

CITY OF SOLANA BEACH
JURISDICTIONAL URBAN RUNOFF
MANAGEMENT PROGRAM

PREPARED BY:

**CITY OF SOLANA BEACH AND
URS CORPORATION**

FEBRUARY 12, 2002

**CITY OF SOLANA BEACH
JURISDICTIONAL URBAN
RUNOFF MANAGEMENT
PROGRAM**

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SIGNED CERTIFIED STATEMENT

**CITY OF SOLANA BEACH
JURISDICTIONAL URBAN RUNOFF MANAGEMENT PROGRAM
FEBRUARY 2002**

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Chandra P. Collure, P.E.
City Engineer, City of Solana Beach

Date

The City of Solana Beach has developed this Jurisdictional Urban Runoff Management Program (JURMP) to comply with Order No. 2001-01, NPDES Permit No. CAS0108758, Water Discharge Requirements for Discharges of Urban Runoff From Municipal Separate Storm Sewer Systems Draining Watersheds of the County of San Diego, the Incorporated Cities of San Diego and The San Diego Unified Port District (hereinafter referred to as the "Permit"), issued by the California Regional Water Quality Control Board (RWQCB), San Diego Region. The Permit was issued on February 21, 2001 and is valid for five years. This document will be submitted to the RWQCB for approval on February 21, 2002.

The purpose this JURMP is to implement programs to reduce pollution in urban runoff, including programs to regulate new public and private land development during each of the three major phases of urban development, i.e., the planning, construction, and existing development (or use) phases. Each component of the JURMP closely follows the order of the Permit requirements. A brief description of the JURMP section, JURMP section number, and corresponding Permit section number is provided in the JURMP Compliance Reference Index presented after the Table of Contents.

This JURMP will be revised as needed to reflect changes in the City's urban runoff management programs such as revised or new best management practices or new educational or training programs. The annual updates will also reflect changes in the City's commercial, industrial, and municipal databases, including revisions to facility/activity prioritizations that will be refined as additional monitoring and inspection data becomes available.

The City will submit a JURMP Annual Report, which will contain a comprehensive description of all activities conducted by the City to meet Permit requirements applicable to each component of the JURMP. The JURMP Annual Report will include a summary of all illicit discharge complaints and resolutions, and summaries of inspections, enforcement actions, and educational programs. A description of the mechanisms implemented to achieve public participation, budget information, identification of water quality improvements or degradation, and identification of management measures ineffective in reducing pollutants, will also be discussed. The JURMP Annual Report will assess the effectiveness of each component's program in reducing pollutants in urban runoff. The annual assessments will be used to implement revisions, where appropriate, to the City's JURMP.

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2.1		Implement pollution prevention methods and require use by appropriate municipal departments and personnel.	F.3.a.(1)
2.2		Develop and update annually, a watershed-based inventory of all municipal land use areas and activities that generate pollutants.	F.3.a.(2)
2.3		Prioritize each watershed inventory by threat to water quality and update annually. Each municipal area and activity shall be classified as high, medium, or low threat.	F.3.a.(3)
2.4		Designate and implement, or require the implementation of, a set of minimum BMPs for high, medium, and low threat to water quality municipal areas and activities. Implement or require implementation of additional controls for areas and activities tributary to Clean Water Act Section 303(d).	F.3.a.(4)
2.5		Implement a schedule of maintenance activities at all structural controls and for the municipal separate storm sewer system.	F.3.a.(5)
2.6		Implement BMPs to reduce the contribution of pollutants associated with pesticides, herbicides, and fertilizers from municipal areas and activities.	F.3.a.(6)
2.7		Inspect high priority municipal areas and activities annually. Implement follow-up actions as necessary.	F.3.a.(7)
2.8		Enforce storm water ordinances for all municipal areas and activities.	F.3.a.(8)
3.0		Implement an Industrial Component to reduce pollutants in runoff from all industrial sites.	F.3.b
3.1		Implement pollution prevention methods in the Industrial Component and require its use by industry.	F.3.b.(1)
3.2		Develop and update annually a watershed-based inventory of all industrial sites regardless of ownership.	F.3.b.(2)
3.3		Prioritize each watershed inventory by threat to water quality and update annually. Each industrial site shall be classified as high, medium, or low threat.	F.3.b.(3)
3.4		Designate and implement, or require the implementation of, a set of minimum BMPs for high, medium, and low threat to water quality industrial sites. Implement or require implementation of additional controls for areas and activities tributary to Clean Water Act Section 303(d).	F.3.b.(4)
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3.6		Conduct industrial site inspections for compliance with ordinances, permits, and Order requirements.	F.3.b.(6)
3.7		Enforce storm water ordinances at all industrial sites as necessary to maintain compliance with Order requirements.	F.3.b.(7)
3.8		Provide oral notification to the SDRWQCB of non-compliant sites that are determined to pose a threat to human or environmental health within 24 hours of discovery.	F.3.b.(8)

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JURMP Section	Page	Requirement Summary	Permit Section
4.0		Implement a Commercial Component to reduce pollutants in runoff from commercial sites.	F.3.c.
4.1		Implement pollution prevention methods in the Commercial Component and require its use by commerce.	F.3.c.(1)
4.2		Develop and update annually an inventory of high priority threat to water quality commercial sites/sources.	F.3.c.(2)
4.3		Designate and implement, or require the implementation of, a set of minimum BMPs for high, medium, and low threat to water quality commercial sites/sources. Implement or require implementation of additional controls for areas and activities tributary to Clean Water Act section 303(d).	F.3.c.(3)
4.4		Inspect high priority commercial sites and sources annually. Implement follow-up actions as necessary.	F.3.c.(4)
4.5		Enforce storm water ordinances for all commercial sites and sources as necessary to maintain compliance with Order requirements.	F.3.c.(5)
5.0		Implement a Residential Component to prevent or reduce pollutants in runoff from all residential land use areas and activities.	F.3.d
5.1		Include pollution prevention methods in the Residential Component and encourage their use by residents.	F.3.d.(1)
5.2		Identify high priority residential areas and activities.	F.3.d.(2)
5.3		Designate and implement, or require implementation of a set of minimum BMPs for high threat to water quality residential areas and activities. Implement or require implementation of additional controls for areas and activities tributary to Clean Water Act Section 303(d).	F.3.d.(3)
5.4		Enforce storm water ordinances for all residential areas and activities as necessary to maintain compliance with Order requirements.	F.3.d.(4)
6.0		Minimize short and long-term impacts on receiving water quality from new development and redevelopment.	F.1
6.1		Assess General Plan and incorporate water quality and watershed protection principles.	F.1.a
6.2		Modify development project planning and approval process.	F.1.b
6.3		Revise environmental review processes to include requirements for evaluation of water quality effects and identification of appropriate mitigation measures.	F.1.c
6.4		Implement an education program to ensure that planning and development review staff have an understanding of issues associated with new development and redevelopment.	F.1.d
7.0		Implement a Construction Component to reduce pollutant in runoff from construction sites during all construction phases.	F.2
7.1		Implement pollution prevention methods and require its use by construction site owners, developers, contractors, and other responsible parties.	F.2.a
7.2		Review and update grading ordinances as necessary for compliance with storm water ordinances and Order requirements.	F.2.b

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JURMP Section	Page	Requirement Summary	Permit Section
7.3		Require all individual proposed construction and grading projects to implement measures to ensure that pollutants from the site will be reduced to the maximum extent practicable and will not cause or contribute to an exceedance of water quality objectives.	F.2.c
7.4		Annually develop and update, prior to the rainy season, a watershed-based inventory of all construction sites regardless of site size or ownership.	F.2.d
7.5		Prioritize the watershed-based inventory by threat to water quality. Each site shall be classified as high, medium, or low threat.	F.2.e
7.6		Designate a set of minimum BMPs for high, medium, and low threat to water quality construction sites.	F.2.f
7.7		Conduct construction site inspections for compliance with ordinances (grading, storm water, etc.), permits (construction, grading, etc.), and Order requirements and establish inspection frequencies and priorities as determined by the threat to water quality.	F.2.g
7.8		Enforce ordinances (grading, storm water, etc.) and permits (construction, grading, etc.) at all construction sites as necessary to maintain compliance with Order requirements.	F.2.h
7.9		Develop and submit criteria by which to evaluate events of non-compliance to determine whether they pose a threat to human or environmental health.	F.2.i
7.10		Implement a construction activities education program for municipal staff and applicants, contractors, developers, property owners, and other responsible parties.	F.2.j
8.0		Implement an Illicit Discharge Detection and Elimination Component containing measures to actively seek and eliminate illicit discharges and connections.	F.5
8.1		Implement a program to actively seek and eliminate illicit discharges and connections to MS4s.	F.5.a.
8.2		Conduct dry weather analytical modeling of MS4 outfalls to detect illicit discharges and connections.	F.5.b.
8.3		Investigate and inspect any portion of the MS4 that, based on the dry weather modeling results or other information, indicates a potential for illicit discharges, illicit connections, or other sources of non-storm water. Establish criteria to identify portions of the system where follow-up investigations are appropriate.	F.5.c.
8.4		Eliminate all detected illicit discharges, discharge sources, and connections immediately.	F.5.d.
8.5		Implement and enforce all ordinances, or other legal authority to prevent and/or eliminate illicit discharges and connections to the MS4.	F.5.e.
8.6		Prevent, respond to, contain, and clean up all sewage and other spills that may discharge into the MS4 from any source. Prevent entry of spills into the MS4 and contamination of surface water, groundwater, and the soil. Implement a mechanism to be notified of sewage spills.	F.5.f.

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JURMP Section	Page	Requirement Summary	Permit Section
8.7		Promote, publicize, and facilitate public reporting of illicit discharges or water quality impacts associated with discharges into or from MS4s. Develop and operate a public hotline.	F.5.g.
8.8		Facilitate the management and disposal of used oil, toxic material, and other household hazardous wastes.	F.5.h.
8.9		Implement controls and measures to limit infiltration of seepage from municipal sanitary sewers to MS4s through thorough, routine, preventative maintenance of the MS4.	F.5.i.
9.0		Implement an Education Component using all media as appropriate to measurably increase knowledge and to measurably change the behavior of target communities to reduce pollutant releases to MS4s and the environment.	F.4
10.0		Incorporate a mechanism for public participation in the implementation of the JURMP.	F.6
11.0		Develop a long-term strategy for assessing the effectiveness of the individual JURMP. In the JURMP annual report, include and assessment of the effectiveness of the individual JURMP using the strategies developed.	F.7
12.0		Secure the resources necessary to meet the requirements of Order requirements. Develop a strategy to conduct a fiscal analysis of the JURMP.	F.8

1.1 PURPOSE OF DOCUMENT

Urban runoff discharges from municipal separate storm sewer systems (MS4s) are known to be a leading cause of receiving water quality impairment in the San Diego Region and throughout the United States. As runoff flows over urban areas, it picks up harmful pollutants. These pollutants often become dissolved or suspended in urban runoff and are conveyed and discharged to receiving waters without treatment. To help reduce this problem, the Federal Clean Water Act (CWA) directs the U.S. Environmental Protection Agency (EPA) to impose storm water discharge permits through the National Discharge Elimination System (NPDES) Program. One of the requirements of the local municipal NPDES permit program is the implementation of Jurisdictional Urban Runoff Management Programs (JURMPs) to reduce discharges of pollutants and flow into and from MS4s to the maximum extent practicable (MEP) for the purpose of protecting receiving water quality.

1.2 BACKGROUND

In 1972, the Federal CWA was amended to provide that the discharge of pollutants to water of the U.S. from any point source is unlawful unless the discharge is in compliance with an NPDES permit. In 1987, amendments to the CWA added Section 402(p), which establishes a framework for regulating municipal and industrial storm water discharges under the NPDES Program. In California, the municipal permit program is being implemented by the Regional Water Quality Control Boards (RWQCB) in accordance with the November 1990 Federal storm water regulations (40 CFR Part 122). These regulations require that all MS4s, which serve populations over 100,000 obtain NPDES storm water discharge permits.

The City of San Diego, San Diego County, the San Diego Unified Port District, and 17 cities; including the City of Solana Beach (collectively referred to as Copermittees) were issued a storm water permit from the San Diego RWQCB (SDRWQCB) on July 16, 1990 (Order 90-42, NPDES No. CA 0108758), which established urban runoff waste discharge requirements. The monitoring requirements of the permit were published on October 31, 1995 under the RWQCB Monitoring and reporting Program Order No. 95-76 (Order No. 96-76). A Technical Change Order No. 1 amending Order No. 95-76 was published in January 1996. On February 21, 2001, the SDRWQCB adopted Order 2001-01 (Order 2001-01), NPDES No. CAS0108758 (Permit). In compliance with this Permit, each of the Copermittees is required to develop JURMPs.

1.3 SUMMARY OF NPDES REQUIREMENTS

The NPDES Permit requires each of the twenty (20) municipal Copermittees or discharges, which own or operate MS4s that discharge urban runoff into waters of the United States within the San Diego Region, implement programs to reduce pollution in urban runoff, including programs to regulate new public and private land development during each of the three major phases of urban development, i.e., the planning, construction, and existing development (or use) phases. The Permit requires that each Copermittee implement a JURMP that contains the components described in Sections F.1 through F.8 of the Permit including:

- F.1 Land-Use Planning for New Development and Redevelopment
- F.2 Construction Component
- F.3 Existing Development Component
 - a) Municipal
 - b) Industrial
 - c) Commercial
 - d) Residential.
- F.4 Educational Component
- F.5 Illicit Discharge Detection and Elimination Component
- F.6 Public Participation Component
- F.7 Assessment of JURMP Effectiveness Component
- F.8 Fiscal Analysis Component

The Permit requires that high priority facilities be identified, and that minimum structural and non-structural BMPs be established for high priority facilities. The Permit also requires that a process for ensuring the application of BMPs be implemented and enforced by each Copermitttee. In accordance with Permit section N.1, the Copermitttees have developed Model Programs for each component of the Permit to promote consistency among Copermitttee programs.

1.4 OVERVIEW OF COPERMITTEE

The City of Solana Beach (City) is a small city located in southern California on the central coast of San Diego County. It is bordered to the west by the Pacific Ocean, to the north by San Elijo Lagoon and the City of Encinitas, to the east by San Dieguito County Park and rural residences, and to the south by the San Dieguito River Valley and the City of Del Mar.

According the SDRWQCB's report, Watershed Management Approach (January 2000), Solana Beach is located within the Carlsbad and San Dieguito River Watershed Management Areas (WMA). Major surface water bodies in the Carlsbad WMA that receive or convey urban runoff discharges from the City of Solana Beach include the San Elijo Lagoon; located partially within Solana Beach, tributary streams, and the Pacific Ocean. The San Dieguito River/ Estuary, tributary streams, and Pacific Ocean are the major surface water bodies in Solana Beach within the San Dieguito River WMA.

The San Elijo Lagoon, Pacific Ocean (including Fletcher Cover and Seascape Sur Beach Park), and the San Dieguito River/Estuary were designated as impaired by the SDRWQCB and USEPA in 1998 pursuant to CWA section 303(d). The 303(d) pollutants of concern identified for San Elijo Lagoon and the Pacific Ocean within the Carlsbad WMA include coliform bacteria, nutrients, and sediment. Coliform bacteria are identified as a 303(d) pollutant of concern for the San Dieguito River/Estuary, and Pacific Ocean within the San Dieguito River WMA. Additionally, both the San Elijo Lagoon and the San Dieguito River/Estuary are listed in the SWRQB's 1994 Water Quality Control Plan for the San Diego Basin as Areas of Special Biological Significance and as water bodies with the RARE Beneficial Use designation.

1.5 OVERVIEW OF SOLANA BEACH JURMP

This document follows Universal JURMP Organization outline and is organized in 15 sections. Each section addresses a required component of the JURMP as set forth in the Permit. This outline was provided to the copermitees with the intention of providing consistency in document structure. In accordance with the Permit, the document is provided to the County of San Diego (lead Copermitee) who in turn collectively submits JURMPs for all Copermitee to the SDRWQCB.

In accordance with Permit Section F.3.a, this Section of the JURMP describes the City of Solana Beach's program to prevent or reduce pollutants in runoff from all municipal land use areas and activities. High priority existing municipal facilities and activities within the City and minimum BMPs that will be required for each priority are identified. This Section also outlines the program that will be implemented by the City for ensuring that BMPs are implemented and enforced. The goal of this program is to minimize or avoid the impacts of municipal activities on receiving waters and other environmental resources in the City of Solana Beach and, where possible, to enhance the quality of these resources. The following will be conducted in support of this goal:

- Implement policies and practices that minimize the impacts of municipal activities on the City of Solana Beach's receiving waters and other environmentally sensitive areas.
- Develop programs for municipal activities that will meet or exceed compliance obligations under Order No.2001-01.
- Maintain compliance with NPDES permit requirements and other applicable environmental laws and regulations.
- Establish and maintain a viable balance between the City of Solana Beach's needs and the protection of its environmental resources.

This JURMP implements a number of comprehensive program activities to address storm water discharges from existing municipal facilities or areas. These activities include: Pollution Prevention; Source Identification, Threat to Water Quality Prioritization; BMP Implementation; Maintenance of MS4; Management of Pesticides, Herbicides, and Fertilizers; Inspection; and Enforcement. This Section provides a description of each of these program activities and specific permit requirements pertaining to each.

2.1 POLLUTION PREVENTION (F.3.a.(1))

Urban runoff contains a variety of pollutants resulting from pavement and vehicle wear, atmospheric deposition, and littering. These pollutants are predominantly associated with runoff from streets and other paved surfaces and include: hydrocarbons, heavy metals from clutch and brake wear, vehicle exhaust and leaking motor fluids; particulates from road abrasion; and trash. Public sidewalks, plazas, parking lots, parks, and corporate yards are some of the other areas from where pollutants are carried into storm drains by runoff.

As described in this Section, the City of Solana Beach has established a pollutant control program that is focused on municipal operations, including operation and maintenance of its MS4 system with the goal of preventing and reducing pollutants in runoff. This program develops structural and non-structural BMPs that are required for use by appropriate municipal departments and personnel, were appropriate, for the purpose of pollution prevention.

2.2 SOURCE IDENTIFICATION (F.3.a.(2))

Municipal facilities and areas within the City of Solana Beach include public parks, public buildings, streets, roads, and parking lots, a public works yard, and the MS4 system. Table 2-1

identifies a watershed based inventory of existing municipal land use areas and activities that have the potential to generate pollutants within the City of Solana Beach that the City is responsible for maintaining. This inventory will be updated annually.

2.3 THREAT TO WATER QUALITY PRIORITIZATION (F.3.a.(3))

In accordance with Permit section F.3.a.(3) (a) and (b) criteria, existing municipal facilities and areas have been prioritized as high, medium, or low, based on their potential threat water quality from storm water runoff. These are presented in Tables 2-2, 2-3, and 2-4, respectively. In development of the prioritization program, dry-weather monitoring data that has been collected by the City of Solana Beach since 1993, and records of complaints or violations were evaluated. The results of the dry-weather monitoring program from the last eight years have not indicated any serious problems with illegal discharges or illicit connections associated with existing Municipal facilities or areas within the City of Solana Beach storm water drainage system. However, as discussed below, evidence of minor illegal and/or illicit short-term discharges has been detected at isolated locations throughout the monitoring program. Storm water complaints and other types of code compliance issues were reviewed for historical trends to identify types of recurring violations or areas where problems occur most frequently. None of these records that were reviewed during this initial prioritization identified recurring violations associated with existing Municipal facilities or activities.

High priority existing municipal sites in the City of Solana Beach that were identified based on criteria established by the Permit in Section F.3.a include roads, streets, parking facilities, a public works yard and the MS4 system. In addition, North Seascape Surf Park was identified as a high priority municipal site based on the results of the dry weather monitoring data. Evidence of minor discharges including elevated concentrations of ammonia, total, and fecal coliform, have been detected at the outfall (O-02) located at North Seascape Surf Park in dry-weather monitoring data collected since 1997. The public shower located at North Seascape Surf Park, may in part be a source of the total and fecal coliform measured in this area and is therefore ranked as high priority. If the shower is turned off or shown not to be the source of the elevated levels of coliform, then this facility will no longer be a high priority.

Medium priority municipal sites were also determined on the results of dry-weather monitoring data, their proximity to receiving waters, anticipated pollutants, and the presence of structural controls. In general, municipal facilities ranked as medium priority have the potential to generate the identified 303(d) pollutants of concern, but with the exception of Fletcher Cove, have not been identified as pollutant sources based on the results of the dry-weather monitoring data. The dry weather monitoring data indicated that elevated coliform levels were detected in 1996 at the Fletcher Cove Outfall (O-03A). A low-flow diverter was subsequently constructed at Fletcher Cove, which diverts dry weather runoff into the sanitary sewer. The diverter pumps 40 gallons per minute, year round, 24-hours a day. Runoff is only discharged at Fletcher Cove outfall during storm runoff events that exceed 40 gallons per minute. Elevated total and fecal coliform is still present in runoff discharging into the low flow diverter. The source of the total and fecal coliform is currently being investigated. Therefore this facility is ranked as medium priority in the event that the low flow diverter would malfunction.

