The City may 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.

Operation and maintenance of stormwater facilities is a six-stage process:

1. Determine who will own the facility and be responsible for the maintenance of treatment facilities. Identify the means by which ongoing maintenance will be assured (for example, a maintenance agreement that runs with the land).

2. Identify typical maintenance requirements, and allow for these requirements in your project planning and preliminary design.

3. Prepare a maintenance plan for the site incorporating detailed requirements for each treatment and flow-control facility.

4. Maintain the facilities from the time they are constructed until ownership and maintenance responsibility is formally transferred.

5. Formally transfer operation and maintenance responsibility to the site owner or occupant. A warranty, secured by a bond, or other financial instrument, may be required to secure against lack of performance due to flaws in design or construction.

6. Maintain the facilities in perpetuity and comply with your municipality's self-inspection, reporting, and verification requirements.

See the schedule for these stages in Table 5-1.

Stage 1: Ownership and Responsibility

You must specify a means to ensure maintenance of treatment and flow-control facilities in perpetuity.

Depending on the intended use of your site, this may require one or more of the following:

- Execution of a maintenance agreement that "runs with the land."
- Formation of a new community facilities district or other special district, or addition of the properties to an existing special district.
- Dedication of fee title or easement transferring ownership of the facility (and the land under it) to the City.

Ownership and maintenance responsibility for treatment and flow-control facilities should be discussed at the beginning of project planning, typically at the pre-application meeting for planning and zoning review. Experience has shown provisions to finance and implement maintenance of treatment and flow-control facilities can be a major stumbling block to project approval, particularly for small residential subdivisions. (See "New Subdivisions" in Chapter 1.)

► PRIVATE OWNERSHIP AND MAINTENANCE

The municipality may require—as a condition of project approval—that a maintenance agreement be executed.

TABLE 5-1. Schedule for Planning Operation and Maintenance of Stormwater Treatment BMPs.

Stage	*Description*	*Schedule*
1	Determine facility ownership and maintenance responsibility	Discuss with planning staff at pre-application meeting
2	Identify typical maintenance requirements	In initial submittal, coordinate with planning & zoning application
3	Develop detailed operation and maintenance plan	As required by municipality
4	Interim operation and maintenance of facilities	During and following construction including warranty period
5	Formal transfer of operation & maintenance responsibility	On sale and transfer of property or permanent occupancy
6	Ongoing maintenance and compliance with inspection & reporting requirements	In perpetuity

Typically, these agreements may provide that the City may collect a management and/or inspection fee established by a standard fee schedule. The agreement may provide that, if the property owner fails to maintain the stormwater facility, the City may enter the property, restore the stormwater facility to good working order and obtain reimbursement, including administrative costs, from the property owner.

Stage 2: General Maintenance Requirements

Include in your Project Submittal a general description of anticipated facility maintenance requirements. This will help ensure that:

- Ongoing costs of maintenance have been considered in your 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 web page describe general maintenance requirements for the types of stormwater facilities featured in the LID Design Guide (Chapter 4). You can use this information to specify general maintenance requirements in your Project Submittal.

Maintenance fact sheets for conventional stormwater facilities are available in the California Stormwater BMP Handbooks.

Stage 3: Detailed Maintenance Plan

Prepare and submit a detailed maintenance plan. Your 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 your initial Project Submittal be kept onsite as a reference.

► YOUR DETAILED MAINTENANCE PLAN: STEP BY STEP

The following step-by-step guidance will help you prepare your detailed maintenance plan.

Preparation of the plan will require familiarity with your stormwater facilities as they have been or will be constructed and a fair amount of "thinking through" plans for their operation and maintenance.

► STEP 1: DESIGNATE RESPONSIBLE INDIVIDUALS

To begin creating your 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 City inspectors and should sign self-inspection reports and any correspondence with the City 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.
- Your 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 City immediately whenever a property is sold 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 your organization will accommodate initial training of staff or contractors regarding the purpose, mode of operation, and maintenance requirements for the stormwater facilities on your site. Also, describe how your organization will ensure ongoing training as needed and in response to staff changes.

► STEP 2: SUMMARIZE DRAINAGE AND BMPS

Incorporate the following information from your Project Submittal into your 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 planning and zoning review, building permit review, or construction. Incorporate the updated text into your 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 your customized maintenance plan, schedule, and checklists.