**Table 2-1
EXISTING MUNICIPAL FACILITIES**

Facility Name	Facility Address	Type of Activity	Watershed
City of Solana Beach City Hall	635 S. Highway 101	Public Building -Administrative	San Dieguito River, drains to dog beach
City of Solana Beach Fire Department	500 Lomas Santa Fe	Public Building - Fire Station Administrative, fire equipment storage	Carlsbad, drains to Fletcher Cove
Marine Safety Department, Fletcher Cove	111 S. Sierra Ave.	Public Building Administrative, marine safety equipment storage	Carlsbad
Public Works Dept.	1764 Highland Drive	Public Building – Administrative, materials storage, fleet parking	San Dieguito River, drains to Stevens Creek
La Colonia Park and Community Center	715 Valley Ave	Public Park and Building – Community Center, administrative, open space	San Dieguito River
North Seascape Sur Surf Park	Public beach access west of Highway 101, south of Solana Beach and Tennis Club	Public beach	San Dieguito River
Tide Beach Park	302 Solana Vista Drive	Public beach	Carlsbad
Roads, streets,	City Wide - Major thorough fares: Highway 101, Lomas Santa Fe, Stevens St., Cedros Ave.	Circulation	Carlsbad and San Dieguito River
Parking Lots Fletcher Cover Distillery Solana Beach and Tennis Club Seascape Sur Del Mar Shores Del Mar Beach Club East La Colonia Public Park	North end of Plaza St. Intersection of Sierra and Lomas Santa Fe West end of Dahlia St. Seascape Sur Easement Sierra Ave. near Del Mar Terrace Sierra Ave. east of Del Mar Beach Club Dr.	Parking	Carlsbad San Dieguito River San Dieguito River San Dieguito River San Dieguito River San Dieguito River Carlsbad
MS4 System	City-wide	Storm-water conveyance system	Carlsbad and San Dieguito River

**Table 2-2
EXISTING HIGH PRIORITY MUNICIPAL FACILITIES**

Facility Name	Facility Address	Type of Activity	Watershed
Public Works Yard	1764 Highland Drive	Public Building – Administrative, materials storage, fleet parking	Carlsbad
North Seascape Sur Surf Park	Coastal Park west of Highway 101, south of Solana Beach and Tennis Club	Public beach	San Dieguito River
Roads, streets,	City Wide - Major thoroughfares: Highway 101, Lomas Santa Fe, Stevens St., and Cedros Ave.	Circulation	Carlsbad and San Dieguito River
Parking Lots Fletcher Cover Distillery Solana Beach and Tennis Club Seascape Sur Surf Park Del Mar Shores Del Mar Beach Club East La Colonia Public Park	North end of Plaza St. Intersection of Sierra and Lomas Santa Fe West end of Dahlia St. Seascape Sur Easement Sierra Ave. near Del Mar Terrace Sierra Ave. east of Del Mar Beach Club Dr. 715 Valley Ave	Public Parking	Carlsbad San Dieguito River San Dieguito River San Dieguito River San Dieguito River San Dieguito River
MS4 System	City-wide	Storm-water conveyance system	Carlsbad and San Dieguito River Watershed

**Table 2-3
EXISTING MEDIUM PRIORITY MUNICIPAL FACILITIES**

Facility Name	Facility Address	Type of Activity	Watershed
City of Solana Beach Fire Department	500 Lomas Santa Fe	Public Building - Fire Station Administrative, fire equipment storage	Carlsbad, drains to Fletcher Cove

**Table 2-4
EXISTING LOW PRIORITY MUNICIPAL FACILITIES**

Facility Name	Facility Address	Type of Activity	Watershed
City of Solana Beach City Hall	635 S. Highway 101	Public Building –Administrative	San Dieguito River
Marine Safety Department/ Fletcher Cove Park	111 S. Sierra Ave.	Public Building Administrative, marine safety equipment storage	San Dieguito River,
Parks and Recreation Dept.	715 Valley Ave	Public Building – Administrative	San Dieguito River
Tide Beach Park	302 Solana Vista Drive	Public beach	Carlsbad
La Colonia Park and Community Center	715 Valley Ave	Public Park and Building – Community Center, administrative, open space	San Dieguito River, drains to Stevens Creek

Low priority municipal sites are not anticipated to generate significant pollutants.

Monitoring or other data will be used to periodically re-evaluate this inventory to provide support for the removal of a previously identified pollutant or presently prohibited activity and to ensure that resources are appropriately allocated.

2.4 BMP IMPLEMENTATION (F.3.a.(4))

In accordance with Permit Section F.3.a.(4) the City of Solana Beach has established a set of minimum BMPs that are required to be implemented for high, medium, and low threat to water quality municipal areas and activities as identified in Section 2.1.3. The goal of this program is to ensure storm water pollution prevention practices are implemented in accordance with Permit requirements. The ultimate success of these BMPs will be dependant on elevating employee awareness of the importance of proper storm water management and educating employees on potential pollutant sources. Designated BMPs for Specific Municipal Activities/Areas are described below. Site-specific BMPs will be developed during annual inspections, as needed.

Roads and Street Maintenance

Activities on and around roads and streets may generate waste, spills and leaks that have the potential to reach the storm drain system and ultimately enter receiving waters through storm water runoff or as non-storm water discharges. Potential pollutant generating activities associated with road and streets include: vehicle and non-vehicle public use, minor repairs, potholing, construction (placement of pedestrian ramps, sidewalks), maintenance of drainage channels, median landscaping, and repaving activities. These activities have the potential generated heavy metals, oil and grease, herbicides, pesticides, paints, solvents, battery acid, anti-freeze, litter, green waste, and sediment. Roads and streets are designated as high priority facilities. The high priority BMPs that the City of Solana Beach is implementing to reduce potential pollutants originating from road and street activities are listed in Table 2-5. Site-specific BMPs will be developed during annual inspections, as needed.

**Table 2-5
DESIGNATED MINIMUM BMPs FOR ROADS AND STREETS MAINTENANCE**

BMP	Description
Street Sweeping	The City of Solana Beach is currently implementing a street sweeping program. The residential streets are swept once each month, and major arterial streets are swept four times each month throughout the year. Temporary “no parking” signs are posted in areas where there are chronic hindrances due to parked cars.
Vegetation Control	The City currently implements mechanical vegetation control measures including mowing, brush and tree trimming along roadways, swales, and open channels to reduce the amount of vegetation entering the drainage conveyance system. The only herbicide currently used by the City for vegetation control is Round-Up™, which reportedly degrades within 24 hours of application. This material is conducted on as an-needed basis along roadside right-of-ways and is applied in accordance with manufacturer recommended guidelines.
Roadway and Bridge Maintenance	The following BMPs will be implemented during road and bridge maintenance activities: <ul style="list-style-type: none"> • Repair potholes to reduce sediment loss and erosion. • Collect all spare filling material. • Conduct maintenance measures during dry weather. • Barricade drain inlets to reduce sediment or waste form entering the drain during maintenance and construction activities. • Store materials away form conveyance systems. • Construct temporary onsite washout areas. • Manage concrete cutting waste properly • Inspect maintenance equipment for leaks
Visual Inspections	The Public Works Department conducts inspections of the roadways on a regular on-going basis and associated storm water conveyance systems once per year.
Employee Training	The City of Solana Beach will train all its employees to keep them up to date with storm water issues and pollution prevention methods. All Public Works employees, code enforcement, and Engineering staff have attended a training session on the storm water ordinances and enforcement issues.. City staff also attends local Storm Water Quality Task Force meetings, Copermittee meetings and other regional conferences. Other employee-training programs will be implemented in the future and will include both formal and informal training. The frequency of future training will take into account the complexity of the operations and the nature of the staff. Training tools that may be included in the municipalities training program are: <ul style="list-style-type: none"> • Employee handbooks, • Films and slide presentations, • Routine employee meetings, • Bulletin boards, • Suggestion boxes, and • Newsletters, and

Parking Facilities Management

Activities on and around parking facilities may generate waste, spills and leaks that could potentially reach the storm drain system and receiving waters in storm water runoff or as non-storm water discharges. Potential pollutant generating activities associated with parking facilities include: sweeping, degreasing, and parking of vehicles and equipment. These activities have the potential generated oils and grease, battery acid, anti-freeze, litter, and heavy metals. Parking facilities are designated as high priority facilities. The high priority BMPs that the City of Solana Beach is implementing to reduce potential pollutants originating from parking facilities are listed in Table 2-6. Site-specific BMPs will be developed during annual inspections, as needed.

**Table 2-6
DESIGNATED MINIMUM BMPs FOR PARKING FACILITIES**

BMP	Description
Sweeping	The City of Solana Beach is currently implementing a municipal parking lot sweeping program. Municipal parking lots are swept once each month. Temporary “no parking” signs are posted in areas where there are chronic hindrances due to parked cars.
Visual Inspections	The Public Works Department conducts inspections of municipal parking facilities on a daily basis.
Employee Training	A description this BMP was presented above under Road and Street Maintenance. The frequency of future training will take into account the complexity of the operations and the nature of the staff.

Public Works Yard

The City’s Public Works Yard is used for vehicle parking and materials storage. No vehicle maintenance is conducted at the Public Works Yard. All fueling and servicing is conducted offsite at commercial gas stations or vehicle repair facilities. Minor quantities of materials including fertilizer, herbicides, asphalt and tack adhesives, are kept in secured areas. Potential pollutant generating activities associated with Public Works Yard includes asphalt patching, materials storage and parking of equipment and vehicles. These activities have the potential to generate oils and grease, heavy metals, pesticides, herbicides, and fertilizers, and litter. The Public Works Yard is a designated high priority facility. The high priority BMPs that the City of Solana Beach is implementing to reduce potential pollutants associated with the Public Works Yard are listed in Table 2-7. Site-specific BMPs will be developed during annual inspections, as needed.

**Table 2-7
DESIGNATED MINIMUM BMPs FOR PUBLIC WORKS YARD**

BMP	Description
Materials Storage	Only minor quantities of materials including fertilizers, herbicides, asphalt patch and tack adhesives are stored at the Public Works Yard at any one time. These materials are stored in a secured area, isolated from rain events and run-off. A secured hazardous materials shed is located at the yard for use by the Fire or Police Departments for temporary hazardous materials storage. Personnel handling these materials are instructed on proper handling procedures.
Visual Inspections	The Public Works Department inspects the public yard on a daily basis.
Improved Operation and Maintenance	Proper operation and maintenance practices will be implemented to ensure processes and equipment are working well to reduce pollutants to receiving waters.
Good Housekeeping	Soapy water remaining in mop or wash buckets are discharged to the sanitary sewer through a sink, toilet, clean-out or wash area with drain. Litter is routinely swept, shoveled and disposed into the trash. Dry clean-up techniques are used when necessary for chemical or oil spills. (e.g. scatter absorbent on the spill, let it completely absorb then sweep it all up and dispose of it in the proper manner).
Preventative Maintenance	Onsite equipment is maintained in good working condition. Facility equipment is inspected on a regular basis to minimize leaks.
Spill Prevention	Secondary Containment - a secondary containment system is used to prevent spills of Tack adhesive used during asphalt patching. The hazardous materials storage shed is equipped with a secondary containment device. Bio-filter roll – All runoff leaving site flows through a filter material to collect sediments and pollutants, before exiting the site. Training – All employees are trained on spill prevention procedures.
Sediment and Erosion Control	With the exception of a narrow strip of land at the north-end of the Public Works Yard, it is entirely asphalt-paved or covered with structures. A bio-filter log filters all run off leaving site.
Employee Training	A description of this BMP was presented above under Road and Street Maintenance. The frequency of training will take into account the complexity of the operations and the nature of the staff.
Vehicle and Equipment Maintenance Operations	No vehicle or equipment servicing is conducted at the Public Works Yard. Parked vehicles are monitored closely for leaks and pans will be placed under any leaks to collect the fluids for proper disposal or recycling.
Waste Disposal and Recycling	Waste disposal areas are kept free of litter and debris. Dumpsters are located in north end of the yard and are used to collect landscape-trimming debris, street-sweeping debris, and general litter collected from the yard. Waste is segregated in dumpsters. The dumpsters are equipped with covers to prevent the contents from being dispersed by the wind or coming in contact with storm water. A contracted waste hauler removes waste on a weekly basis.
Vehicle Equipment and Washing	No vehicle or equipment washing is permitted at the Public Works Yard. Equipment is washed at commercial facilities.
Storage Tanks	No above or below ground storage tanks are permitted at the Public Works Yard.
Outside Storage	No outside storage of materials that could contribute pollutants is permitted.

Landscape and Recreational Facilities Management

Activities in and around landscape and recreational facilities may generate waste, spills and leaks that could potentially reach the storm drain system and receiving waters via storm water runoff or non-storm water discharges. Potential pollutant generating activities associated with landscape and recreational facilities include: grounds keeping, sanitary portal maintenance, and pest control. These activities have the potential to generate litter, oxygen-demanding substances, sediment, bacteria, oil and grease, nutrients, pesticides, herbicides, and other potentially hazardous materials. Minimum designated BMPs that the City of Solana Beach will require to be implemented to reduce potential pollutants originating from activities associated with Landscape and Recreational Facilities from all priority areas are listed in Table 2-8. Site-specific BMPs will be developed during annual inspections, as needed.

Public Buildings

Activities in and around public buildings may generate waste, spills and leaks that could potentially reach the storm drain system and receiving waters in storm water runoff or as non-storm water discharges. Potential pollutant generating activities associated with City of Solana Beach public buildings include: landscaping, parking, materials storage, maintenance, and pest control. These activities have the potential to generate litter, oxygen-demanding substances, sediment, bacteria, nutrients, oils and grease, pesticides, herbicides, and other potentially hazardous materials. Minimum designated BMPs that the City of Solana Beach will require to be implemented to reduce potential pollutants originating from activities associated with all priority Public Buildings are listed in Table 2-9. Site-specific BMPs will be developed during annual inspections, as needed.

2.5 MAINTENANCE OF MUNICIPAL SEPARATE STORM SEWER SYSTEM (F.3.a.(5))

The City is responsible for developing a MS4 operation and maintenance schedule that meets the requirements of Permit Section F.3.a(5). The goal of this schedule is to reduce the impact of storm drain operation and maintenance activities on storm water quality. The schedule shall include (a) maintenance activities for all structural controls designed to reduce pollutant discharges to or from its MS4 and related drainage structures, and (b) maintenance activities for the municipal separate storm sewer system. The maintenance schedule at a minimum must include the following:

- Inspection and removal of accumulated waste between May 1 and September 20 of each year.
- Additional cleaning as necessary between October 1 and April 30 of each year.
- Maintenance of records documenting cleaning and waste material removal.
- Proper disposal of waste in accordance with applicable laws.
- Measures to eliminate waste discharge during MS4 maintenance and cleaning.

**Table 2-8
DESIGNATED MINIMUM BMPs FOR LANDSCAPE
AND RECREATIONAL FACILITIES**

BMP	Description
Materials Storage	No potentially hazardous materials are stored at the City's Landscape and Recreational Facilities. Cover construction materials temporarily stored.
Pesticide, Herbicide, and Fertilizer Application and Handling	Pesticide, Herbicide and Fertilizer Application will be conducted in accordance with the procedures described in Section 2.1.6 below.
Facility Repair, Remodeling and Construction	The following BMPs will be employed during repair, remodeling, and construction of municipal facilities such as restrooms and picnic areas: <ul style="list-style-type: none"> • Limit impervious area as much as possible • Employ sediment traps and barricades and other erosion and sediment control BMPs during grading or earth moving activity to prevent sediment from leaving construction site. • Divert all runoff away from construction.
Visual Inspections	The Public Works Department conducts inspections of municipal landscape and park facilities on an on-going basis.
Facility and Grounds Maintenance	Litter and debris is collected and disposed of properly on a daily basis. All paved surfaces will be swept if necessary and the waste will be collected and properly disposed
Good Housekeeping	All materials used in the construction and maintenance of park and landscaping facilities will be protected from exposure to rain. Solid waste will be collected by a contractor on a weekly basis. All green waste will be collected and properly disposed. Materials such as sand and gravel will be stored in covered areas and away from any potential drainage or storm water conveyance systems. All pesticides and fertilizer tanks will be routinely checked for leaks or spills. In the event of a leak or spill proper maintenance and spill control procedures will be implemented to prevent any contamination of the storm water conveyance system, or adjacent creeks, lakes, or rivers. <ul style="list-style-type: none"> • Information on good housekeeping practices will be distributed during employee training sessions. • Good housekeeping measures will be discussed at employee meetings. • Employees will be informed of activities that could potentially cause contamination of storm water and the importance of carefully conducting these activities in areas that do not discharge/drain to storm sewers. • Good housekeeping tips and reminders will be posted on employee bulletin boards.
Landscape Waste	Landscape waste will be properly disposed as it is accumulated and will not be stockpiled near watercourses or storm drain inlets.
Sediment and Erosion Control	Unpaved or non-vegetated areas will be inspected during the rainy season for evidence of erosion. If erosion is occurring, erosion and sediment controls will be implemented such as planting, use of temporary covers, sand bags, silt fences, etc.
Employee Training	A description this BMP was presented above under Road and Street Maintenance. The frequency of training will take into account the complexity of the operations and the nature of the staff.
Waste Disposal and Recycling	Waste disposal areas will be kept free of litter and debris. Waste receptacles will have a cover or lid to prevent the contents from being dispersed by the wind or coming in contact with storm water. Waste is removed on a weekly basis by a private contractor.

**Table 2-9
DESIGNATED MINIMUM BMPs FOR PUBLIC BUILDINGS**

BMP	Description
Materials Storage	All materials will be stored in a manner that it is protected from rain and runoff. Small quantities of fuel are stored at the Marine Safety Dept. for fueling boats in a secured locker. Potentially hazardous materials are not stored at the other Public Buildings.
Pesticide, Herbicide, and Fertilizer Application and Handling	Pesticide, Herbicide and Fertilizer Application will be conducted in accordance with the procedures described in Section 2.1.6 below.
Facility Repair, Remodeling and Construction	This BMP was discussed in the Landscape and Recreational Facilities.
Visual Inspections	The Public Works Department conducts inspections of municipal buildings on an on-going basis, and inspects the associated storm water conveyance systems twice a year.
Facility and Grounds Maintenance	This BMP was discussed in the Landscape and Recreational Facilities.
Good Housekeeping	This BMP was discussed in the Landscape and Recreational Facilities.
Landscape Waste	This BMP was discussed in the Landscape and Recreational Facilities.
Sediment and Erosion Control	This BMP was discussed in the Landscape and Recreational Facilities.
Employee Training	A description this BMP was presented above under Road and Street Maintenance. The frequency of training will take into account the complexity of the operations and the nature of the staff.
Waste Disposal and Recycling	This BMP was discussed in the Landscape and Recreational Facilities.

The City’s MS4 system is maintained by the Public Works Department so that it functions hydraulically as intended during storm events. The storm drain system is inspected once a year by the Pubic Works Department, with additional inspections of Stevens Creek.

2.5.1 MS4 BMPs

The following BMPs will be implemented to prevent storm drain Operation and Maintenance (O&M) activities from contributing to pollutants that enter into the storm drain conveyance system and receiving waters.

Routine Inspection and Cleaning

1. Inspect and clean as all inlets/catch basins once a year Between May 1 and September 30.
2. Inspect and clean as needed all storm drain lines in known problem areas at least once a year.
3. Inspect and clean as needed sumps and debris racks drainage ditches and debris basins throughout the year.

4. Cleaning activities may occur on a year round basis, however, known problem areas shall be targeted prior to the rainy season.
5. Inspect and clean as needed all storm drain facilities that have been affected by emergency response activities.
6. Additional cleanings shall be conducted as necessary during the rainy season (Oct. 1st through April 30th).
7. Emergency storm water facility repairs and construction – as needed/ year round.
8. Illicit discharge detection and reporting - as encountered / year round.
9. Vegetation maintenance along conveyance system open channels – annually/year round when permitted by regulation agencies.
10. Landslide and Embankment Repair of Channels
 - Haul land or hillside debris or removed material to an approved dump site as soon as practicable. Do not dump material into or near storm drain inlets, ditches, or watercourses.
 - Notify proper regulatory agencies about material that has naturally fallen into a watercourse due to a substantial slide.
 - Use temporary erosion control measures, such as sediment basins, silt fences, hay bales, or blankets, if necessary to protect the slope until repairs have been completed. Revegetate denuded slopes as soon as practical to prevent future erosion.
11. When materials are saturated with water, dewatering will be done in an area that does not drain to storm drains or creeks, without proper filtering.

Solid Waste Management

1. As much debris, silt, trash and sediment as possible shall be removed from the storm drain system when cleaning. Debris capture systems shall be used to prevent material from washing into streams or channels.
2. Provide proper containment for the temporary storage of removal debris during cleaning. Surface types of temporary storage sites shall be of concrete, asphalt or other type of impermeable material.
3. Waste collected from drain systems shall be dewatered as necessary for proper disposal to the landfill. Dewatering sites should not drain to storm drains or receiving waters, without proper filtering.
4. Waste collected from drain systems should be recorded.

Staff/Contractor Training and Coordination

1. Provide staff training for storm drain operation and maintenance personnel at least once a year with emphasis on controlling storm water pollution through storm drain operation and maintenance.
2. Include provisions for storm water pollution prevention in contract specifications or agreements for conducting storm drain operation and maintenance.

Record Keeping and Evaluation

1. Maintain records tracking all cleaning activities. The records shall show when and which facilities have been inspected and cleaned.
2. Provide a referral and follow-up process between storm drain operation and maintenance of illicit connection and illegal dumping investigation staff for problems found.
3. Document any unusual flows observed during inspection (particularly dry weather flows) and the follow-up actions/referrals (i.e., Storm Water Program contacted, etc.).
4. Review the records annually to critique the effectiveness of storm drain operation and maintenance activities. Modifications to O&M policies and procedures shall be documented and reported.

Operational Improvement, Structural Retrofit and Design Changes

1. Review the storm drain O&M program annually and if needed, identify operational improvements, opportunities for structural retrofit and design changes.
2. O&M provisions shall be included in planning and design phases of CIP projects to ensure that storm water quality issues are considered in the design of storm drain systems. The City of Solana Beach has funded the following projects in support of maintaining and upgrading its MS4 system:

Stevens Creek

During the period between October 16, 1995 and January 16, 1996, the City thoroughly cleaned the Stevens Creek box culvert. On-going sediment removal is conducted annually by the Public Works Department.

Fletcher Cove Low Flow Diverter

The 1996 results of the City's Dry Weather Non-Point Source Screening Program identified excessive bacteria levels at the Fletcher Cove Outfall. In March of 1997, the City Council approved an engineering consultant to design a low flow diverter to divert the contaminated storm water to the City's sanitary sewer system. On November 18, 1997, the City Council awarded the construction contract to build the low flow diverter. In April 1998, the construction of the low flow diverter started. The construction of the low flow diverter was delayed due to the El Nino driven storms. The low flow diverter was constructed and formally accepted by the City Council and put into operation on October 20, 1998. Originally, the low flow diverter was

operated prior to a predicted storm event to catch the heavily polluted first flush. Subsequently, the City has changed its operating policy to operating the low flow diverter at all times except during heavy rainfalls. The City is preparing to allocate up \$5000 on modifying the low flow diverter to improve its operating capability over the next 5 years.

Education and Training

The City of Solana Beach will provide training to all Department of Public Works personnel who participate in the O&M of the MS4. This training will instruct personnel on new Permit requirements related to MS4 O&M. It will introduce new work processes, functions and behaviors that incorporate the BMPs necessary for staff to prevent illegal discharges into the City's storm water collection and conveyance system and recreational waters.

2.6 MANAGEMENT OF PESTICIDES, HERBICIDES, AND FERTILIZERS (F.3.a.(6))

The City of Solana Beach owns and maintains facilities that utilize pesticides and fertilizers. The use of pesticides and fertilizers has been identified by the SDRWQCB as possible pollutants to MS4's. The City will implement an Integrated Pest Management Program to reduce or prevent runoff of pesticides and fertilizers from municipal properties into the MS4 and meet the Permit requirements.

Approximately 90 percent of the City's landscape maintenance is contracted to private companies. The Public Works Department is responsible for vegetation control along roadway right-of-ways and the MS4 system. Small quantities of herbicides, fertilizers, and pesticides are stored in a secure building at the Public Works Yard. An herbicide sprayer is inspected by the Department of Agriculture on a regular basis. Round-up™ is the only herbicide authorized for vegetation control by the City. This herbicide reportedly degrades within 24-hours of application.

The following BMPs are required by the City of Solana Beach and its contractors associated with pesticide, herbicide, and fertilizer use.

2.6.1 Pesticide, Herbicide, and Fertilizer Application and Handling

The application and handling of pesticides, herbicides, and fertilizers and the training and certification of employees conducting these activities will be conducted in accordance with the Federal Pesticide, Fungicide, and Rodenticide Act and California Title 3, Division 6, Pesticides and Pest Control Operations. All public agency employees who apply pesticides and herbicides in areas such as parks, golf courses, rights-of-way and recreation areas will be properly certified in accordance with state regulations. Contracts for landscape maintenance will include similar requirements. A brief summary of the regulations and BMPs that will be implemented include:

- Agricultural pest control businesses must be supervised by a Qualified Applicator Licensee who has a current Qualified Applicator Certificate.
- Every two years, the Qualified Applicator Certificate holder must show proof that they have secured a minimum of 40 hours of continuing education.

- All Qualified Applicator Licensees and Qualified Applicator Certificate holders are required to report pesticide usage on a monthly basis to the Department of Agriculture, giving locations, type and quantity of pesticides, and other information.
- The Qualified Applicator Certificate holder will conduct monthly inspections to monitor storage, handling and disposal of the pesticides.
- The Department of Agriculture will review the pesticide application programs of public agencies
- Insure written recommendations prepared by a State Pesticide Advisor are followed during pesticide application
- Insure that pesticide and fertilizer labels, and the material safety data sheet(s), are followed by applicator
- Insure all state, federal, and local regulations are followed in the use of fertilizers and pesticides
- Reduce runoff by proper irrigation programming, programming shorter irrigation cycle times and increasing the irrigation frequency after the application of fertilizers and pesticides. This practice will reduce runoff
- Do not fertilize or apply pesticides prior to or during storm events
- Use pesticides that are quickly absorbed into the soil or plants which will reduce the amount of pollutants entering an MS4
- Whenever practical, use integrated pest management practices
- Don't spray pesticides when the spray can drift into non-target areas or onto non-target vegetation, insects or animals
- Follow the pesticide and fertilizer labels and state regulations in disposing of excess products and containers
- Comply with county and state reporting requirements for pesticide use

All employees who handle pesticides will be familiar with the most recent MSDS files. Additional BMPs that will be considered include: always use caution when handling any hazardous product; read and follow use instructions, use up all of the product before disposing or give the extra to other agencies or community groups; do not dispose of product down storm drains, into creeks, onto the ground, or by burning.

2.6.2 Minimizing Use

A description of this BMP was described in Section 2.4 Landscape and Recreational Facilities Management.

2.6.3 Storage and Inspection

The same regulations that govern pesticide application and handling also cover storage and inspection. These requirements apply to appropriate public agency staff and will be included in landscape maintenance contracts. A summary of the applicable portions of the regulations is as follows:

- The Qualified Applicator Certificate holder will conduct monthly inspections to monitor storage, handling and disposal of the pesticides.
- At least quarterly, the County Agricultural Commissioner will consult with public agencies concerned with air and water quality, fish and wildlife, and others, to identify past or potential problems associated with the use of pesticides.
- The Commissioner may enter and inspect any fields, areas, structures and greenhouses where pesticides are handled, stored or applied.

Additional BMPs that will be considered include: store products away from sources of heat, sparks, and flames; store products in their original containers and keep them well labeled; do not store chemicals in food containers.

2.6.4 Reporting and Record Keeping

The location, frequency, amount, type and date of fertilizers and pesticides used will be reported in the NPDES Annual Report.

2.7 INSPECTION OF MUNICIPAL AREAS AND ACTIVITIES (F.3.a.(7))

The City of Solana Beach will achieve compliance at municipal facilities through site inspections, review of self-audits by Supervisors or staff, enforcement procedures, and other means as described in this Section. The inspections will be conducted by either City staff (public works inspectors, code enforcement personnel, or appropriately trained staff) or its contractors. Alternatively, the City will collaborate with other North County City inspection programs.

2.7.1 Site Inspection Responsibilities

The City of Solana Beach is developing an inspection program to determine compliance with its applicable Ordinances, Permits (building, grading, storm water etc.) and the Permit. The City is adopting site inspection procedures, as necessary, to ensure that municipal facilities implement an effective combination of BMPs to meet the minimum water quality protection requirements specified by the City, based upon the sites threat to water quality prioritization. Site-specific BMPs will be developed during the inspection program, as needed. The City is developing and implementing enforcement procedures to require that corrective actions be undertaken when these requirements are not met. The program will include the following elements:

- City of Solana Beach Inspections;
- Supervisor self-inspections consisting of implementation, maintenance, monitoring and revision of BMPs; and
- Enforcement Procedures

2.7.2 Inspection Procedures

Municipal facilities and activities will be inspected by the Storm Water Coordinator or other staff to verify that the facilities or activities are being performed in accordance with the applicable codes, regulations and ordinances. If the inspected site does not meet the City's minimum water quality protection requirements City inspectors will immediately direct compliance and conduct follow-up inspections as necessary to confirm that compliance is attained. Additional inspections will be conducted as project scope dictates the need for modified and/or additional BMPs.

The primary mechanism City inspectors or its contractors will use to determine if water quality protection requirements and BMPs for municipal activities are being met will be to assess the site against the appropriate designated BMP requirements as described in Section 2.4. The BMP inspection requirements are intended to be easy to interpret field observations that allow an assessment of site conditions during both dry and wet conditions. Inspection training will focus on how to recognize whether water quality protection requirements are being achieved at any time during the year.

The inspector may utilize the following framework when conducting an inspection:

- Review the municipal facility supervisors self-inspection checklist to determine whether requisite self-inspections have been performed;
- Review the site erosion control and BMP implementation plans and determine whether they are being properly implemented;
- Determine if BMPs are being used in accordance with approved plans;
- Determine whether BMPs are effectively being implemented and maintained properly; and
- Determine whether the supervisor is making appropriate adjustment when ineffective BMPs are found.

If BMPs are either lacking or being implemented improperly, appropriate enforcement action will be taken. If the inspected site does not meet the minimum water quality protection requirements, City inspectors will follow-up within a reasonable time frame to assure that all applicable requirements are implemented.

The City will notify the SDRWQCB of any noncompliance in accordance with the Permit (Section R.1 and B.6 of Appendix C) if the noncompliance meets the City's criteria of posing a threat to human or environmental health. A copy of the Permit is included in Appendix A.

2.7.3 Inspection Frequencies

The City or its designated agents will establish inspection frequencies and priorities as determined by the threat to water quality prioritization described in Section 2.3. At a minimum each site that is determined to be high priority will be inspected annually. The need for additional inspections may vary depending upon several factors including:

- Site conditions;
- History of facility compliance and past performance; and
- Weather patterns.

2.7.4 Supervisor Self-Inspections

Storm water management is a dynamic operation where changes are expected. BMPs for storm water management measures that require frequent maintenance to maintain their effectiveness and may require relocation, revision and re-installation, particularly as facility dynamics change. Supervisor self-inspections are recommended prior and during the rainy season to:

- Ensure that BMPs are properly implemented and functioning effectively;
- Identify maintenance (e.g., material removal) and repair needs;
- Ensure that proper implementation of storm water management plans.
- Make sure that staff is aware of the storm water management requirements

The City will recommend that Supervisors or designated employees conduct self-inspections, which include a self-inspection checklist, noting date, time, conditions and inspection date. Self-inspections are recommended to be performed according to the following schedule:

- Before every rainfall event that is predicted to produce observable runoff and after every rainfall event that produces observable runoff,
- At 24-hour intervals during extended rainfall events.

2.8 ENFORCEMENT OF MUNICIPAL AREAS AND ACTIVITIES (F.3.a.(8))

The Permit requires the City to develop an enforcement program to enforce compliance with the Permit at its municipal facilities. The City's inspectors and/or other staff with enforcement authority will conduct enforcement of storm water pollution prevention requirements for municipal activities and at municipal facilities. The inspectors will record and document violations. Depending on the severity of the violation, enforcement can range from a verbal warning to disciplinary actions. If the non-compliance is a result of negligence by a contractor to the municipality the enforcement action could range from a verbal warning to cancellation of the contract. An enforcement program will be implement to accomplish the following goals:

- To educate the regulated community (municipal staff and contractors);
- To promote compliance of the laws and regulations;
- To return violators to compliance in a timely manner;
- To initiate and conclude enforcement activities in a timely manner;

- To penalize violators, as appropriate, and to deprive violators of any significant benefit gained from violations;
- To treat similar facility owners and operators equally and consistently with regard to the same types of violations

Inspectors will conduct follow-up inspections to determine if corrective actions have been taken in accordance with the City of Solana Beach's ordinances and minimum BMP requirements. Escalating enforcement steps, providing flexibility for the inspectors to establish appropriate compliance time frames on a case-by-case basis, will be used as needed to ensure compliance.

If a significant and/or immediate threat to water quality is observed by an inspector, action will be taken to require the responsible party to immediately cease the discharge. The threat to water quality will be assessed by inspectors for runoff from a construction site that will not be reasonably controlled by the protective measures in place or if a failure of BMPs is resulting in the release of sediments or other pollutants to a degree that may be substantially degrading water quality. The typical progressive enforcement steps are:

- Verbal warnings;
- Written warnings;
- Disciplinary actions taken against a municipal employee
- Enforcement of contracts (Municipal projects);
- Stop work orders (for contractors);
- Civil and or criminal Court Actions; and
- Cancellation of contract (for contractors).

These measures are described below.

Verbal Warnings

Verbal warnings will often be used as an initial method of requesting corrective action and enforcing compliance. Verbal warnings are often sufficient to achieve correction of the violation, often while the inspector is present. The inspector will notify the responsible party of the violation, and document the violation. A specific time frame for correcting the problem and a follow-up inspection date will be documented by the inspector. Based on the degree of severity, the inspector will take into account any history of similar or repeated violations by the responsible party at this or other sites.

Written Warnings

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

Disciplinary Actions

If a municipal employee is the cause of non-compliant activities, it will be up to the discretion of the City to take disciplinary actions against the employee.

Enforcement of Contracts

If a contractor or developer is performing contract work, then the City will use the provisions within the contract for enforcement of non-compliance. Language currently exists in all construction contracts that gives the right to the City to stop work (without time penalties) or revoke contracts if the contractors performing the construction activities do not comply with appropriate laws, regulations, ordinances and project requirements. All future public contracts will include language that specifically requires the contractor to comply with the regulations of the City's JURMP and the Order 2001-01 issued by the RWQCB.

Stop Work Orders

If a notice of violation has not been addressed by the next inspection, *or if a significant threat to water quality is observed* (such as a failure of BMPs resulting in a significant release of pollutants off site), a stop work order may be issued by the appropriate municipal official such as the Project Manager, City Engineer, and/or City Inspector. Stop work orders prohibit further activity until the problem is resolved and provide a time frame for correcting the problem. The stop work order will describe the infraction and specify what corrective action must be taken. A copy of the stop work order will be given to the responsible party, placed in the project file, and documented in the Inspection records. To restart work once a stop work order has been issued, the project manager, City Engineer, and/or City Inspector must verify that the deficiencies have been satisfactorily corrected. If City staff is satisfied with the corrections, work may proceed.

Civil and Criminal Court Actions

As a final resort, the City may use Civil and or Criminal court actions under the State Porter Cologne Water Quality Act or the Federal Clean Water Act, which may result in significant fines levied upon the non-compliant municipal contractor.

In accordance with Permit Section F.3.b, this Section of the JURMP describes the City of Solana Beach's program to reduce contaminants in urban runoff originating from existing industrial facilities. The goal of this program is to minimize or avoid the impacts of industrial activities on receiving waters and other environmental resources and, where possible, to enhance the quality of these resources. As part of this program, a prioritized inventory of industrial sites has been developed based on their threat to water quality. The City has identified minimum BMPs that will be required for each existing priority group, and the program for ensuring that these minimum BMPs are implemented and enforced. In accordance with Permit Section F.3.b, this component of the JURMP will address Pollution Prevention; Source Identification, Threat to Water Quality Prioritization; BMP Implementation; Monitoring of Industrial Sites, Inspection of Industrial Sites, Enforcement, and Reporting of Non-compliant Sites. This Section provides a description of each of these program activities and specific permit requirements pertaining to each.

3.1 POLLUTION PREVENTION (F.3.b.(1))

Urban runoff contains a variety of pollutants resulting from industrial activities including heavy metals, oil and grease, sediment, and trash. The primary goal of this component is to reduce the quantity of contaminants that enter the City's storm water conveyance system from industrial facilities within its jurisdiction. To this end, the following will be conducted:

- Develop a facility inventory and prioritize industrial facilities in accordance with Permit requirements.
- Establish discharge prohibitions and develop appropriate BMP requirements.
- Educate industrial facility owners, operators, and workforce to increase their knowledge regarding the impacts of urban runoff on MS4s and potential BMP solutions.
- Routinely inspect industrial facilities and investigate complaints, as required.
- Enforce storm water regulations and ordinances.
- Collect and report monitoring data, non-compliant facilities and assessment data.
- Document storm water pollution prevention activities conducted at industrial facilities and submit information to SDRWQCB in Annual Report.

Staff within the City's Engineering and Public Works Departments is currently responsible for inspecting for storm water violations and responding to complaints. Under the industrial component, this program will be formalized and expanded per the requirements of the Permit as described below. Documentation received from the City's inspection programs will be used for follow up efforts to ensure compliance.

3.2 SOURCE IDENTIFICATION (F.3.b.(2))

In accordance with Permit Section F.3.b.(2), the City of Solana Beach has developed a watershed-based database (Table 3-1) of existing industrial facilities within its jurisdiction. This inventory includes the site name, address, SIC Codes, and a narrative description of each site's

**Table 3-1
EXISTING INDUSTRIAL FACILITIES**

Facility Name	Facility Address	Narrative Description	SIC Code	Watershed
Baker Iron Works	710 Valley Ave	Structural metal fabrication	3441	San Dieguito River
Blalock Cabinet Shop	414 N. Cedros	Cabinet Manufacturer	2434	Carlsbad

activities. This inventory will be updated annually. Thirteen acres in the vicinity of Stevens Avenue and Valley Avenue are currently zoned for light industrial activities (City of Solana Beach Zoning Map, 1993).

3.3 THREAT TO WATER QUALITY PRIORITIZATION (F.3.b.(3))

In accordance with Permit section F.3.b.(3) (a) and (b) criteria, existing industrial facilities have been prioritized as high, medium, or low, based on their potential threat water quality from storm water runoff. The industrial database is prioritized based on the following considerations; 1) type of activity (SIC code), 2) materials used in the industrial processes, 3) types and quantities of waste generated, 4) potential to discharge pollutants, 5) authorized non-storm water discharges, 6) size of the facility, 7) proximity to a receiving water body, and 8) sensitivity of the nearby receiving water body.

Following is a more specific description of the high, medium or low categories used by the City to classify industrial facilities.

A. High Priorities Industrial Sites

- Facilities that are within the tributary of an impaired water body listed in accordance with Section 303(d) of the 1972 CWA, and generate pollutants for which the water body is impaired.
- Facilities that based on field verification, historical activities, violations, non-storm water discharge evaluation, monitoring results (including field screening), complaints, or violations are considered at risk of contributing a significant pollutant load to the storm drain conveyance system.
- Facilities located within or adjacent to (i.e., within 200 ft.) a coastal lagoon or a receiving water body within an environmentally sensitive area (ESA), or facilities that discharge directly to these receiving waters.
- Facilities subject to Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA)
- Facilities subject to the Statewide General Industrial Permit

B. Medium and Low Priority Industrial Sites

Industrial facilities that do not meet any of the aforementioned high priority criteria are classified into lower priority groups. Medium priority sites are those that pose some threat to water quality, but are not classified as “high” threat. Low priority sites are those whose activities have no exposure to storm water.

In accordance with the Permit, the City has developed a watershed-based inventory of industrial sites according to threat to water quality prioritization. Black Iron Works is categorized as medium priority (Table 3-2) since it is not subject to the Statewide General Industrial Permit based on its SIC code, and it is not a source of the pollutant of concern (bacteria) identified for San Dieguito Lagoon. Blalock Cabinets is ranked as a low priority facility since all its activities are conducted indoors, and are therefore not exposed to storm water. The dry weather monitoring data collected since 1993 has not indicated that either of these two facilities are pollutant sources, and no records of complaints or violations associated with these facilities were discovered in the records reviewed during this prioritization. Monitoring or other data will be used to periodically re-evaluate this inventory.

The City of Solana Beach has no authority over the two-miles of railroad right of way that travels through the City. However, the City’s dry weather monitoring program will be designed to evaluate if the railroad line is contributing pollutants to storm water runoff. If the dry weather monitoring program indicates that the railroad right-of-way is contributing pollutants to storm water runoff, the City will coordinate with the North County Transit District and Amtrak to identify BMPs to eliminate pollutants from the railroad right-off-way to the maximum extent practicable.

**Table 3-2
PRIORITIZATION OF MUNICIPAL FACILITIES**

Facility Name	Facility Address	Priority/Criteria	SIC Code	Watershed
Baker Iron Works	710 Valley Ave	Medium Priority/outside activities subject storm water	3441	San Dieguito River
Blalock Cabinet Shop	414 N. Cedros	Low Priority/No exposure to storm water	2434	Carlsbad

3.4 BMP IMPLEMENTATION (F.3.b.(4))

In accordance with Section F.3.b.(4), the City has established a set of minimum BMPs that are applicable for both medium and low priority industrial sites. As identified Section 3.3, there are no high priority industrial sites in the City of Solana Beach. These minimum designated BMPs are described below.

Non-Structural BMPs

The following non-structural BMPs will be required to prevent industrial pollutants from entering storm water or authorized non-storm water discharges:

- Good housekeeping;
- Preventive maintenance;
- Periodically Sweep Parking Areas;
- Solid waste (non-hazardous) handling and recycling;

Structural BMPs

- Based on the results of the dry weather monitoring data, the two industrial sites do not appear to be pollutant sources. If future dry weather monitoring data indicates that these facilities are contributing pollutants, then site-specific structural BMPs may be required. The City inspector will meet with the facility owner or owner's representative to identify appropriate BMPs. Recommended BMPs will be obtained from existing agency sources (i.e. Caltrans) and the Model Programs.

3.5 MONITORING OF INDUSTRIAL SITES (F.3.b.(5))

In accordance with Permit section F.3.b.(5), the City is required to implement a monitoring program for runoff from high priority industrial sites. As described in Section 3.3, there are currently no high priority industrial sites in the City of Solana Beach. However, in an effort track potential pollutants from either of the City's two light-industrial facilities or from the railroad right-of-way, the City will design its dry weather monitoring program to evaluate water quality down gradient of these sources, if possible.