- Specific information noted in Steps 2 and 3, above.
- Other input from the facility designer, City 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.

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 your maintenance plan or as a separate document.

► STEP 5: COMPILE MAINTENANCE PLAN

The following general outline is provided as an example.

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 (copied or adapted 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 your maintenance plan. One copy must be submitted to the municipality, 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 the electronic file backed-up so that copies of the maintenance plan can be made if the hard copy is lost or damaged.

► STEP 6: UPDATES

Your maintenance plan will be a living document.

Operation and maintenance personnel may change; mechanical equipment may be replaced, and additional maintenance procedures may be needed. Throughout these changes, the maintenance plan must be kept up-to-date.

Updates may be transmitted to the local municipality at any time. However, at a minimum, updates to the maintenance plan must accompany the annual inspection report.

Stage 4: 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 5: Transfer Responsibility

As part of the detailed maintenance plan, note the expected date when responsibility for operation and maintenance will be transferred. Notify the City when this transfer of responsibility takes place.

Stage 6: Operation & Maintenance Verification

The City implements an operation and maintenance verification program, including periodic site inspections.

City staff will perform inspections at least once prior to the rainy season annually.

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Appendix

A

Stormwater Pollutant Sources/ Source Control Checklist

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APPENDIX—STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

How to use this worksheet:

1. Review Column 1 and identify which of these potential sources of stormwater pollutants apply to your site. Check each box that applies.

2. Review Column 2 and incorporate all of the corresponding applicable BMPs in your 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 your Project-Specific SUSMP. Use the format shown in Table 3-1 on page 31 of the *SUSMP*. Describe your 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 YOUR 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
❑ A. **On-site storm drain inlets**	❑ **Locations of inlets.**	❑ **Mark all inlets with the words "No Dumping! Flows to Bay" or similar.**	❑ **Maintain and periodically repaint or replace inlet markings.** ❑ **Provide stormwater pollution prevention information to new site owners, lessees, or operators.** ❑ **See applicable operational BMPs in Fact Sheet SC-44, "Drainage System Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com** ❑ **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."**
❑ B. **Interior floor drains and elevator shaft sump pumps**	-------	❑ **State that interior floor drains and elevator shaft sump pumps will be plumbed to sanitary sewer.**	❑ **Inspect and maintain drains to prevent blockages and overflow.**

IF THESE SOURCES WILL BE ON THE PROJECT SITE	... THEN YOUR 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
❑ C. **Interior parking garages**	-------	❑ **State that parking garage floor drains will be plumbed to the sanitary sewer.**	❑ **Inspect and maintain drains to prevent blockages and overflow.**
❑ D1. **Need for future indoor & structural pest control**	-------	❑ **Note building design features that discourage entry of pests.**	❑ **Provide Integrated Pest Management information to owners, lessees, and operators.**
❑ D2. **Landscape/ Outdoor Pesticide Use**	❑ **Show locations of native trees or areas of shrubs and ground cover to be undisturbed and retained.** ❑ **Show self-retaining landscape areas, if any.** ❑ **Show stormwater treatment facilities.**	**State that final landscape plans will accomplish all of the following.** ❑ **Preserve existing native trees, shrubs, and ground cover to the maximum extent possible.** ❑ **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.** ❑ **Where landscaped areas are used to retain or detain stormwater, specify plants that are tolerant of saturated soil conditions.** ❑ **Consider using pest-resistant plants, especially adjacent to hardscape.** ❑ **To insure successful establishment, select plants appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency, and plant interactions.**	❑ **Maintain landscaping using minimum or no pesticides.** ❑ **See applicable operational BMPs in Fact Sheet SC-41, "Building and Grounds Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com** ❑ **Provide IPM information to new owners, lessees and operators.**

IF THESE SOURCES WILL BE ON THE PROJECT SITE	... THEN YOUR 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
❑ E. **Pools, spas, ponds, decorative fountains, and other water features.**	❑ **Show location of water feature and a sanitary sewer cleanout in an accessible area within 10 feet.**	❑ **If the local municipality 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.**	❑ **See applicable operational BMPs in Fact Sheet SC-72, "Fountain and Pool Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com**
❑ F. **Food service**	❑ **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.** ❑ **On the drawing, show a note that this drain will be connected to a grease interceptor before discharging to the sanitary sewer.**	❑ **Describe the location and features of the designated cleaning area.** ❑ **Describe the items to be cleaned in this facility and how it has been sized to insure that the largest items can be accommodated.**	-------