3.6 INSPECTION OF INDUSTRIAL SITES (F.3.b.(6))

In accordance with Permit section F.3.b.(6), site inspections will be conducted of industrial facilities within the City's jurisdiction. The goal of the inspections will be to review the facility's BMPs and conduct an assessment of their effectiveness. The inspection results will also provide additional information for updating the watershed-based inventory database. The following tasks will be implemented in this element:

- Develop an inspection checklist and procedures
- Train inspection staff
- Develop inspection frequencies for industrial high, medium, and low priority facilities based on permit requirements
- Coordinate inspections with other agencies where appropriate (Fire Dept., County Department of Environmental Health)
- Perform routine inspections
- Report on routine inspections

Facility Inspections

In accordance with Permit requirements, the City of Solana Beach is required to develop inspection frequencies for each of its priority groups. There are currently no high priority

industrial sites in Solana Beach. The existing low and medium priority industrial facilities will be inspected annually for the first two years of the program. The inspection frequency of these facilities will be re-evaluated after this time period.

City of Solana Beach personnel (public works, engineering, or code enforcement staff), or City contractors will conduct the inspections to determine if the facility is compliant with the Permit, and that runoff pollutants have been reduced to the maximum extent practicable. The inspector will observe for evidence of illicit discharges and connections to the MS4 and will provide feedback about BMPs appropriate for a given activity.

General Procedures for medium and low priority inspections will include:

- Pre-inspection Preparation. Using the inventory database, the City will identify the SIC code, thereby knowing what type of industrial activity and pollutants to expect on site.
- Inspection Site Visit. With the exception of a preliminary scoping visit, the site visit will be unannounced to observe properly the effectiveness of BMPs. After introductions, the inspector will interview the facility owner or facility superintendent, and perform a visually inspection of the interior and exterior of the facility. The inspector will observe site activities, handling, storage, and disposal practices of potential pollutant causing substances, and observe for evidence of illicit discharges and connections to the MS4. The inspector should prepare a field sketch showing the exterior and interior areas of industrial activity; the facility boundaries, direction of sheet flow and receiving waterbodies; storm drain inlets, and points of discharge; areas of impervious surfaces; materials storage areas; and location of structural controls, if appropriate.
- Documentation. A standard inspection report will be completed at the time of the site visit and will serve as a written record of compliance or non-compliance. The inspection report will provide a set of instructions for compliance, include an acknowledgment by the responsible party (when signed), and will update to the site's compliance history, and will serve as a basis (case file) for further administrative or legal action, if warranted.
- Post-inspection Processing. Information obtained from the inspection will be used to update the inventory database; to make referrals to appropriate agencies, and to report to the SDRWQCB incidents of non-compliance that present a threat to human or environmental health, as specified in Permit section F.3.b.(8).

Investigation of Complaints Involving Industrial Sites

In accordance with Permit Section F.5.d, the City will strive to eliminate illicit discharges, connections, and discharge sources to its MS4. Complaints of illicit discharges from an industrial site may be made by the public or another agency, or they may arise from the results of dry-weather monitoring. The City will investigate and inspect complaint associated with industrial facilities in accordance with the procedures described in Section 8.3.

3.7 ENFORCEMENT MEASURES FOR INDUSTRIAL SITES (F.3.b.(7))

The City's inspectors and/or other staff with enforcement authority will conduct enforcement of storm water pollution prevention requirements for industrial activities and at industrial facilities. The inspectors will record and document violations. Depending on the severity of the violation, enforcement can range from a verbal warning to disciplinary actions. If the non-compliance is a result of negligence by a contractor to the industrial facility the enforcement action could range from a verbal warning to the assessment of fines. An enforcement program will be implemented to accomplish the following goals:

- To educate the industrial community on storm water quality protection;
- To promote permit, ordinance, and regulatory compliance;
- To achieve timely compliance;
- To achieve timely enforcement;
- To develop and enforce consistent penalties.

Inspectors will conduct follow-up inspections to determine if corrective actions have been taken in accordance with the City of Solana Beach's ordinances and minimum BMP requirements. Escalating enforcement steps, providing flexibility for the inspectors to establish appropriate compliance time frames on a case-by-case basis, will be used as needed to ensure compliance.

If a significant and/or immediate threat to water quality is observed by an inspector, action will be taken to require the responsible party to immediately cease the discharge. The threat to water quality will be assessed by inspectors for runoff from a construction site that will not be reasonably controlled by the protective measures in place or if a failure of BMPs is resulting in the release of sediments or other pollutants to a degree that may be substantially degrading water quality. The typical progressive enforcement steps are:

- Verbal warnings;
- Written warnings;
- Denial or revocation of business licenses; and
- Civil and or criminal Court Actions.

These measures are described below.

Verbal Warnings

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

Written Warnings

If the deficiency noted in a verbal warning is not corrected by the next inspection or the severity of the violation is such, that a verbal warning is not strong enough, a written notice of violation will be issued describing the infraction that is to be corrected and the time frame for correction and for a follow-up inspection. A copy of the notice will be given to the facility owner or facility supervisor and placed in the active inspection file. If the violation has been corrected to the satisfaction of the inspector, the inspector will document compliance in the inspection file.

Denial or Revocation of Business License

In severe cases of non-compliance or significant discharges, it may be appropriate to revoke the industrial facility's business license. The facility owner would then have to re-apply for a business license and meet any City requirements placed on the facility.

Civil and Criminal Court Actions

As a final resort, the City may use Civil and or Criminal court actions under the State Porter Cologne Water Quality Act or the Federal Clean Water Act, which may result in significant fines levied upon the non-compliant industrial facility owner.

3.8 REPORTING ON NON-COMPLIANT SITES (F.3.b.(8))

In accordance with Attachment C (B.6) of Permit , the City will verbally notify the SDRWQCB of non-compliant industrial facilities that are determined to pose a threat to human or environmental health within its jurisdiction within 24 hours of the discovery of non-compliance. As required as part of Attachment C (B.6) of Permit, a written report will be submitted to the SDRWQCB within 5 days of the incidence of non-compliance. Sites are considered non-compliant when one or more violations of local ordinances, permits, plans, or the Permit exist on the site.

The following criteria will be used to evaluate events of non-compliance to assess whether they pose a threat to human health or the environment:

- Estimated area of erosion caused by discharge.
- Estimated sediment load discharged from site.
- Were toxic materials discharged from site.
- Were 303(d) pollutants of concern released.
- Proximity of site to sensitive water body (i.e. is discharge to ocean, creek, river, etc).
- Proximity of site to impaired water body (303d listed).
- Proximity of site to sensitive habitat/endangered species.
- Estimated volume of discharge.
- Proximity to a school, day care, or residential area.
- Proximity of site to public water supply (well head, monitoring wells)
- Beneficial uses for affected water bodies.
- If discharge to storm drain, condition of storm drain (clog, etc.)
- TSS concentration in discharge and turbidity.
- Other materials discharged from site (concrete washout, sanitary washes, etc.).

In accordance with Permit Section F.3.c, this Section of the JURMP describes the City of Solana Beach's program to reduce contaminants in urban runoff originating from existing commercial development. The goal of this program is to minimize or eliminate the impacts of commercial activities on receiving waters and other environmental resources and, where possible, to enhance the quality of these resources. As part of this program, an inventory of high priority commercial businesses has been developed based on their potential threat to water quality. The City has identified minimum BMPs that will be required for high priority commercial activity, and the program for ensuring that these minimum BMPs are implemented and enforced. This component of the JURMP will address Pollution Prevention, Source Identification, BMP Implementation, Inspection of Commercial Sites and Sources, and Enforcement of Commercial Sites and Sources. This Section provides a description of each of these program activities and specific permit requirements pertaining to each.

4.1 POLLUTION PREVENTION (F.3.c.(1))

Urban runoff contains a variety of pollutants resulting from commercial activities including litter, detergents, bacteria, hydrocarbons, oil and grease, and heavy metals. The primary goal of this component is to reduce the quantity of contaminants that enter the City's storm water conveyance system from commercial activities within its jurisdiction. Pollution prevention comprises procedures and practices that eliminate or reduce the generation of pollutants at their source. The City's current pollution prevention program includes public education and outreach programs, recycling, street and parking lot sweeping, and dry-weather monitoring. In addition, the City's storm water ordinances identify prohibited discharges and practices applicable to the commercial community designed to protect water quality. This program will be expanded to comply with the new Permit requirements and will include the following elements:

- Develop an inventory of high priority commercial activities or facilities based on their threat to water quality in accordance with Permit requirements.
- Develop a public education program targeted at commercial businesses, to educate commercial owners and their workforce on new Permit requirements and their responsibilities under this program.
- Develop pollution prevention requirements and storm water BMPs to be implemented at commercial facilities.
- Require implementation storm water BMPs appropriate to the facility's threat to water quality.
- Perform routine inspections of high priority commercial facilities.
- Collect and report monitoring data, non-compliant commercial facilities and assessment data.
- Document storm water pollution prevention activities conducted at commercial facilities, which will then be reported in the Annual Report to the SDRWQCB along with an annual assessment form.

Staff within the City's Engineering and Public Works Departments currently patrol the City's commercial districts and inspect for storm water violations. In addition, they respond to

complaints received from the Storm Water Hotline or referrals from other departments within the City and County.

4.2 SOURCE IDENTIFICATION (F.3.c.(2))

The City of Solana Beach consists of a total drainage area of 2,211 acres. Of this area, approximately 173 acres, or 8% of the total area is commercially zoned. Commercial areas within the City of Solana Beach discharge to 303(d) listed waters and environmentally sensitive water bodies. The 303(d) listed water bodies are the San Elijo Lagoon and Ecological Reserve, the San Dieguito Lagoon, and the Pacific Ocean. Commercial areas within the City of Solana Beach discharge runoff directly to the San Elijo Lagoon and the Pacific Ocean, and indirectly to the San Dieguito Lagoon via Stevens Creek, a tributary to the San Dieguito Lagoon. The pollutants of concern for the San Elijo Lagoon are high coliform count, sediment, and nutrients. High coliform count is the pollutant of concern for the San Dieguito Lagoon and the Pacific Ocean.

In accordance with Permit section F.3.c.(2) criteria, high priority existing commercial businesses have been identified, based on their potential threat water quality from storm water runoff. Minimum high priority commercial categories applicable to the City of Solana Beach are:

- Automobile servicing and repair;
- Automobile/vehicle washing;
- Retail or wholesale fueling;
- Pest control services;
- Eating and drinking establishments;
- Mobile carpet, drape, or upholstery cleaning;
- Cement mixing or cutting;
- Landscaping;
- Nurseries; and
- Golf courses.

The City's business database reviewed, which contains approximately 1,200 businesses. Information contained in the database included business name and address. The database did not include any SIC codes or other indicators of business type, therefore, business type was determined by name, if obvious, information provided by the City, City zoning maps, and searches conducted by category in the Pacific Bell Yellow Pages and Yahoo Internet Yellow Pages. The City's business database was expanded and now includes fields for business type, priority site, 303(d) contributor, and watershed. This database will be maintained and developed into a commercial inventory to use as a tool for inspectors and for the retention of accurate City records. Identified high priority businesses are listed in Table 4-1.

**Table 4-1
HIGH PRIORITY COMMERCIAL SITES**

Category	Address	303(D)	Discharges Pollutant Of Concern?
Automobile Servicing And Repair	136 N Cedros Ave	O	No
	371 N Highway 101	O	No
	714 Marsolan Ave.		
	421 N Hwy 101	O	No
	128 N Cedros Ave	O	No
	637 Valley Avenue E		
	201 S Hwy 101	O	No
	146 N Cedros Ave	O	No
	301 N Hwy 101	O	No
Automobile/Vehicle Washing	435 N. Highway 101	O	No
	615 S Hwy 101	O	No
	435 N Hwy 101	O	No
Retail Or Wholesale Fueling	660 Via De La Valle		
	435 N Hwy 101	O	No
	705 Lomas Santa Fe		
	706 Lomas Santa Fe Drive		
Pest Control Services	265 Santa Helena	Se	No
Eating And Drinking Establishments	731 S. Highway 101 #161	O	Yes
	309 N Solana Hills Dr #48	Sc	Yes
	905 Lomas Santa Fe Dr	Sc	Yes
	159 S Hwy 101	O	Yes
	143 Cedros Avenue A	O	Yes
	579 S Sierra Ave	O	Yes
	524 Stevens Ave 11	Sc	Yes
	667 San Rodolfo Dr 133	Sc	Yes
	1221 Via Mil Cumbres	Sc	Yes
	437 S Hwy 101 601	O	Yes
	106 Solana Hills Drive	Sc	Yes
	124 Lomas Santa Fe Dr 108	Sc	Yes
	437 S Hwy 101 118	O	Yes
	512 Via De La Valle 102	Sc	Yes
	650 Valley Avenue	Sc	Yes
	607 Valley Avenue	Sc	Yes

**Table 4-1 (continued)
HIGH PRIORITY COMMERCIAL SITES**

Category	Address	303(D)	Discharges Pollutant Of Concern?
	640 Via De La Valle	Sc	Yes
	106 S Hwy 101	O	Yes
	166 Solana Hills Dr	Sc	Yes
	150 S Acacia Ave	O	Yes
	740 Lomas Santa Fe Dr 210	Sc	Yes
	243 Highway 101 North 8	O	Yes
	280 Lomas Santa Fe Drive	Sc	Yes
	145 S Hwy 101	O	Yes
	731 S Hwy 101 K	O	Yes
	647 South Highway 101	O	Yes
	315 S Hwy 101	O	Yes
	437 S Hwy 101 112	O	Yes
	514 Via De La Valle 100	Sc	Yes
	937 Lomas Santa Fe D	Sc	Yes
	647 S. Highway 101	O	Yes
	117 West Plaza	O	Yes
	106 S Sierra Ave	O	Yes
	742 Genevieve Street	Sc	Yes
	945 Lomas Santa Fe Dr	Sc	Yes
	135 Highway 101 North	O	Yes
	689 Lomas Santa Fe D	Sc	Yes
	524 Stevens Avenue	Sc	Yes
	731 S Hwy 101	O	Yes
	550 Via De La Valle	Sc	Yes
	445 N Hwy 101	O	Yes
	126 S Solana Hills Dr	Sc	Yes
	437 Highway 101 South	O	Yes
	141 Lomas Santa Fe	Sc	Yes
	979 Lomas Santa Fe Drive	Sc	Yes
	124 Lomas Santa Fe Dr	Sc	Yes
	124 Lomas Santa Fe Drive 105	Sc	Yes
	691 Lomas Santa Fe	Sc	Yes
	125 N Hwy 101	O	Yes

**Table 4-1 (continued)
HIGH PRIORITY COMMERCIAL SITES**

Category	Address	303(D)	Discharges Pollutant Of Concern?
	124 Lomas Santa Fe Drive 101	O	Yes
	123 W Plaza St	O	Yes
	155 South Highway 101	O	Yes
	689 Lomas Santa Fe #A	Sc	Yes
	315 S Hwy 101 D	O	Yes
	315 S Hwy 101	O	Yes
	221 N Hwy 101	O	Yes
	691 Lomas Santa Fe Drive A	Sc	Yes
	621 Valley Ave	Sc	Yes
	665 San Rodolfo Drive 123	Sc	Yes
	271 N Highway 101	O	Yes
	143 S. Cedros	O	Yes
	132 S Cedros Ave	O	Yes
Cement Mixing Or Cutting	659 Marsolan Ave		
	354 Pacific Avenue		
Mobil Carpet, Drape, Or Upholstery	214 S. Nardo		
Cleaning	249 S. Highway 101	O	No
Landscaping	618 Sonrisa St		
	P.O. Box 499		
	990 Highland Drive 110p		
	143 S Cedros Ave C 101	O	No
	339 Barbara Avenue	Se	Yes
	906 Santa Florencia	Se	Yes
	426 N. Cedros Ave	O	No
	301 Santa Helena	Se	Yes
	944 Santa Estella	Se	Yes
Nurseries	355 N Hwy 101	O	No
	240 S Cedros Ave	O	No
	330 S Cedros Ave	O	No
	170 Nardo Avenue		
Golf Courses	1500 Lomas Santa Fe Dr		
	1580 Sun Valley Road	Se	Yes

In addition to identifying minimum high priorities based on business category, dry-weather monitoring data, collected by the City of Solana Beach since 1993, and records of complaints or violations were evaluated. The results of the dry-weather monitoring program from the last eight years have not indicated any serious problems with illegal discharges or illicit connections associated with existing commercial businesses within the City of Solana Beach storm water drainage system. However, as discussed below, evidence of minor illegal and/or illicit discharges has been detected in the Stevens Creek area, and in the vicinity of Fletcher Cove and North Seascape Surf Beach that may be due to commercial sources. Storm water complaints and other types of code compliance issues were reviewed for historical trends to identify types of recurring violations or areas where problems occur most frequently. These records indicated that recurring violations associated with restaurants in the vicinity of Stevens Creek.

The analytical data from ocean outfalls near Fletcher Cove and North Seascape Surf Beach have indicated high bacteria levels, which could result from runoff from restaurants or improper disposal of pet waste. Review of the businesses that discharge to these outfalls was conducted by creating a query from the business database of all commercially zoned and otherwise zoned streets that discharge to these outfalls. Since an MS4 map is currently not available to definitively determine the exact streets that contribute to these outfalls, the streets were selected by proximity to the outfalls and the general drainage pattern as indicated in the City's General Plan. Of the businesses contained in the query, restaurants were the only commercial business category identified to be a potential source of bacteria. Since restaurants are already listed as a minimum high priority, this query did not identify any new high priority commercial businesses. The specific restaurants identified to discharge into the ocean via Fletcher Cove and Seascape Surf outfalls are identified by an "O" in the 303(d) column of Table 4-1. The additional identification will be useful during inspections, should an illicit connection or discharge be discovered in the future.

Review of the businesses contributing runoff to the San Elijo Lagoon was conducted similarly to contributors to the Pacific Ocean, as described above. The outfalls to the San Elijo Lagoon are located along the northern boundary of the City limits, and in the northwest corner of the City. A golf course and several landscaping businesses were located within the contributing area, and landscaping could be a significant source of sediment or nutrients, however the work conducted by these companies likely occurs in other areas. Since these business categories are automatically listed as minimum high priorities, this query did not identify any new high priority commercial businesses. The businesses identified to contribute runoff to San Elijo Lagoon are identified by an "SE" in the 303(d) column of Table 4-1. The additional identification will be useful during inspections, should an illicit connection or discharge be discovered.

Review of the businesses contributing runoff to Stevens Creek was conducted similarly to contributors to the Pacific Ocean and San Elijo Lagoon, as described above. The outfalls to Stevens Creek are located north of Lomas Santa Fe and west of the Interstate 5 Freeway (I-5). The creek runs in a general east to west direction north of Lomas Santa Fe, turns south at the cross section with I-5, and heads in a north to south direction beyond the City Limits. Of the businesses contained in the query, restaurants were the only commercial business category identified to be a potential source of bacteria. Since restaurants are already listed as a minimum high priority, this query did not identify any new high priority commercial businesses. The

specific restaurants identified to discharge into Stevens Creek are identified by a “SC” in the 303(d) column of Table 4-1. The additional identification will be useful during inspections, should an illicit connection or discharge be discovered in the future.

The far right column of Table 4-1, indicates whether the business category discharges the identified 303(d) water bodies pollutants of concern.

4.3 BMP IMPLEMENTATION (F.3.c.(3))

In accordance with Section F.3.c.(3), the City has established a set of minimum BMPs for the high priority threat to water quality commercial sites identified in Section 4.2. The goal of this program is to ensure storm water pollution prevention practices are implemented in accordance with Permit requirements. The ultimate success of these BMPs will be dependant on elevating the commercial business population’s awareness of the importance of proper storm water management and potential pollutant sources. Designated BMPs for high priority commercial categories are described below. Site-specific BMPs will be developed during annual inspections, as needed

4.3.1 Designated Minimum BMPs for High Priority Sites

In accordance with Section F.3.c.(3), minimum BMPs have been developed for each of the existing high priority commercial categories. Minimum designated BMPs for each of the high priority commercial categories are listed in Tables 4-2 through 4-11. Site-specific BMPs will be developed during annual inspections, as needed. The identified high priority commercial categories in Solana Beach include:

- Automobile servicing and repair;
- Automobile/vehicle washing;
- Retail or wholesale fueling;
- Pest control services;
- Eating and drinking establishments;
- Mobile carpet, drape, or upholstery cleaning;
- Cement mixing or cutting;
- Landscaping;
- Nurseries; and
- Golf Courses.

4.3.2 Implementation of Minimum BMPs for High Priority Sites

The City of Solana Beach will implement minimum BMPs for high priority sites through public education and outreach, and inspection programs. The City will conduct a workshop targeted at the commercial business community in March 2002. The workshop will present the new Permit requirements as they pertain to the commercial community. The workshop will also introduce the minimum designated BMPs that will be required for high priority commercial business categories.

**Table 4-2
AUTOMOBILE SERVICING AND REPAIR**

Area or Activity	Pollution Prevention	Potential Pollutant Source	Type of Pollutant	Recommended BMPs
Repair or Maintenance	Employee training Preventive maintenance Spill response plan Signage	Changing fluids Replacing parts	Oil/grease Transmission fluid Antifreeze (coolant) Brake fluid Heavy metals: Cu, Zn, Cr, Ni, Pb	Service vehicle indoors Ensure floor drains are plumbed to sanitary sewer; if not, then cover drains Place secondary drip pans under fluid receptacles Keep absorbent materials/pads readily accessible in work areas Segregate waste fluids and store in approved containers Recycle fluids whenever possible Dispose of hazardous wastes properly Send soiled rags to laundry service or dispose of them properly Use tarp and drip pans under vehicles
Emergency outdoor repairs				
Salvage area				Drain fluids from "parts" vehicles upon arrival to the yard Recycle oil, antifreeze, batteries, etc.
Cleaning	Run a "dry" shop Use non-caustic cleaning agents Replace chlorinated solvents with aqueous cleaning solutions			Collect dust, grindings, and shavings at work stations Dry sweep work areas before mopping Dispose of mop water to sanitary sewer only Power wash engines on paved, bermed surfaces equipped with sump drain or oil/water separator

**Table 4-2 (continued)
AUTOMOBILE SERVICING AND REPAIR**

Area or Activity	Pollution Prevention	Potential Pollutant Source	Type of Pollutant	Recommended BMPs
Receiving/storing vehicles Painting Stripping Cleaning Non-hazardous paint: Scraping or sandblasting, body filling, wet sanding Paint booth Hazardous paint removal Cleaning equipment	Minimize volume needed for the job Preventive maintenance Employee training	Leaks Over-mixing Spills Open work area Drift (wind) Leaks Overspray Rinsate from dust control	Automotive fluids Grease Paint Solvents Thinners Particulates Setttable solids Paint chips/dust Sand Glass Stone Metals Suspended solids	Use drip pans Wipe down greasy parts with rags Perform work indoors Recycle/reuse paints Filter and reuse solvents Dry water-based paints/wet sanding material and dispose in trash Reuse brushes for water-based paints: rinse to a sanitary sewer Confine work to approved, enclosed area equipped with vacuum hood and filter Dry-sweep or vacuum dust and dispose to trash Use appropriate, well-maintained equipment (e.g., high-efficiency paint sprayers, electrostatic spray guns, air-atomized spray guns, high-volume/low pressure and gravity-feed guns) Collect and treat wastewater or remove as hazardous waste Refer to Cal-OSHA guidelines and state & local hazardous waste laws Use self-contained cleaning vat Recycle cleaning fluid

**Table 4-3
AUTOMOBILE/VEHICLE WASHING**

Area or Activity	Pollution Prevention	Potential Pollutant Source	Type of Pollutant	Recommended BMPs
Washing	Employee training Use less toxic detergents, e.g., aqueous cleaners Use phos-phate-free detergents Minimize water for washing	Vehicle body Vehicle engine Wheels: Acid-based cleaning Line or gasket leaks	Suspended solids pH Oil/grease Phosphates Heavy metals COD BOD	Cover storm drain grates or curb inlets Locate wash pad away from storm drains Use berms to divert wastewater to collection area Collect wastewater (by vacuum) for recycling or disposal to sanitary sewer Provide wastewater tank for wash water that cannot be disposed properly while on site

**Table 4-4
RETAIL OR WHOLESALE FUELING**

Area or Activity	Pollution Prevention	Potential Pollutant Source	Type of Pollutant	Recommended BMPs
Dispensers	Employee training	Spills from individual vehicles or tanker trucks	Fuels	Post "no topping off" signs
Tanks	Signage		Oil/grease	Use dry sweep methods
	Preventive maintenance		Heavy metals	Keep spill response materials readily accessible
	Spill response plan		COD Litter	Maintain surfaces paved with approved impervious material (e.g., Portland cement concrete)
				Provide design (berms or intercepting drains/sumps) for spill containment and to prevent run-on
				Use oil/fuel absorbent booms/pads in catchment basins
				Provide overhead coverage that drains storm water away from dispensing areas
				Conform to state laws for spill containment and overflow prevention
				Provide automatic shut-off latches on nozzles as permitted by local regulations
				Provide secondary containment around fuel truck during transfer—driver stays with truck
				Provide secondary containment for outdoor storage areas

**Table 4-5
PEST CONTROL SERVICES**

Area or Activity	Pollution Prevention	Potential Pollutant Source	Type of Pollutant	Recommended BMPs
<p>Storage Application Cleaning</p>	<p>Employee training Good housekeeping Signage Spill response plan Integrated pest management Preventive maintenance</p>	<p>Leaks Overspray Continual or excessive use of pesticides</p>	<p>Pesticides</p>	<p>Comply with state and county pesticide handling regulations Provide secondary containment for containers in storage Use dry sweep methods Keep spill response materials easily accessible Apply when windy conditions are not expected Avoid applying before irrigation or rainfall Follow manufacturer's instructions on label to prevent excessive concentrations, overspray, and leftover solutions Maintain applicator equipment in good condition Triple- or pressure-rinse empty containers Use rinsate for making next batch Use non-chemical methods (e.g., traps, sticky tape, hot-wire lamp, high-pressure water spray) whenever feasible Consider using non-chemical methods along water bodies</p>

**Table 4-6
EATING AND DRINKING ESTABLISHMENTS**

Area or Activity	Pollution Prevention	Potential Pollutant Source	Type of Pollutant	Recommended BMPs
<p>Dumpster Tallow & grease bin Equipment cleaning Sidewalks Parking lot Loading/unloading Exterior pest control Landscaping</p>	<p>Employee training Signage Spill response plan Recycling Preventive maintenance</p>	<p>Emptying containers Improper pesticide application Leaks Spills Pressure washing</p>	<p>Oil/grease Pesticides Sediment Litter Paints</p>	<p>Clean dumpster and grease bin areas daily Replace leaking or dirty dumpster Reduce liquid waste in trash and double-bag trash to prevent leaks Dry sweep whenever possible Cover storm drain inlets before hosing down pavement Use berms to divert wastewater to collection area Collect wastewater (vacuum) and dispose to sanitary sewer Stop spills at the source Keep spill response materials easily accessible, including near the receiving door Use wet-clean method: Use rags or absorbent to collect residue; then mop and collect wastewater; dispose to sanitary sewer Properly maintain outdoor grease interceptors Wash equipment indoors Properly maintain all sinks Contract with hood-filter-element cleaning service (Outdoor wash area): Provide bermed surface with slope toward drain connected to sanitary sewer Consider contracting with certified pest control operator Properly collect and dispose of green waste from landscaping activities</p>

**Table 4-7
CEMENT MIXING OR CUTTING**

Area or Activity	Pollution Prevention	Potential Pollutant Source	Type of Pollutant	Recommended BMPs
Headquarters: Production Mixing Job site: Pouring Cutting Exposed aggregate finishing Cleaning Washout area	Employee training Good Housekeeping Record keeping Recycling	Spills Drift (wind) Excess process water	pH Suspended solids Oil/grease Heavy metals Hydrocarbons	Provide overhead coverage for production area Dry sweep daily and properly recycle or dispose of loose aggregate, mortar, dust, etc. Dry sweep gutters, alleys, streets, sidewalks, etc. Properly cover storm drains Use berms to prevent run-on Divert slurries to collection area or sedimentation basin Shovel/vacuum slurries daily Designate area where all rinsate is confined, collected, and disposed to sanitary sewer, dead-end sump, process treatment system, etc., or discharge rinsate to hole where water percolates/evaporates and solids are recovered for disposal

**Table 4-8
MOBILE CARPET, DRAPE, OR UPHOLSTERY CLEANING**

Area or Activity	Pollution Prevention	Potential Pollutant Source	Type of Pollutant	Recommended BMPs
Storage Wastewater disposal	Employee training Preventive maintenance Adequate equipment Minimize water for washing	Illegal discharges Leaks	Suspended solids BOD COD Organic matter	Dispose of wastewater to sanitary sewer at the job site or to a holding tank Dispose of wastewater in tank to sanitary sewer at company headquarters or at an approved establishment Maintain tanks, hoses, and fittings in leak-proof condition Note: High-volume discharges can disrupt septic systems of private homes. Also, routine disposal of such discharges to a municipal sewer may require approval from the local wastewater district.

**Table 4-9
LANDSCAPING**

Area or Activity	Pollution Prevention	Potential Pollutant Source	Type of Pollutant	Recommended BMPs
Watering/irrigation Installation Construction Plant maintenance Nutrient management Pest/weed management	Employee training Preventive maintenance Good housekeeping Integrated pest management Recycling (composting)	Irrigation run-off Rainwater runoff Soil preparation Stockpiling Trimming, mowing, and pruning Excessive concentration or overspray Continual or excessive use	Sediment Oil/grease Organic matter Fertilizer Herbicides Pesticides Nitrogen salts Nitrogen Phosphorus	Properly match water delivery rate with soil infiltration rate Properly match pesticide/herbicide application rate with soil infiltration rate Maintain irrigation efficiency and uniform distribution Periodically inspect sprinkler heads Utilize automatic timers to minimize runoff Cover stockpiles Control soil erosion: straw or sandbag dikes, mulch, silt fences, biofilter strips, etc. Keep leaves, twigs, and clippings out of drain inlets and catchment basins Collect and recycle all green waste Mix and apply chemicals according to manufacturer's instructions Keep containers and spray nozzles in good condition Avoid overspray or application outside the target area Use manual methods along water bodies Triple-rinse containers and use rinsate to make next batch Properly dispose of empty containers Use appropriate predator species, whenever feasible Establish and maintain habitat for predator species

**Table 4-10
NURSERIES AND GREENHOUSES**

Area or Activity	Pollution Prevention	Potential Pollutant Source	Type of Pollutant	Recommended BMPs
Irrigation Green waste disposal or reuse Fertilizer application Pesticide application Construction	Employee training Signage Preventive maintenance Recycling Integrated pest management	Overwatering Tail water Leachate Storm water runoff Drift (wind) Overspray	Sediment Fertilizers Pesticides Suspended solids (roof coating)	Utilize appropriate low-volume watering methods (e.g., drip-, sub-, & pulse-irrigation) to minimize water volume Use collection tray benches for overhead spraying Maintain nozzles, intermitters, and other application equipment in optimal condition Consider tail-water recovery systems or subsurface drains for recycling irrigation water Routinely conduct soil and plant tissue analysis to determine fertilizer needs Utilize appropriate methods (e.g., timed application or combination slow-release & constant liquid fertilizer) to reduce excessive fertilization Apply pesticides under appropriate weather conditions to prevent drift Apply pesticides within target area to prevent overspray Minimize use of pesticides causing local problems Utilize mechanical methods (trapping, vacuuming, net sweeping, etc.) where possible Divert roof runoff (storm water only) to subsurface drains or conveyances via gutter/downspout system Divert roof runoff (storm water with coating sediment) to settling pond—effluent may not be discharged to conveyance or receiving waters without individual NPDES permit Use shade cloths instead of roof coatings, whenever possible Store green waste away from conveyances and water bodies Remove or compost green waste properly to minimize stockpiling Cover stockpiles during rainy weather

Table 4-11 Golf Courses, Parks, and Other Recreational Areas/Facilities

Area or Activity	Pollution Prevention	Potential Pollutant Source	Type of Pollutant	Recommended BMPs
Pest management	-----	-----	-----	Refer to Table 9 (Pest Control Services)
Landscaping	-----	-----	-----	Refer to Table 16 (Landscaping)
Food Service	-----	-----	-----	Refer to Table 10 (Eating and Drinking Establishments)
Rest rooms	Employee training	Visitors	Litter	Erosion control: Limit area of soil disturbance, plan work for non-rainy day, stabilize bare-soil slopes, cover stockpiles, etc.
Parking lots	Signage	Trail maintenance	BOD	Water after heavy traffic to minimize soil compaction
Trails	Preventive maintenance	Vehicle leaks	COD	Post signs: No Dumping, No Littering, No Car Maintenance in Lots, Keep Pets on Leash, Stay on Trail, Aluminum Cans Only, etc.
Water bodies and wetlands	Recycling	Pets	Sediment	Provide maps showing locations of restrooms, trash containers, recycling bins, etc.
Wash rack or pad		Boats	Bacteria/viruses	Provide trash containers in parking lots, campgrounds, and other convenient locations
Construction		Green waste	Oil/grease	Dry sweep paved surfaces
Mowing		Solid waste	Heavy metals	Manually clean storm water catchment basins and culverts
Irrigation		Wash water	Manure	Plumb rest room floor drains to sanitary sewer, septic system, or properly installed subsurface drain if approved by local codes
		Rinsate	Pesticides	Provide vegetated buffer strips along water bodies, if feasible
		Erosion	Fertilizers	Divert irrigation flows to minimize pesticides/fertilizers from reaching water bodies
			Detergents	Consider using low-maintenance turf to minimize chemical needs
				Recycle (compost) green waste
				Recycle clippings via mulching method
				Use predator species, if feasible, and provide appropriate habitat
				Plumb wash rack drainage system to sanitary sewer or approved recycling system

An outreach program called the “Clean Business Program” will also be developed that will consist of development and distribution of an activity-specific BMP Guide, and development and annual distribution of a follow-up flyer stating the status of the program. Verification that the BMPs have been implemented will occur through inspections, as discussed in Section 4.4.

The activity-specific minimum BMP guide will be developed for each of the high priority commercial categories listed in Section 4.3. The content of the guide will be similar to the information presented in Tables 4-2 through 4-11, which identifies pollution prevention measures, potential pollutant sources, types of pollutants, and recommended BMPs. The guide will include an introduction that explains the intent of each BMP, and why it is required. The guide will also explain the annual inspection and enforcement programs. Appropriate flyers will be circulated to all the business identified in the database.

As part of the “Clean Business Program” an annual follow-up flyer will be developed and distributed to businesses that describes the effectiveness of the program. This information will be based on compliance as determined by inspections, the dry-weather monitoring program analytical results, and the annual assessment forms.

4.4 INSPECTION OF COMMERCIAL SITES AND SOURCES (F.3.c.(4))

In accordance with Permit section F.3.c.(4), site inspections will be conducted of high priority commercial facilities within the City’s jurisdiction. In addition, inspections will be conducted at businesses identified by the dry-weather monitoring program, bi-annual illicit discharge/illicit connection monitoring program, or complaint-based reports, as the source of non-storm water discharges in the City’s storm drains. The goal of the inspections will be to review the facility’s compliance with the permit requirements, including implementation of minimum designated BMPs, and assessing their effectiveness. The inspection results will also provide additional information for updating the watershed-based inventory database. The following tasks will be implemented in this element:

- Develop an inspection checklist and procedures;
- Train inspection staff;
- Develop inspection frequencies for high priority commercial activities based on permit requirements;
- Coordinate inspections with other agencies where appropriate (Fire Dept., County Department of Environmental Health);
- Perform routine inspections; and
- Report on routine inspections.

Facility Inspections

In accordance with Permit requirements, the City of Solana Beach is required to develop inspection frequencies for high priority commercial activities. The City will inspect the existing high priority commercial businesses annually for the first two years of the program. The inspection frequency will be re-evaluated after this time period.

City of Solana Beach personnel (public works, engineering, or code enforcement staff), or City contractors will conduct the inspections to determine if the commercial facility is compliant with the Permit, and that runoff pollutants have been reduced to the maximum extent practicable. The inspector will observe for evidence of illicit discharges and connections to the MS4 and will provide feedback about BMPs appropriate for a given activity.

General Procedures for high priority commercial activity inspections will include:

- Pre-inspection Preparation. Using the inventory database, the City will identify the commercial category, thereby knowing what type of pollutants to expect on site and minimum BMP requirements.
- Inspection Site Visit. With the exception of a preliminary scoping visit, the site visit will be unannounced to observe properly the effectiveness of BMPs. After external observations are noted, the inspector will enter the business and meet with the business owner, manager or supervisor. The inspector will obtain from this contact necessary information to continue the inspection including updated information for the commercial inventory, changes in ownership or operations, clarification of observations noted before entering the facility, and especially suspected illegal connections. The inspector will then perform a walk-through of the business, noting evidence of illegal discharges (e.g., continuous leaks or recent spills), detection of illegal connections (e.g., sump or floor drains discharging to the MS4), confirmation of additions or changes, and effectiveness of BMP implementation in each area of commercial activity. The inspector will observe site activities, handling, storage, and disposal practices of potential pollutant causing substances, and observe for evidence of illicit discharges and connections to the MS4. The inspector should prepare a field sketch showing the exterior and interior areas, the facility boundaries, direction of sheet flow and receiving water bodies, storm drain inlets, points of discharge, areas of impervious surfaces, materials storage areas, and location of structural controls, if appropriate.
- Documentation. A standard inspection report will be completed at the time of the site visit and will serve as a written record of compliance or non-compliance. The inspection report will provide a set of instructions for compliance, include an acknowledgment by the responsible party (when signed), will update to the site's compliance history, and will serve as a basis (case file) for further administrative or legal action, if warranted.
- Post-inspection Processing. Information obtained from the inspection will be used to update the inventory database, to make referrals to appropriate agencies, and to report to the SDRWQCB incidents of non-compliance that present a threat to human or environmental health, as specified in Permit section F.3.b.(8).

If a business has failed to implement minimum BMPs that resulted in an illicit discharge, the inspector will notify the business owner/responsible party that the discharge is prohibited. The inspector will also issue a Notice of Violation (NOV) to the responsible party and provide him/her with a Corrective Action Form with recommendations of alternative disposal options or BMPs. The inspector will inform the responsible party that enforcement measures will be taken if the discharge continues. If the inspector determines that the incident is a serious violation, a more aggressive enforcement option may be used. Refer to Enforcement of Commercial Sites and Sources, Section 4.5.

4.5 ENFORCEMENT OF COMMERCIAL AND SOURCES (F.3.c.(5))

The City of Solana Beach will establish, maintain, and enforce adequate legal authority to control pollutant discharges into and from their MS4s through ordinance, statute, permit, contract, or other means. The City will review and revise their ordinances and other applicable authorities as necessary to implement and enforce all storm water and non-storm water discharge prohibitions for all areas and activities within their jurisdiction.

The City's inspectors and/or other staff with enforcement authority will conduct enforcement of storm water pollution prevention requirements for commercial activities. The inspectors will record and document violations. Depending on the severity of the violation, enforcement can range from a verbal warning to disciplinary actions. An enforcement program will be implemented to accomplish the following goals:

- To educate the commercial business community on storm water quality protection;
- To promote permit, ordinance, and regulatory compliance;
- To achieve timely compliance;
- To achieve timely enforcement; and
- To develop and enforce consistent penalties.

Inspectors will conduct follow-up inspections to determine if corrective actions have been taken in accordance with the City of Solana Beach ordinances and minimum BMP requirements. Escalating enforcement steps, providing flexibility for the inspectors to establish appropriate compliance time frames on a case-by-case basis, will be used as needed to ensure compliance.

If a significant and/or immediate threat to water quality is observed by an inspector, action will be taken to require the responsible party to immediately cease the discharge.

The typical progressive enforcement steps are:

- Verbal warnings;
- Written warnings;
- Denial or revocation of business licenses; and
- Civil and or criminal Court Actions.

These measures are described below.

Verbal Warnings

Verbal warnings will often be used as an initial method of requesting corrective action and enforcing compliance. Verbal warnings are often sufficient to achieve correction of the violation, often while the inspector is present. The inspector will notify the business owner, manager, or supervisor of the violation, and document the violation and the notification to the project supervisor in the inspection file. A specific time frame for correcting the problem and a follow-up inspection date will be documented by the inspector. Based on the degree of severity, the inspector will take into account any history of similar or repeated violations by the responsible party at this or other sites.

Voluntary Compliance

Parties responsible for illicit discharges or connections may elect to voluntarily comply with corrective action when notified of their violation. Voluntary compliance, without enforcement, will only be acceptable for first-time, minor incidents. If compliance is achieved and the discharge is eliminated, no other enforcement actions will be required.

Written Warnings

If the deficiency noted in a verbal warning is not corrected by the next inspection or the severity of the violation is such, that a verbal warning is not strong enough, a written notice of violation will be issued describing the infraction that is to be corrected and the time frame for correction and for a follow-up inspection. A copy of the notice will be given to the business owner, supervisor, or manager and placed in the active inspection file. If the violation has been corrected to the satisfaction of the inspector, the inspector will document compliance in the inspection file.

Denial or Revocation of Business License

In severe cases of non-compliance or significant discharges, it may be appropriate to revoke the facility's business license. The facility owner would then have to re-apply for a business license and meet any City requirements placed on the facility.

Civil and Criminal Court Actions

As a final resort, the City may use Civil and or Criminal court actions under the State Porter Cologne Water Quality Act or the Federal Clean Water Act, which may result in significant fines levied upon the non-compliant business owner.

The City of Solana Beach will establish, maintain, and enforce adequate legal authority to control pollutant discharges into and from their MS4s through ordinance, statute, permit, contract, or other means. The City will review and revise their ordinances and other applicable authorities as necessary to implement and enforce all storm water and non-storm water discharge prohibitions for all areas and activities within their jurisdiction.

In accordance with Permit Section F.3.d this Section of the JURMP describes the City of Solana Beach's program to reduce contaminants in urban runoff originating from existing residential development. The City currently conducts programs including inspections and dry-weather monitoring, and public outreach and educational activities to reduce residential contaminants in storm water runoff. This program will be expanded to be compliant with the new Permit requirements and includes the following activities: Pollution Prevention, Threat to Water Quality Prioritization, BMP Implementation, and Enforcement. This Section provides a description of each of these program activities and specific permit requirements pertaining to each.