IF THESE SOURCES WILL BE ON THE PROJECT SITE	... THEN YOUR 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
❑ G. **Refuse areas**	❑ **Show where site refuse and recycled materials will be handled and stored for pickup. See local municipal requirements for sizes and other details of refuse areas.** ❑ **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.** ❑ **Any drains from dumpsters, compactors, and tallow bin areas shall be connected to a grease removal device before discharge to sanitary sewer.**	❑ **State how site refuse will be handled and provide supporting detail to what is shown on plans.** ❑ **State that signs will be posted on or near dumpsters with the words "Do not dump hazardous materials here" or similar.**	❑ **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**
❑ H. **Industrial processes.**	❑ **Show process area.**	❑ **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."**	❑ **See Fact Sheet SC-10, "Non-Stormwater Discharges" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com**

IF THESE SOURCES WILL BE ON THE PROJECT SITE	... THEN YOUR 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
❑ I. **Outdoor storage of equipment or materials. (See rows J and K for source control measures for vehicle cleaning, repair, and maintenance.)**	❑ **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.** ❑ **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.** ❑ **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.**	❑ **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:** ▪ **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**	❑ **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**

IF THESE SOURCES WILL BE ON THE PROJECT SITE	… THEN YOUR 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
❑ J. **Vehicle and Equipment Cleaning**	❑ **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.**	❑ **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):** ❑ **Washwater from vehicle and equipment washing operations shall not be discharged to the storm drain system.** ❑ **Car dealerships and similar may rinse cars with water only.** ❑ **See Fact Sheet SC-21, "Vehicle and Equipment Cleaning," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com**

IF THESE SOURCES WILL BE ON THE PROJECT SITE	... THEN YOUR 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
❑ K. **Vehicle/Equipment Repair and Maintenance**	❑ **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.** ❑ **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.** ❑ **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.**	❑ **State that no vehicle repair or maintenance will be done outdoors, or else describe the required features of the outdoor work area.** ❑ **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.** ❑ **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.**	**In the SUSMP report, note that all of the following restrictions apply to use the site:** ❑ **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.** ❑ **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.**

IF THESE SOURCES WILL BE ON THE PROJECT SITE	... THEN YOUR 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
❑ L. **Fuel Dispensing Areas**	❑ **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.** ❑ **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.**	-------	❑ **The property owner shall dry sweep the fueling area routinely.** ❑ **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.**

IF THESE SOURCES WILL BE ON THE PROJECT SITE	... THEN YOUR 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
❑ M. **Loading Docks**	❑ **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.** **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.** ❑ **Provide a roof overhang over the loading area or install door skirts (cowling) at each bay that enclose the end of the trailer.** ❑	-------	❑ **Move loaded and unloaded items indoors as soon as possible.** ❑ **See Fact Sheet SC-30, "Outdoor Loading and Unloading," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com**
❑ N. **Fire Sprinkler Test Water**	-------	❑ **Provide a means to drain fire sprinkler test water to the sanitary sewer.**	❑ **See the note in Fact Sheet SC-41, "Building and Grounds Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com**

IF THESE SOURCES WILL BE ON THE PROJECT SITE	... THEN YOUR 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
O. **Miscellaneous Drain or Wash Water** ❑ **Boiler drain lines** ❑ **Condensate drain lines** ❑ **Rooftop equipment** ❑ **Drainage sumps** ❑ **Roofing, gutters, and trim.**	---	❑ **Boiler drain lines shall be directly or indirectly connected to the sanitary sewer system and may not discharge to the storm drain system.** ❑ **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.** ❑ **Rooftop mounted equipment with potential to produce pollutants shall be roofed and/or have secondary containment.** ❑ **Any drainage sumps on-site shall feature a sediment sump to reduce the quantity of sediment in pumped water.** ❑ **Avoid roofing, gutters, and trim made of copper or other unprotected metals that may leach into runoff.**	---
❑ P. **Plazas, sidewalks, and parking lots.**	---	---	❑ **Plazas, sidewalks, and parking lots shall be swept regularly to prevent the accumulation of litter and debris. Debris from pressure washing shall be collected to prevent entry into the storm drain system. Washwater containing any cleaning agent or degreaser shall be collected and discharged to the sanitary sewer and not discharged to a storm drain.**

Appendix

B

Hydromodification Management Plan

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