5.1 POLLUTION PREVENTION (F.3.d.(1))

Pollutants in urban runoff that are associated with residential activities include sediment, pesticides, herbicides, and fertilizers from landscaping activities, bacteria from pet waste, detergents from washing activities, petroleum products and/or heavy metals from automobile use and repair, nutrients from disposal of green waste, and litter from improper disposal. These pollutants can be carried into storm drains by storm water and non-storm water runoff.

The City of Solana Beach has established a pollutant control program that is focused on residential activities that have the potential to generate these pollutants, including automobile-related activities, home and garden care activities, and household hazardous waste and pet waste disposal activities. The City's pollution prevention program will be implemented primarily through enforcement of City ordinances; public education and outreach programs; green and household hazardous waste recycling and disposal programs, pet waste disposal programs, and complaint-response inspections. This program develops designated minimum BMPs that are designed to reduce residential pollutants to the maximum extent practicable.

5.2 THREAT TO WATER QUALITY PRIORITIZATION (F.3.d.(2))

The City of Solana Beach consists of a total drainage area of 2,211 acres. Of this area, approximately 1,277 acres, or 58% of the total area is developed with residential properties. Residential areas within the City of Solana Beach discharge to 303(d) listed waters and environmentally sensitive water bodies. The 303(d) listed water bodies are the San Elijo Lagoon and Ecological Reserve, the San Dieguito Lagoon, and the Pacific Ocean.

In accordance with Permit section F.3.a.(3)(b) criteria, high priority existing residential areas and activities have been identified, based on their potential threat water quality from storm water runoff. High priority residential activities include:

- Automobile repair and maintenance
- Automobile washing
- Automobile parking
- Home and garden care activities and product use (pesticides, herbicides, and fertilizers)
- Disposal of household hazardous waste (e.g. paints, cleaning products)
- Disposal of pet waste
- Disposal of green waste

High priority areas are presented in Table 5-1. In development of the prioritization program, dry-weather monitoring data that has been collected by the City of Solana Beach since 1993, and records of complaints or violations were evaluated. The results of the dry-weather monitoring program from the last eight years have not indicated any serious problems with illegal discharges or illicit connections associated with existing residential areas or activities within the City of Solana Beach storm water drainage system. However, as discussed below, evidence of minor illegal and/or illicit discharges has been detected at isolated locations. Storm water complaints and other types of code compliance issues were reviewed for historical trends to identify types of recurring violations or areas where problems occur most frequently. None of the records reviewed during this initial prioritization identified recurring violations associated with existing residential areas or activities.

Three high priority residential areas were identified in the City of Solana Beach. A description of the criteria used to identify high priority residential areas is described below.

**Table 5-1
HIGH PRIORITY RESIDENTIAL AREAS**

Residential Area	Receiving Waterbody	Outfall/discharge Point
Neighborhoods north of Plaza Street, west of North Highway 101	San Elijo Lagoon	CMP Drain Pipe discharging into Open Space Area near bermed lagoon area
Neighborhoods north of Canyon Drive, west of Interstate-5	San Elijo Lagoon	36" RCP TM4370 at north end of Rios Ave. TM17737 northwest of end of Barbara Ave. TM1631 north end of Canyon Place 18" CMP , TM1756 at north end of Glencrest L6461 outfall at north end of Santa Olivia
Neighborhoods north of Santa Victoria Street, and Lomas Santa Fe Golf Course east of Interstate-5	San Elijo Lagoon	L6461 outfall at north end of Santa Clarina L7543 at north end of Santa Helena 18" RCP TM3116-1 at north end of Santa Luisida Dr. TM3116 at northwest end of Santa Petra Drive 18" RCP TM3116 at east end of Santa Petra Drive 18" RCP TM 3116-1 at lot 1539 near Santa Sabina 18" RCP TM 3116-1 at lot 1551 near Santa Elena
Neighborhoods west of Stevens Avenue, South of Canyon Drive, and north of Corio Street	Pacific Ocean	Fletcher Cove Outfall O-03A
Neighborhoods west of Stevens Avenue, south of Corio Street and north of Via de La Valle	Pacific Ocean	Seascape Sur, Outfall O-02

North Seascape Surf Surf Park – The residential area that discharges into Outfall O-02, located at North Seascape Surf Beach Park, west of Sunset Plaza Drive is identified as a high priority residential area. Evidence of minor discharges including elevated concentrations of ammonia, total, and fecal coliform, have been detected at Outfall O-02. The high-density residential zoned area that contributes runoff to this outfall, which includes a fishpond located at Seascape Surf Condominiums that is reportedly discharged into the MS4, which may be a source of the total and fecal coliform measured in this area.

Fletcher Cove – The residential area that discharges into Outfall O-03A, located at Fletcher Cove Beach Park, at the west end of Plaza Street is identified as a high priority residential area. Dry-weather monitoring program data indicated that elevated coliform levels were detected in 1996 at Outfall O-03A. A low flow diverter has been installed at Fletcher Cove that diverts dry-weather flow to the storm sewer system during the summer months and during storm events the remainder of the year. The dry-weather monitoring reports indicate that the low-flow diverter is successful in preventing discharge into the ocean while it is operating. However, elevated total and fecal coliform is still present in runoff discharging into the low flow diverted, and the Pacific Ocean during non-operational periods. The residential area that drains into this outfall, may in part be a source of the total and fecal coliform measured in this area.

San Elijo Lagoon Area - The residential areas located near the northern corporate limit of Solana Beach that discharge north into San Elijo Lagoon are identified as high priority residential areas due to their proximity to the lagoon. The lagoon is identified as a 303(d) listed waterbody, an Area of Special Biological Significance, and is designated with RARE Beneficial Uses. No dry-weather monitoring data is currently available to evaluate if these residential areas are contributing pollutants of concern into San Elijo Lagoon. The status of this area will be re-evaluated as dry weather monitoring data becomes available.

Stevens Creek Area - The residential areas that contribute runoff into Stevens Creek, which ultimately discharges into San Dieguito Lagoon is not identified as a high priority area. The dry weather monitoring data collected from this drainage area has not indicated the presence of elevated bacteria levels, the identified 303(d) pollutant of concern for San Dieguito Lagoon. The prioritization of these residential areas will be re-evaluated based on future dry-weather monitoring data. However, it is anticipated that high-priority activities, such as pet waste disposal and landscaping activities likely occur in these areas, and therefore the minimum designated BMPs described for these activities will apply to these residential communities.

Monitoring or other data will be used to periodically re-evaluate this inventory to provide support for the removal of a previously identified pollutant or presently prohibited activity and to ensure that resources are appropriately allocated. The following questions will be addressed in conducting these reviews.

- Do the results support existing program priorities (continue)?
- Do the results fail to support existing program priorities (discontinue)?
- Do the results indicate that other priorities are needed (new listing)?

5.3 BMP IMPLEMENTATION (F.3.d.(3))

In accordance with Permit Section F.3.d(3), the City of Solana Beach will designate a set of minimum BMPs for high threat to water quality residential areas and activities.

5.3.1 Minimum High Priorities

Table 5-2 lists designated minimum BMPs recommended by the City to reduce pollutants from high priority residential activities.

**Table 5-2
DESIGNATED MINIMUM BMPs¹ FOR
HIGH PRIORITY RESIDENTIAL ACTIVITIES AND AREAS**

Activity	Potential Best Management Practices (BMPs)
Automobile Repair and Maintenance	Public Education and Outreach including: <ul style="list-style-type: none"> • Pollution Prevention – preventative maintenance, reduce vehicle use, timely repairs • Leaks and Spills –prevention, containment, timing (avoid outside repairs during rain events), use of absorbent clean-up material • Materials and Waste Management – proper storage and disposal, recycle when possible, minimize use • Restrict Activity – encourage residents to use commercial facilities for conducting repairs
Automobile Washing	The City of Solana Beach Storm Water Ordinance prohibits residential automobile washing
Automobile Parking	<ul style="list-style-type: none"> • Proper parking lot design • Establish and enforce residential design standards for parking areas • Establish parking restrictions either generally or in priority areas (outdoors, near water bodies, etc.) Public Education and Outreach including: <ul style="list-style-type: none"> • Encourage residents to use routine preventative maintenance practices and to make timely vehicle repairs • Encourage sweeping of parking areas
Home and Garden Care Activities and Product Use	<ul style="list-style-type: none"> • Reduce irrigation runoff by proper design, operation and maintenance of residential irrigation systems. • Leaks and Spills –prevention timing (avoid pesticide or fertilizer application prior to rain events), proper clean-up • Materials and Waste Management – proper storage and disposal, recycle when possible, minimize use, avoid pesticide/fertilizer use on rainy or windy days • Restrictions – restrict disposal into storm drains, do not wash down impervious surfaces into street or gutter Public Education and Outreach: <p>Pollution Prevention – encourage the use of safe substitutes and alternative methods for garden use, minimize pesticide and fertilizer use, use of native or drought tolerant plants, use techniques to attract beneficial insects and biological controls, compost, conserve water (xeriscape, drip irrigation, etc.), use of mulch to reduce erosion.</p>

**Table 5-2 (continued)
DESIGNATED MINIMUM BMPs¹ FOR
HIGH PRIORITY RESIDENTIAL ACTIVITIES AND AREAS**

Activity	Potential Best Management Practices (BMPs)
Home Care and Maintenance	<ul style="list-style-type: none"> • Leaks and Spills –prevention, immediate clean-up, proper disposal • Materials and Waste Management – proper storage, dispose and recycle at community recycling or hazardous waste collection facilities when possible, minimize use • Restrictions – restrict disposal of wash water into streets, gutters, and storm drains Public Education and Outreach- <ul style="list-style-type: none"> • Pollution Prevention – minimize product use, encourage use of safe alternatives and water-based paints, and follow manufacturer instructions
Disposal of Pet Waste	<ul style="list-style-type: none"> • Materials and Waste Management – Provide pet waste disposal bags, encourage owners to pick up and properly dispose of pet waste. proper storage, dispose and recycle at community recycling or hazardous waste collection facilities when possible, minimize use • Restrictions – restrict disposal of wash water into streets, gutters, and storm drains Public Education and Outreach - <ul style="list-style-type: none"> • Pollution Prevention – encourage pet owners to spay/neuter pets to reduce feral cat and dog populations, encourage owner to pick up and properly dispose of pet waste

The primary pollutants of concern for the high priority residential areas that discharge into San Elijo Lagoon and the Pacific Ocean are eutrophic pollutants, sediment, and bacteria. Fertilizers are a likely source of eutrophic pollutants. Landscaping, gardening activities, and automobile parking and use are also contributors of sediment. Pet waste can be a source of residential bacteria pollutants. In an effort to reduce these pollutants from these high priority neighborhoods, the City of Solana Beach’s public outreach and education programs will emphasize the BMPs designed to reduce these contaminants identified in Table 5-2. The City of Solana Beach will increase their public outreach and education programs in the identified high priority areas.

5.3.2 Implementation of Minimum BMPs

The City of Solana Beach will implement residential BMPs primarily through public education and outreach programs and city implemented BMPs. City implemented BMPs, such as street sweeping and storm drain cleaning will be conducted by the Public Works Department (See Section 2.0- Municipal (Existing Development) Component). The City’s Education and Outreach Program will inform and educated residents of the negative impacts of urban runoff and BMPs they can implement to reduce or eliminate their contribution to urban runoff. The City’s education and outreach programs include:

Storm Drain Tile Marker Standard and Installation

The City of Solana Beach adopted a construction standard for Storm Drain Markers on April 7, 1998. This construction standard requires that all new or replaced storm drain inlets have a fish

and the words “NO DUMPING, THIS DRAINS TO THE OCEAN” message on a tile marker permanently affixed on the curb face of each side of the inlet opening. The tile markers are applied with an adhesive and are durable enough to be visible after many years. The storm drain markers are an important part of the City’s public education process as a permanent reminder to not dump pollutants into storm drains. On April 10, 1999, volunteers from Del Mar/Solana Beach Sunrise Rotary Club installed 62 of 309 City maintained curb inlets. Volunteers have since installed the remaining markings.

School Presentations

The City will present school presentations which focus on recycling and pollution prevention topics such as the importance of recycling used motor oil, identifying what a household hazardous material is, and how dumping or improper disposal harms the environment. The presentation utilizes an interactive model called Enviroscope.

Public Displays

Public displays are presented at street fairs to educate the public about the importance of proper disposal of used oil. Clean used oil containers are distributed at the events along with a list of certified used oil collection centers in North County. Solana Recyclers will present their display at the Fiesta del Sol event in Solana Beach in 2002.

Newsletters and Internet Sites not operated by the City

Articles in the newsletter *down 2 E.A.R.T.H. News* and information on the Solana Recyclers website (www.beresourceful.org) also contribute to educating the public about used oil recycling and other storm water and storm drain related issues. Informative articles are published in each issue of *down 2 E.A.R.T.H. News* for the past two years. *Down 2 E.A.R.T.H. News* is distributed to all residents in the cities of Solana Beach, Encinitas, and Del Mar via U.S. mail two times per year. The website contains storm water-related information and provides a complete list of certified used oil collection centers and household hazardous waste collection centers based on zip code. These outreach methods have proven to be more cost effective than direct mail brochures.

City-published Newsletters

The City of Solana Beach regularly publishes storm water-related articles in the City’s “Shorelines” newsletter. The newsletter is distributed to Solana Beach residents and businesses twice a year.

Brochures

Future outreach efforts include publication of a series of informative brochures on pollution prevention, identified pollutants of concern and recommended BMP practices to reduce the pollutants, proper disposal methods targeted toward people that are moving, and movie theater advertisements. Increased mailing frequency will occur in high priority residential neighborhoods.

The City of Solana Beach, Solana Recyclers and the non-profit organization I Love A Clean San Diego will implement this education campaign from January 2002 to March 2003.

Cal/EPA Environmental Hotline

The City of Solana Beach is participating in the Cal/EPA Environmental Hotline. The EPA is sponsoring a toll-free phone number that gives out environmental information. The City has provided information about our storm water programs to be placed on this hotline.

Storm Drain Outfall Caution Signs

The City of Solana Beach is cooperating with the County of San Diego Department of Environmental Health to ensure that the public is adequately notified of potential health risks associated with urban runoff on our beaches. The City permanently posted caution signs at Fletcher Cove and Seascape Sur storm drain outfalls.

Used Oil Recycling

Currently, the non-profit organization Solana Recyclers, Inc. facilitates the used oil recycling program for the City of Solana Beach and five other cities in North County. The program consists primarily of public education through school presentations, public displays at street fairs, articles in the newsletter *down 2 E.A.R.T.H. News*, and surveying of established certified used oil collection centers. These programs are funded through Used Oil Block Grants awarded to the cities of Solana Beach, Del Mar and Encinitas by the California Integrated Waste Management Board (CIWMB). Refer to Section 8.4 for a description of these programs.

Staff members at Solana Recyclers perform quarterly surveys of the 26 certified used oil collection centers in North County either in person or by phone. The purpose of the survey is to establish a working relationship with the centers, verify that the collection centers have the proper signage and containers, and to gauge the level of public participation. Funds from the Block Grant are also used to purchase equipment and tanks for the centers. Clean used oil containers are available at some centers at no charge to the public. Currently there are no certified used oil collection centers within the city limits of Solana Beach, however several centers are located nearby in Encinitas.

The City of Solana Beach will expand on these programs utilizing funds from the Used Oil Opportunity Grant offered by the CIWMB. The City will form a collective effort with other coastal cities to utilize funds and implement programs on a regional level. These programs will include curbside used oil recycling, establishment of certified collection centers in the City, providing used oil recycling information on the City website, and potentially implementation of storm drain inlet filters (pending legislation).

Household Hazardous Waste (HHW) Collection

The HHW program for the City of Solana Beach is facilitated by the Regional Solid Waste Authority (RSWA), which represents the cities of Solana Beach, Del Mar, Encinitas, , National City, Vista and Poway. The RSWA sponsors programs using funds obtained from a Household

Hazardous Waste Grant awarded by the CIWMB. Programs include permanent HHW collection facilities, public education and outreach, and equipment and disposal costs.

Two permanent HHW collection facilities are available to the residents and businesses of Solana Beach. These facilities are located in Vista and Poway, and are open to the public on Saturdays between the hours of 9:00AM and 3:00PM excluding holiday weekends. Businesses that are conditionally exempt small quantity generators can make appointments to drop-off HHW at either facility and are charged a disposal fee. Door-to-door HHW collection is available for elderly and homebound residents of Solana Beach by appointment. The HHW grant supports this program, covering the recycling fee of \$20.00 per monitor. Grant funds are fixed so the cost is covered until the funds are exhausted.

The City of Solana Beach will expand public education efforts associated with HHW by including information on the City website and in the newsletter Shorelines.

5.4 ENVIRONMENT OF RESIDENTIAL AREAS AND ACTIVITIES (F.3.d.(4))

Establishment of Legal Authority

The City of Solana Beach will establish, maintain, and enforce adequate legal authority to control pollutant discharges into and from their MS4s through ordinance (refer to Section 8.4), statute, permit, contract, or other means. The City will review and revise their ordinances and other applicable authorities as necessary to implement and enforce all storm water and non-storm water discharge prohibitions for all areas and activities within their jurisdiction.

Enforcement Action

Currently, BMPs are enforced in residential areas in response to complaints made to the City by a third party, or when a City official sees an illicit discharge. In addition, to increase the effectiveness of the enforcement program, street sweeper operators, dog catchers, police, fire department, and postal service employees will be trained to identify illicit discharges. When a complaint is received, the public works inspector or one of the City's three code enforcement inspectors is sent to the site. The inspector documents the violation and contacts the owner of the property or violator. The inspector will ensure that the proper BMP has been implemented, or that corrective action has been taken. Enforcement may consist of any or all of the following: verbal warning, written warning, orders to abate or correct, and fines. Escalating enforcement measures should be imposed if time frames and/or remedies are not achieved. If compliance is achieved and the discharge is eliminated, no other enforcement actions will be required. The City of Solana Beach performs follow-up investigations to prevent the reoccurrence of illicit discharges and connections.

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In accordance with Section F.1 of the Permit, this section of the JURMP describes the City of Solana Beach's program to reduce the short and long-term impacts on receiving water quality from new development and redevelopment. The program consists of General Plan assessment, modification of development project approval processes, revision of environmental review processes, and conducting education efforts focused on new development and redevelopment. This section provides a description of each of these program activities and specific permit requirements pertaining to each.

6.1 ASSESSMENT OF GENERAL PLAN (F.1.a)

The purpose of this program component is to incorporate water quality and watershed protection principles into the existing General Plan for the City of Solana Beach. In accordance with Permit Section F.1.a, the City of Solana Beach has revised its General Plan (adopted 1988) to include additional water quality and watershed protection principles and policies to direct land-use decisions and require implementation of consistent water quality protection measures for new development and redevelopment projects. Policy amendments and revisions will be made to the Land Use Element, Circulation Element, Safety Element, and Open Space and Conservation Element of the City's General Plan. These revisions are currently being reviewed by the City of Solana Beach's attorney and the General Plan will be updated upon approval.

6.2 MODIFICATION DEVELOPMENT PROJECT APPROVAL PROCESS (F.1.b)

6.2.1 Development Project Requirements

The City of Solana Beach will incorporate the following development project requirements prior to the issuance of local grading and building permits in order to ensure that pollutants and runoff from developments will be reduced to the maximum extent practicable and will not cause or contribute to an exceedance of receiving water quality objectives.

Source Control BMPs

Project proponents will be required to implement source control BMPs for all applicable development projects (See Section 7.0 Construction Component for applicability). It is the responsibility of the property owner and permit holder to select, install and maintain appropriate BMPs. The project proponent will be required to submit selected BMPs to the City in conjunction with project plans. The City will be responsible for assessing the appropriateness of selected BMPs and recommend additional or alternative BMPs, where necessary. Project proponents must select BMPs in accordance with BMP selection criteria outlined in the Construction Component of this JURMP. Source control BMPs must be approved by the City prior to the issuance of appropriate permits. Project proponents must certify that the BMPs proposed to support the permit application will be installed, monitored, maintained or revised as appropriate to ensure continued effectiveness. BMPs must be installed by the project proponent in accordance with an industry recommended standards (e.g. Caltrans or California Stormwater BMP handbooks) or in accordance with the California General Permit for Construction Activities.

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Site Design/Landscape Measures

Where feasible, project proponents will be required to incorporate site design/landscape measures into proposed project plans for review and approval by the City. The site design and landscape plan must include measures targeted at maximizing infiltration, providing retention, slowing runoff, and minimizing impervious land coverage for all development projects. The site design/landscape plan must be reviewed and approved by the City prior to the issuance of local permits.

Site design and landscape measures aimed at reducing pollutants from new developments by minimizing impervious surfaces include:

- Direct rooftop runoff to pervious areas such as yards, or vegetated areas, and avoid routing rooftop runoff to the roadway or the storm water conveyance system.
- When feasible, use permeable materials for private sidewalks, driveways, parking lots, golf cart paths, trails, or interior roadway surfaces.
- Reduce overall lot imperviousness by promoting alternative driveway surfaces and shared driveways that connect two or more homes together.
- Reduce the overall imperviousness associated with parking lots by providing compact car spaces, minimizing stall dimensions, incorporating efficient parking lanes, and using pervious materials in spillover parking areas.
- Provide reduced width sidewalks and incorporate landscaped buffer areas between sidewalks and streets. These must comply with regulations for the Americans with Disabilities Act and other life safety requirements and will require provisions for maintenance as set out in section 5.4 below.
- Design residential streets for the minimum required pavement widths. The radius of cul-de-sacs should be the minimum required to accommodate emergency and maintenance vehicles.
- Minimize the number of residential streets and cul-de-sacs and incorporate landscaped areas to reduce their impervious cover.

Buffer Zones

The project proponent must also incorporate buffer zones for natural water bodies, where feasible. If buffer zone implementation is infeasible, buffers such as trees, lighting restrictions, access restrictions, etc should be incorporated into the site design plans. Local permits will not be issued until the City has reviewed and approved the buffer zone or buffer design associated with the proposed project.

Evidence of Coverage Under General Industrial Permit

The City of Solana Beach will require industrial applicants subject to California's statewide General NPDES Permit for Storm Water Discharges Associated With Industrial Activities to provide evidence of coverage under the General Industrial Permit. The City will not issue permits until proof of coverage has been provided.

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Compliance with Construction Component Provisions

Project proponents must ensure that all construction activities are in compliance with the provisions identified in the Construction Component of this JURMP. These provisions include:

- Current Grading Ordinances
- Construction and Grading Project Requirements
- General Requirements for Construction Activities During Wet and Dry Seasons
- BMP Selection, Installation, and Maintenance Requirements
- Inspection Requirements

Proof of Post-Construction BMP ongoing long-term maintenance

The City is currently investigating options for post-construction BMP long-term maintenance responsibilities. Long-term maintenance responsibilities will be further identified in the local SUSMP. Options include:

1. Long-term maintenance of post-construction BMPs is the responsibility of the property owner and compliance of post-construction BMPs is subject to investigation by the City. If property owners violate post-construction BMP requirements, the City may chose to use their legal authority and proceed with enforcement actions.
2. Long-term maintenance of post-construction BMPs is the responsibility of the City. The City will fund maintenance activities through the implementation of a City utility tax to be paid by residents and businesses within the City.
3. Long-term maintenance of post-construction BMPs is the responsibility of the City. The City will fund maintenance activities through the initiation of a permit fee to be paid by the property owner upon submittal of the permit application for development projects requiring long-term maintenance of post-construction BMPs.

6.2.2 Standard Urban Storm Water Mitigation Plans (SUSMPs)

The model Standard Urban Storm Water Mitigation Plan (SUSMP) is currently being developed to facilitate the development of local SUSMPs for each Copermittee. Within 180 days of approval of the model SUSMP, the City of Solana Beach will adopt and submit to the SDRWQCB for approval its own local SUSMP, and amended ordinances consistent with the approved model SUSMP.

Currently, where feasible and after adoption and approval of the local SUSMP for the City of Solana Beach, the City will ensure that all new development and significant redevelopment projects falling under the priority project categories or locations listed below meet SUSMP requirements. Priority project categories include:

- *Home subdivisions of 100 housing units or more.* This category includes single-family homes, multi-family homes, condominiums, and apartments.
- *Home subdivisions of 10-99 housing units.* This category includes single-family homes, multi-family homes, condominiums, and apartments.

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- *Commercial developments greater than 100,000 square feet.* This category is defined as any development on private land that is not for heavy industrial or residential uses where the land area for development is greater than 100,000 square feet. The category includes, but is not limited to: hospitals; laboratories and other medical facilities; educational institutions; recreational facilities; commercial nurseries; multi-apartment buildings; car wash facilities; mini-malls and other business complexes; shopping malls; hotels; office buildings; public warehouses; automotive dealerships; commercial airfields; and other light industrial facilities.
- *Automotive repair shops.* This category is defined as a facility that is categorized in any one of the following Standard Industrial Classification (SIC) codes: 5013, 5014, 5541, 7532-7534, or 7536-7539.
- *Restaurants.* This category is defined as a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812), where the land area for development is greater than 5,000 square feet.
- *All hillside development greater than 5,000 square feet.* This category is defined as any development which creates 5,000 square feet of impervious surface which is located in an area with known erosive soil conditions, where the development will grade on any natural slope that is twenty-five percent or greater.
- *Environmentally Sensitive Areas: All development and redevelopment located within or directly adjacent to or discharging directly to an environmentally sensitive area (where discharges from the development or redevelopment will enter receiving waters within the environmentally sensitive area), 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.* Environmentally sensitive areas include but are not limited to all Clean Water Act Section 303(d) impaired water bodies; areas designated as Areas of Special Biological Significance by the State Water Resources Control Board (Water Quality Control Plan for the San Diego Basin (1994) and amendments); water bodies designated with the RARE beneficial use by the State Water Resources Control Board (Water Quality Control Plan for the San Diego Basin (1994) and amendments); areas designated as preserves or their equivalent under the Multi Species Conservation Program within the Cities and County of San Diego; and any other equivalent environmentally sensitive areas which have been identified by the Copermittees. “Directly adjacent” means situated within 200 feet of the environmentally sensitive area. “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.
- *Parking lots 5,000 square feet or more or with 15 or more parking spaces and potentially exposed to urban runoff.* Parking lot is defined as a land area or facility for the temporary parking or storage of motor vehicles used personally, for business, or for commerce.

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- *Street, roads, highways, and freeways.* This category includes any paved surface which is 5,000 square feet or greater used for the transportation of automobiles, trucks, motorcycles, and other vehicles.
- *Retail Gasoline Outlets.* Retail Gasoline Outlet is defined as any facility engaged in selling gasoline.

6.3 REVISIONS TO ENVIRONMENTAL REVIEW PROCESS (F.1.c)

The environmental review process will be revised to include evaluation of the water quality effects of proposed projects and identification of mitigation measures for incorporation into the project design, where appropriate. The City will update its Initial Study Checklist used by staff for CEQA compliance to include the following questions designed to address increased pollutants and flow from proposed projects:

- Could the proposed project result in an increase in pollutant discharges to receiving waters? Consider water quality parameters such as temperature, dissolved oxygen, turbidity and other typical storm water pollutants (e.g., heavy metals, pathogens, petroleum derivatives, synthetic organics, sediment, nutrients, oxygen-demanding substances, and trash).
- Could the proposed project result in significant alteration of receiving water quality during or following construction?
- Could the proposed project result in increased impervious surfaces and associated increased runoff?
- Could the proposed project create a significant adverse environmental impact to drainage patterns due to changes in runoff flow rates or volumes?
- Could the proposed project result in increased erosion downstream?
- Is the project tributary to an already impaired water body, as listed on the Clean Water Act Section 303(d) list. If so, can it result in an increase in any pollutant for which the water body is already impaired?
- Is project tributary to other environmentally sensitive areas? If so, can it exacerbate already existing sensitive conditions?
- Could the proposed project have a potentially significant environmental impact on surface water quality, to either marine, fresh, or wetland waters?
- Could the proposed project have a potentially significant adverse impact on ground water quality?
- Could the proposed project cause or contribute to an exceedance of applicable surface or groundwater receiving water quality objectives or degradation of beneficial uses?
- Can the project impact aquatic, wetland, or riparian habitat?

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6.4 EDUCATION ON NEW DEVELOPMENT AND REDEVELOPMENT (F.1.d)

Municipal Staff

Training Workshops

The Storm Water Coordinator for the City will provide a training workshop for planning department staff to educate them on new Permit requirements and changes to local ordinances, regulations, procedures, etc. as a result of compliance with the Permit.

Seminars and Conferences

The City of Solana Beach will also require appropriate staff members and inspectors to attend local Storm Water Quality Task Force meetings, selected training seminars (e.g. Best Management Practice Seminar, 2000), City meetings and other regional conferences throughout the year related to the following topics:

- Federal and state water quality laws and regulations applicable to development projects;
- The connection between land use decisions and short and long-term water quality impacts (i.e., impacts from land development and urbanization); and
- How impacts to receiving water quality resulting from development can be minimized (i.e., through implementation of various source control and structural BMPs).

Construction and Building Activities Guide

The City of Solana Beach, with the permission of the County of San Diego, has modified the County's "Storm Water Best Management Practice Guide for Construction and Building Activities" for city use. The guide will be used as a reference by City staff in the project review process.

Project Applicants, Contractors, Developers, Property Owners, and other Responsible Parties

Pre-Construction Meetings/Training Seminar

The City of Solana Beach holds pre-construction meetings prior to issuance of the grading or improvement permit. As part of the agenda in the Pre-construction Grading Guidelines, the Engineering Staff informs the developers, homeowners, or contractors about the storm water pollution issues and mitigation methods. The City of Solana Beach will expand this training session to include training on the following topics:

- Federal, state, and local water quality laws and regulations applicable to development projects;
- Required federal, state, and local permits pertaining to water quality; Water quality impacts of urbanization; and
- Methods for minimizing the impacts of development on receiving water quality.

SECTION SIX

Construction Handout

The City of Solana Beach provides a Storm Water BMP Guide handout for construction and building activities to all project proponents when applying for local permits. The handout discusses storm water pollution and the responsibility of property owner or operator, and identifies BMPs for all phases of construction. The handout also identifies additional resources and contacts to obtain additional information.

Rainy Season Reminder

During the rainy season the City of Solana Beach notifies by mail all developers, homeowners or contractors, who have an active grading permit, of their responsibilities to control and reduce pollutants in runoff from their construction activity.

City Sponsored Workshops and Meetings

The City of Solana Beach will hold monthly meetings and workshops beginning in March 2002 for business and property owners. The early workshops will be entitled “Storm Water - What is New” and will be educational in nature. Later workshops will be providing more specific instructions as to the strategic plan of the City/Copermittees in administering the Watershed URMP and SUSMP.

City Newsletter and Web Site

The City web site and newsletter will inform the public of changes to local permit process and regulations regarding new development and redevelopment as a result of compliance with the Permit.

In accordance with Section F.2 of the Permit, this Section of the JURMP describes the City of Solana Beach's program to reduce contaminants in urban runoff originating from construction sites and activities. High priority construction sites within the City and required minimum BMPs for all construction activities are identified. This Section also outlines the program that will be implemented by the City in order to ensure that BMPs are implemented and enforced. The goal of this program is to minimize or avoid the impacts of construction activities on receiving waters and other environmental resources in the City of Solana Beach and, where possible, to enhance the quality of these resources.

This Section is organized into specific program activities that will be implemented by the City to address storm water discharges from construction sites or activities. These include: Pollution Prevention; Grading Ordinance Update, Modify Construction and Grading Approval Process, Source Identification, Threat to Water Quality Prioritization; BMP Implementation; Inspection of Construction Sites; Enforcement of Construction Sites, Reporting of Non-compliant Sites, and Education on Construction Activities.

7.1 POLLUTION PREVENTION (F.2.a)

Significant amounts of pollutants have the potential to impact receiving waters as a result of construction activities. These include sediment and other pollutants from construction-related materials, wastes, or spills. These pollutants can be transported to the storm drain system and ultimately receiving waters by wind or runoff. To ensure that pollutant runoff is controlled to the maximum extent practicable, the City of Solana Beach has established a pollutant control program that is focused on construction activities. This program includes revisions to local permit and ordinance requirements for construction activities. Included in these new provisions are requirements for BMP implementation and inspection for the purpose of pollution prevention.

Construction site owners, developers, contractors and other responsible parties are required to act in accordance with all pollution prevention methods for construction activities set forth by the City and outlined in this JURMP for compliance with the Permit.

7.2 GRADING ORDINANCE UPDATE (F.2.b)

The City of Solana Beach has reviewed and updated its grading and storm water ordinances for compliance with the Permit. Current grading ordinances require implementation of BMPs and other measures during all construction activities and includes:

- Erosion prevention;
- Seasonal restrictions on grading
- Slope stabilization requirements
- Phased grading
- Revegetation as early as feasible
- Preservation of natural hydrologic features
- Preservation of riparian buffers and corridors
- Maintenance of all source control and structural treatment BMPs
- Retention and proper management of sediment and other construction pollutants on site

7.3 MODIFY CONSTRUCTION AND GRADING APPROVAL PROCESS (F.2.c)

Prior to approval and issuance of local construction and grading permits, the City of Solana Beach requires all individual proposed construction and grading projects to implement measures to ensure that pollutants from the site will be reduced to the maximum extent practicable and will not cause or contribute to an exceedance of water quality objectives. Additionally, the City will further ensure that all grading and construction activities will be in compliance with the Permit, applicable City ordinances and other applicable requirements.

Construction and Grading Project Requirements

The City has updated project requirements associated with local grading and construction permits to ensure that pollutant discharges are reduced to the maximum extent practicable and water quality objectives are not violated during the construction phase. Prior to the issuance of grading or construction permit, the project proponent is required to:

- Develop and implement a plan to manage storm water and non-storm water discharges from the site at all times;
- Minimize grading during the wet season and require grading during dry weather periods to the extent feasible. If grading does occur during the wet season, project proponent will be required to implement additional BMPs for any rain events that may occur.
- Emphasize erosion prevention as the most important measure for keeping sediment on site during construction;
- Utilize sediment controls as a supplement to erosion prevention for keeping sediment on-site during construction, and never as the single or primary method;
- Minimize areas that are cleared and graded to only the portion of the site that is necessary for construction;
- Require project proponent to minimize exposure time of disturbed soil areas;
- Temporarily stabilize and reseed disturbed soil areas as rapidly as possible;
- Permanently revegetate or landscape as early as feasible;
- Stabilize all slopes; and
- Provide evidence of coverage under the General Construction Permit, as required by California's Statewide General NPDES Permit for Storm Water Discharges Associated With Construction Activities,

7.4 SOURCE IDENTIFICATION (F.2.d)

Prior to the wet season each year, the City or Solana Beach will develop and update a watershed-based inventory of all construction sites within its jurisdiction regardless of site size or ownership. This requirement is applicable to all construction sites regardless of whether the construction site is subject to the California statewide General NPDES Permit for Storm Water Discharges Associated With Construction Activities, or other individual NPDES permit. The

watershed-based inventory of construction activities will facilitate the effort to identify construction areas that may be discharging pollutants offsite.

Construction sites include any site where an activity such as grading, excavation, clearing, road construction, building construction, or demolition results in the disturbance of soil. Table 7-1 presents a list of current construction sites within the City's jurisdiction.

7.5 THREAT TO WATER QUALITY PRIORITIZATION (F.2.e)

Construction areas within the City are classified as a high, medium, or low threat to water quality based on the following criteria:

High Priority

- The site is 50 acres or more and grading will occur during the wet season; OR
- The site is (1) 5 acres or more, required to file an NOI and comply with State General Construction Permit and is (2) tributary to a Clean Water Act section 303(d) water body impaired for sediment or is within or directly adjacent to or discharging directly to a coastal lagoon or other receiving water within an environmentally sensitive area (as defined in section F.1.b.(2)(a)vii of RWQCB Order No. 2001-01).
- Sites where past activities have illustrated a need for frequent oversight.
- Sites where 50% of the total slope area is greater than 3:1.

Medium Priority

- Any site required to file an NOI and comply with State General Construction Permit but is not a tributary to a Clean Water Act Section 303(d) water body impaired for sediment or is within or directly adjacent to or discharging directly to a coastal lagoon or other receiving water within an environmentally sensitive area (as defined in section F.1.b.(2)(a)vii of RWQCB Order No. 2001-01).
- Capital Improvement Projects where grading occurs, however a Storm Water Pollution Prevention Plan (SWPPP) is not required under the State General Construction Permit.
- Permit projects in the public right-of-way where grading occurs, however SWPPPs are not required.
- Permit projects on private property where grading permits are required, however, Notice Of Intents (NOIs) and SWPPPs are not required.

**Table 7-1
SOLANA BEACH CONSTRUCTION SITE INVENTORY**

Project Name	Location	Priority Category	Current Zoning	Type of Construction	Project Site Area	Hydrologic Unit	Drainage	Draining to 303(d) listed water?	303(d) Pollutants of Concern
McMahon Development	500 Stevens Ave.	Medium	Office/ Professional	Office Building.		San Dieguito	Stevens Creek which drains to San Dieguito Lagoon.	Yes	Coliform
Santa Fe Christian School Redevelopment and Expansion	838 Academy Dr.	Medium	Medium/High Density Residential	Redevelopment and Expansion of School Facility.	15.65 Acres (Entire Site)	San Dieguito	Stevens Creek which drains to San Dieguito Lagoon.	Yes	Coliform
American Assets	Stevens Ave.	Medium	Office/ Professional	Redevelopment of existing office building (1,000 ft ²) and new development of 50,000 ft ² office building.	11 acres	San Dieguito	Stevens Creek which drains to San Dieguito Lagoon.	Yes	Coliform
Sillstrop	400-500 Cedros	High	Medium/High Density Residential	Development of 25 Residential Units.	1.8 Acres	San Elijo	Runoff from site enters below grade railroad corridor. The majority of runoff drains to the Pacific Ocean at Fletcher Cove (Outfall O-03A). Some runoff is thought to drain to San Elijo Lagoon via the railroad corridor.	Yes	<u>Pacific Ocean</u> Coliform <u>San Elijo Lagoon</u> Sediment Coliform Nutrients

Low Priority

- Capital Improvement Projects where minimal to no grading occurs, such as signal light and loop installations, street light installations, etc.
- Permit projects in the public right-of-way where minimal to no grading occurs, such as pedestrian ramps, driveway additions, small retaining walls, etc.
- Permit projects on private property where grading permits are not required, such as small retaining walls, single-family homes, small tenant improvements, etc.

Sites can also be classified as high, medium, or low based on assessment of the following criteria at the discretion of the City Engineer.

- soil erosion potential
- site slope
- project size and type
- sensitivity of receiving water bodies
- proximity to receiving water bodies
- non-storm water discharges
- any other relevant factors.

Inventory of Current Construction Activities**High Priority Sites**

The development project located at 400-500 Cedros Avenue is considered a high priority site because the project site is greater than 5 acres and runoff from site drains to a below grade railroad corridor. From the railroad corridor, the majority of runoff drains to the Pacific Ocean at Fletcher Cove (Outfall O-03A). Some runoff, however, may drain to San Elijo Lagoon via the railroad corridor. San Elijo Lagoon is a 303(d) listed water body. Pollutants of concern include sediment, coliform and nutrients.

Medium Priority Sites

The development projects located at 838 Academy Drive and 500 Stevens are considered medium priority sites. Runoff from both development projects drain to Stevens Creek which flow into San Dieguito Lagoon. San Dieguito Lagoon is a 303(d) listed water body and is impaired for coliform.

Low Priority Sites

Currently, there are no low priority project sites within the City.

7.6 BMP IMPLEMENTATION (F.2.f)

Responsible parties will be required to select, implement, and maintain BMPs designed to reduce contaminants in urban runoff that originate from construction activities. The City does not advocate BMPs specific to high, medium, or low priority sites, rather it advocates that in order to

protect water quality during construction, three categories of control practices be implemented: (1) erosion control; (2) sediment control practices; and (3) materials management. The responsibility party must select appropriate BMPs from each of these categories to ensure protection of water quality and compliance with Permit requirements.

7.6.1 Timing

Where feasible, the City of Solana Beach will limit construction activities to the dry season. However, in cases where construction activities do occur during the wet season, the City will require the responsible party to implement more aggressive measures and inspection procedures to ensure that impacts of construction activities on receiving waters are minimized or avoided. General requirements for construction activities during wet and dry seasons are listed below.

7.6.2 Dry Season Requirements (May 1 through September 30)

- Adequate perimeter protection BMPs must be installed and maintained.
- Adequate sediment control BMPs must be installed and maintained.
- Adequate BMPs to control off-site sediment tracking must be installed and maintained.
- Deployment of physical or vegetation erosion control BMPs must commence as soon as slopes are completed for any portion of the site. The project proponent may not continue to rely on the ability to deploy standby BMP materials to prevent erosion of slopes that have been completed.

7.6.3 Rainy Season Requirements (October 1 through April 30)

- Adequate erosion control BMPs must be installed and maintained and upgraded as necessary to provide sufficient protection for storms likely to occur during the rainy season.
- One hundred percent of all exposed disturbed areas must have erosion protection BMPs properly installed or 100% erosion control on slopes, in combination with properly designed and sized desiltation basins (certified by a qualified Civil Engineer) for exposed non-slope areas such as pads and roads with the exception of slopes greater than 3:1(Horizontal vs. Vertical) that have properly designed de-silting basins at all discharge points.
- Perimeter protection and sediment control BMPs must be installed and maintained and upgraded as necessary to provide sufficient protection for storms likely to occur during the rainy season.
- Adequate BMPs to control off-site sediment tracking must be installed and maintained.
- Adequate physical or vegetation erosion control BMPs must be installed and established for all completed slopes prior to the start of the rainy season. These BMPs must be maintained throughout the rainy season. If a selected BMP fails, it must be repaired and improved, or replaced with an acceptable alternate as soon as it is safe to do so. The failure of a BMP shows that the BMP, as installed, was not adequate for the circumstances in which it was used. Repairs or replacements must therefore put a more robust BMP in place.

- The amount of exposed soil allowed at one time shall not exceed that which can be adequately protected by deploying standby erosion control and sediment control BMPs prior to a predicted rainstorm or through the use of desiltation basins designed and stamped by a Certified Engineer.
- Disturbed areas that are not completed but are not being actively graded in addition to disturbed active areas such as trenching, building and landscaping areas, must be fully protected from erosion if left for 10 or more days. The ability to deploy standby BMP materials is not sufficient for these areas. BMPs must actually be deployed.
- A minimum of 125% of the material needed to install standby BMPs necessary to completely protect the exposed portions of the site from erosion, and to prevent sediment discharges, must be stored on site. Areas that have already been protected from erosion using physical stabilization or established vegetation stabilization BMPs are not considered to be “exposed” for purposes of this requirement.
- The project proponent must have an approved “weather triggered” action plan and have the ability to deploy standby BMPs as needed to completely protect the exposed portions of the site within 48 hours of a predicted storm event (a predicted storm event is defined as a forecasted, 50% chance of rain). The “weather triggered” action plan must be reasonable and implementable prior to a predicted rain. The dynamic nature of construction activities often disturbs significant portions of the site, making these areas particularly vulnerable to erosion. BMPs include giving careful consideration to the required hours and on-site supplies needed to ensure that no portion of the site is insufficiently protected during a storm event. The “weather triggered” action plan should be developed by performing “dry-runs” to calculate the actual time required for effective pre-rain site preparation. An appropriate weather forecast “trigger” should then be selected to meet the time and supply parameters. The action plan should be part of the comprehensive Construction Activity/BMP Sequencing Schedule. Careful consideration should be given to ensure that each construction phase has effective, continuous and year-round BMPs sequenced in such a way to ensure that no portion of the site is insufficiently protected resulting in erosion and illegal discharges. On request, the project proponent must provide proof of this capability that is acceptable to the City.
- Deployment of physical or vegetation erosion control BMPs must commence as soon as slopes are completed for any portion of the site. The project proponent may not continue to rely on the ability to deploy standby BMP materials to prevent erosion of slopes that have been completed.
- Grading must be phased at larger sites. For example, it may be necessary to deploy erosion and sediment control BMPs in areas that are not completed but are not actively being worked before additional grading is done.

7.6.4 BMP Selection

BMPs are operational activities or physical controls that are applied to storm water and other runoff to reduce or eliminate the discharge of pollutants off-site. BMPs can be structural or

nonstructural controls that have direct effects on the release, transport or discharge of pollutants. Selection of BMPs for a project is a function of assessing project type, size, post-construction activities and other factors. Project proponents shall identify all impacts relating to pollutants of concern and provide satisfactory evidence using these criteria that the specific BMPs proposed will mitigate such impacts to the maximum extent practicable.

It is the responsibility of the property owner and permit holder to select, install and maintain appropriate BMPs. BMPs must be installed in accordance with an industry recommended standard (e.g. Caltrans or California Stormwater BMP handbooks) or in accordance with the State General Construction Permit.

For all grading and building projects, the City of Solana Beach requires the implementation and maintenance of at least one BMP listed in each erosion control and sediment control subcategory below. Depending on project scope and potential associated discharges, additional BMPs may be needed. If the project proponent proposes to use a BMP not listed below, approval from the City is required prior to installation. The County, however, will not accept tracking, mulch, non-watered seed mixtures, and jute matting without seed and irrigation as a means to protect exposed slopes from erosion.

Erosion Control

1. Physical Stabilization of exposed slopes
 - a. Geotextiles
 - b. Mats
 - c. Fiber rolls
 - d. Sprayed on binders
 - e. Other material approved by the City for use in specific circumstances

If physical stabilization is selected, materials must be appropriate to the circumstances in which they are deployed, and sufficient material must be deployed.

2. Vegetation Stabilization of exposed slopes
 - a. Established interim vegetation (via Hydroseed, seeded mats, etc)
 - b. Established permanent landscaping

If vegetation stabilization is selected, the stabilizing vegetation must be installed, irrigated and established prior to October 1 (Established vegetation is defined as a subsurface mat of intertwined mature roots with a uniform vegetative coverage of 70 percent of the natural vegetative coverage or more on disturbed areas). In the event stabilizing vegetation has not been established by October 1, other forms of physical stabilization must be employed to prevent erosion until the stabilizing vegetation established.

Sediment Control

1. Perimeter protection. Protect the perimeter of the site or exposed area from sediment ingress/discharge in sheet flows using:

- a. Silt fencing
 - b. Gravel bag barriers
 - c. Fiber rolls
2. Resource protection. Protect environmentally sensitive areas, and watercourses from sediment in sheet flows by using:
 - a. Silt fencing
 - b. Gravel bag barriers
 - c. Fiber rolls
 3. Sediment Capture. Capture sediments in channeled storm water by using:
 - a. Storm-drain inlet protection measures
 - b. De-silting basins (Designed in accordance with an industry standard such as Caltrans, California Stormwater BMP manual etc. If the project is five acres or greater the desilting basin(s) must be designed in accordance with the State General Construction Permit, Order DWQ 99-08.
 4. Velocity Reduction. Reduce the velocity of storm water by using:
 - a. Outlet protection (energy dissipater)
 - b. Equalization basins
 5. Off-site Sediment Tracking. Prevent sediment from being tracked off-site by using:
 - a. Stabilized construction entrances/exits
 - b. Construction road stabilization

For all grading and building projects, the City of Solana Beach requires the implementation and maintenance of all materials management practices listed below.

Materials Management

1. Prevent the contamination of storm water by wastes through proper management of the following types of wastes:
 - a. Solid
 - b. Sanitary
 - c. Concrete
 - d. Hazardous
 - e. Equipment – related wastes
2. Prevent the contamination of storm water from construction materials by:
 - a. Covering and/or providing secondary containment of storage areas
 - b. Taking adequate precautions when handling materials

If implementation of any of the above BMPs are determined infeasible at a particular site, alternate equivalent BMPs will be selected.

The project proponent must submit a plan whereby these BMPs are implemented and maintained. This plan must be approved by the City Engineer prior to the issuance of any grading or building permits.

7.7 INSPECTION OF CONSTRUCTION SITES (F.2.g)

The following performance standards will be used by the City of Solana Beach in order to evaluate the effectiveness of BMP implementation on construction activities. The City inspector and developers/contractors required to perform self-inspections can use the standards as a technique for determining if existing BMPs are adequate or if additional or alternate BMPs need to be implemented. Performance standards include:

- No measurable sediment pollution in runoff from the site
- Slope erosion, rills and gullies of any size must be repaired as soon as it is safe to do so.
- Water velocity moving offsite must not be greater than pre-storm construction levels.

Developer/Contractor Self Inspection Requirements for High Priority Sites and Projects Requiring Compliance with State General Construction Permit

BMPs for construction sites are usually temporary measures that require frequent maintenance for continued effectiveness. Because construction operations are always changing, BMPs may require relocation, revision and re-installation, particularly as project grading progresses. Therefore, developer/construction self-inspections are required for high priority sites or projects requiring compliance with the State General Construction Permit, particularly during the rainy season. There are four primary purposes of the self-inspections conducted by developers, owners and contractors:

- To ensure that the owners/developers/contractors take full responsibility for storm water pollution caused by their activities
- To ensure that BMPs are properly implemented and functioning effectively
- To identify maintenance (e.g., sediment removal) and repair needs
- To ensure that the project proponents implement their storm water management plans

The developer/contractor will be required to provide City inspectors (or inspectors contracted by the City) completed self-inspection forms for review upon request.

During self-inspection, the contractor/developer will be required to document, at a minimum, the inspection date and time, environmental and site conditions, and observations and BMP effectiveness. These records must be kept on-site and made available for City inspectors, if requested.

Self-inspections must be performed according to the following schedule:

- Before every rainfall event that is predicted to produce observable runoff and after every rainfall event that produces observable runoff,
- At 24-hour intervals during extended rainfall events.

City Inspection Procedures

Inspections are conducted to ensure that developers implement an effective combination of BMPs to meet city water quality protection requirements and that activities are being performed in accordance with project plans, building and grading permits, and applicable codes, regulations, and ordinances. During inspections, assessments will be made as to the effectiveness of the combination of erosion, sediment, and non-storm water BMPs implemented to prevent the discharge of pollutants into the storm water conveyance system.

The City of Solana Beach conducts daily construction site inspections on a year round basis for high and medium priority sites. Daily inspection information is documented on an inspection field form (Figure 7-1). Future inspections will encompass the revisions made to city ordinances and permits for compliance with the Permit and will incorporate the following tasks:

- Review project proponents self-inspection checklist to determine whether minimum self-inspections have been performed;
- Review the site erosion control and BMP implementation plans and determine whether they are being properly implemented;
- Determine if BMPs are being used in accordance with the intent of all laws and approved plans;
- Determine whether BMPs are effectively being implemented and maintained properly; and
- Determine whether owner/developer/contractor is making appropriate adjustment when ineffective BMPs are found.

Enforcement actions will be taken by the City if BMPs are either lacking or being implemented improperly. These actions are discussed in Section 7.8.

The City will maintain the it's current inspection frequency standard but will adhere to the minimum inspection frequencies pursuant to the Order if changes to the City's current program occur. The minimum inspection frequencies are as follows:

During the wet season, (i.e., October 1 through April 30 of each year) the City will conduct inspection at all high priority construction sites

1. Weekly, or
2. Monthly for any site that the City certifies in a written statement to the SDRWQCB all of the following:

**Figure 7-1
DAILY INSPECTION FIELD FORM**



**CITY OF SOLANA BEACH
DEPARTMENT OF ENGINEERING**

DAILY INSPECTION REPORT

REPORT NO. _____

PROJECT: _____

DATE: _____ LOCATION: _____

WEATHER CONDITIONS: _____

CONTRACTOR: _____

EQUIPMENT: _____

LABOR: _____

MATERIAL: _____

DESCRIPTION OF WORK IN
PROGRESS: _____

WHAT STORMWATER BEST MANAGEMENT PRACTICES (BMP) ARE REQUIRED: _____

BMP MEASURES IN PLACE: _____

INSPECTOR: _____ TIME: _____

SHEET ___ OF ___ SHEETS

- The City has record of construction site's Waste Discharge Identification Number (WDID#) documenting construction site's coverage under the statewide General Construction Permit;
- The City has reviewed the construction site's Storm Water Pollution Prevention Plan (SWPPP);
- The City finds SWPPP to be in compliance with all local ordinances, permits, and plans; and
- The City finds that the SWPPP is being properly implemented on site.

Certified statements may be submitted to the SDRWQCB at any time for one or more sites.

The City will inspect medium and low priority construction sites twice during the wet season. All construction sites will be inspected by the City once during the dry season (i.e., May 1 through September 30) and then as needed based on the findings of the inspection.

Based upon site inspection findings, the City will implement all follow-up actions necessary for compliance with the Permit.

7.8 ENFORCEMENT OF CONSTRUCTION SITES (F.2.h)

The City of Solana Beach has developed enforcement procedures to require that corrective actions be undertaken when permits, ordinances or other requirements are not adhered to.

Each Copermitttee shall enforce its ordinances (grading, storm water, etc.) and permits (construction, grading, etc.) at all construction sites as necessary to maintain compliance with this Order. Copermitttee ordinances or other regulatory mechanisms shall include sanctions to ensure compliance. Sanctions shall include the following or their equivalent: Non-monetary penalties, fines, bonding requirements, and/or permit denials for non-compliance.

The City's enforcement program is designed to accomplish the following goals:

- Educate the regulated community
- Promote compliance of the laws and regulations within the regulated community
- Return violators to compliance in a timely manner
- Initiate and conclude enforcement activities in a timely manner
- Penalize violators, as appropriate, and to deprive violators of any significant benefit gained from violations
- Prevent any business from having an unfair business advantage through non-compliance
- Treat similar facility owners and operators equally and consistently with regard to the same types of violations
- Deter violators of Unified Program laws and regulations

City inspectors (or inspectors contracted by the City) will document all violations observed during site inspections. If a significant and/or immediate threat to water quality is observed by the inspector, enforcement action will be taken immediately to require the developer/contractor to stop the discharge. The specific enforcement action will depend on the severity of the

violation, but can range from a verbal warning to large fines. In judging the degree of severity, the inspector will take into account any history of similar or repeated violations by the same developer or contractor at this or other sites. Normally, escalating enforcement steps are used by the City to ensure compliance. These are steps are described in detail below.

Verbal Warnings

The inspector will notify the owner, developer, or contractor of the violation and issue a verbal warning requiring that the discharge be immediately controlled. The inspector will document the violation and the notification to the project supervisor in the inspection file. The inspector will give the responsible party a time frame for correcting the problem and a follow-up inspection date will be scheduled.

Written Warnings

If the violation noted in a verbal warning is not corrected by the scheduled follow-up date, or the severity of the violation is such that a verbal warning is not strong enough, a written notice of violation (NOV) will be issued. The NOV will describe the infraction that is to be corrected, and provide a time frame for correction and a date for a follow-up inspection. A copy of the notice will be provided to the owner, developer or contractor. If at the time of the follow up inspection the violation has been corrected to the satisfaction of the inspector, the inspector will document compliance in the inspection file with the NOV.

Enforcement of Contracts (For Municipal Projects Only)

If a contractor or developer is performing construction work for a City of Solana Beach, the City will use the provisions within the contract for enforcement of non-compliance. The City will incorporate language into their construction contracts that give them the right to refuse payment, stop work (without time penalties) or revocation of contracts if the contractors performing the construction activities do not comply with appropriate permits, laws, regulations and ordinances.

Stop Work Orders

If an NOV has not been addressed by the next inspection, or the developer has not complied with their permit requirements, or a significant threat to water quality is observed (such as a failure of BMPs resulting in a significant release of sediment or other pollutants off site), a stop work order may be issued by the appropriate City official. Stop work orders prohibit further construction activity until the problem is resolved and provide a time frame for correcting the problem. The stop work order will describe the infraction and specify what corrective action must be taken. A copy of the stop work order will be given to the owner, developer or contractor. To restart work once a stop work order has been issued, the private contractor's project supervisor must request the inspector to re-inspect the project and verify that the deficiencies have been satisfactorily corrected. If the inspector is satisfied with the corrections, the inspector may sign off on that phase of the project, and work may proceed. The stop work order and other related information will be documented in the inspection file.

Denial or Revocation of Permits

In severe cases of non-compliance or significant discharges, The City may decide to revoke the building or grading permits that a contractor or developer is working under or deny future permits on the project. The project proponents would then have to re-apply for permits and meet any requirements that the City may place on the project. The City will develop criteria and procedures in the permit-issuing program to implement this enforcement tool.

Civil and Criminal Court Actions

As a final resort, the City may use Civil and or Criminal court actions under the State Porter Cologne Water Quality Act or the Federal Clean Water Act, which may result in significant fines levied upon the non-compliant responsible parties.

7.9 REPORTING OF NON-COMPLIANCE SITES (F.2.i)

The City of Solana Beach will provide oral notification to the SDRWQCB of non-compliant sites that are determined to pose a threat to human or environmental health within its jurisdiction within 24 hours of the discovery of non-compliance. This is required as part of Attachment C (B.6) of RWQCB Order No. 2001-01. Oral notification will be followed by a written report and submitted to the SDRWQCB within 5 days of the incidence of non-compliance as required as part of Attachment C (B.6) of Permit. Sites are considered non-compliant when one or more violations of local ordinances, permits, plans, or RWQCB Order No. 2001-01 exist on the site.

The inspector will evaluate events of non-compliance (storm water or non-storm water discharges) based on the following criteria to determine whether the discharge poses a threat to human or environmental health.

- Estimated area of erosion caused by discharge.
- Estimated sediment load discharged from site.
- Were toxic materials discharged from site.
- Proximity of site to sensitive water body (i.e. is discharge to ocean, creek, river, etc)
- Proximity of site to impaired water body (303d listed).
- Proximity of site to sensitive habitat/endangered species.
- Estimated volume of discharge.
- Proximity of site to public water supply (well head, monitoring wells)
- Beneficial uses for affected water bodies.
- If discharge to storm drain, condition of storm drain (clog, etc.)
- TSS concentration in discharge and turbidity.
- Other materials discharged from site (concrete washout, sanitary washes, etc.).

7.10 EDUCATION ON CONSTRUCTION ACTIVITIES (F.2.j)***Municipal Staff***

The City will conduct a training workshop for its construction inspectors in March 2002 to update them on new Permit requirements related to construction sites. The City of Solana Beach will continue to require staff members and inspectors to attend local Storm Water Quality Task Force meetings, appropriate training seminars (e.g. Best Management Practice seminar, 2000), City meetings and other regional conferences throughout the year to educate employees of the following topics:

- Federal, state, and local water quality laws and regulations applicable to construction and grading activities.
- Urban runoff training
- The connection between construction activities and water quality impacts (i.e., impacts from land development and urbanization).
- How impacts to receiving water quality resulting from construction activities can be minimized (i.e., through implementation of various source control and structural BMPs).
- California's Statewide General NPDES permit for storm water discharges associated with construction activities
- How erosion can be prevented
- Storm water inspection training

Project Applicants, Contractors, Developers, Property Owners, and Other Responsible Parties**Pre-Construction Meetings/Training Seminar**

The City of Solana Beach holds pre-construction meetings prior to issuance of the grading or improvement permit. As part of the agenda in the Pre-construction Grading Guidelines, the Engineering Staff informs the developers, homeowners, or contractors about the storm water pollution issues and mitigation methods. The City of Solana Beach will expand this training session to include training on the following topics:

- Federal, state, and local water quality laws and regulations applicable to development projects;
- Required federal, state, and local permits pertaining to water quality; Water quality impacts of urbanization; and
- Methods for minimizing the impacts of development on receiving water quality.

City Sponsored Workshops and Meetings

The City of Solana Beach will hold monthly meetings and workshops beginning in March 2002 for business and property owners. The early workshops will be entitled “Storm Water - What is New” and will be educational in nature. Later workshops will be providing more specific instructions as to the strategic plan of the City/Copermittees in administering the watershed URMP and SUSMP.

Construction and Building Activities Guide

The City of Solana Beach, with the permission of the County of San Diego, has modified the County’s “Storm Water Best Management Practice Guide for Construction and Building Activities” for city use. The guide is now provided to developers, homeowners, or contractors with the issuance of engineering grading or improvement permits.

Rainy Season Reminder

During the rainy season the City of Solana Beach notifies by mail all developers, homeowners or contractors, who have an active grading permit, of their responsibilities to control and reduce pollutants in runoff from their construction activity.

Refer to Section 9 for a complete list of educational programs offered by the City of Solana Beach.

This section describes the City of Solana Beach's program for preventing and eliminating illicit discharges and illegal connections (ID/IC) into and from the Solana Beach storm water system. For the past eight years the City has been conducting annual inspections of their storm water conveyance system; which includes the collection of dry-weather discharges for chemical analysis to detect and eliminate illicit discharges and/or illegal connections in accordance with the requirements of Permit No. 90-42 (SDRWQCB, 1990). The results of this eight-year program have not indicated any serious problems with illegal discharges or illicit connections within the City of Solana Beach storm water drainage system. In accordance with Sections B and F.5 of Order No. 2001-01 the City's existing program will be expanded for compliance with the new Permit requirements. A description of the City's expanded IC/ID is provided in this section.

8.1 ILLICIT DISCHARGES AND CONNECTIONS (F.5.a)

Illicit discharges are non-storm water discharges that are improperly disposed into the MS4 and are potential significant contributors of pollutants. These pollutants, once discharged either directly into the storm drain system or by means of illegal connections, make their way to receiving waters and have the potential to impact water quality. The City's IC/ID program is designed to identify, prohibit, and eliminate discharges that are a significant source of pollutants with the goal of protecting receiving water quality.

8.1.1 Discharge Prohibitions

In support of this goal, the following non-storm water discharges are prohibited from entering the City's MS4, unless authorized by a separate NPDES permit:

- Sewage;
- Discharges of wash water resulting from the hosing or cleaning of gas stations, auto repair garages, or other types of automotive services facilities;
- Discharges resulting from the cleaning, repair, or maintenance of any type of equipment, machinery, or facility including motor vehicles, cement-related equipment, and port-a-potty servicing, etc.;
- Discharges of wash water from mobile operations such as mobile automobile washing, steam cleaning, power washing, and carpet cleaning, etc.;
- Discharges of wash water from the cleaning or hosing of impervious surfaces in municipal, industrial, commercial, and residential areas including parking lots, streets, sidewalks, driveways, patios, plazas, work yards and outdoor eating or drinking areas, etc.;
- Discharges of runoff from material storage areas containing chemicals, fuels, grease, oil, or other hazardous materials;
- Discharges of pool or fountain water containing chlorine, biocides, or other chemicals;
- Discharges of pool or fountain filter backwash water;

- Discharges of pet waste, vegetation clippings, or other landscape or construction-related wastes;
- Discharges of food-related wastes (e.g., grease, fish processing, and restaurant kitchen mat and trash bin wash water, etc.);
- Discharges from foundation drains;
- Discharges from crawl space pumps, unless flow is rising from ground water sources;
- Discharges from air conditioning condensation;
- Discharges from individual residential car washing; and
- Discharges from dechlorinated swimming pool discharges.

Discharges from the storm water conveyance system are also subject to the following:

- Discharges from MS4s that cause or contribute to the violation of water quality standards (designated beneficial uses and water quality objectives developed to protect beneficial uses) will be reduced to the maximum extent practical through the implementation of BMPs. (Refer to Appendix A).
- Basin Plan Prohibitions (identified in Attachment A of Order 2001-01). will be reduced to the maximum extent practical through the implementation of BMPs (Refer to Appendix A).

8.1.2 Non-storm Water Discharge Exemptions

In accordance with the City's Storm Water Management Ordinance 13.10.060, Discharge of Pollutants, the City currently allows the following categories of non-storm water discharges into the MS4:

- Diverted stream flows
- Rising groundwater
- Uncontaminated ground water infiltration [as defined at 40 CFR 35.2005(20)] to MS4s
- Uncontaminated pumped groundwater
- Springs
- Flows from riparian habitats and wetlands
- Water line flushing
- Landscape irrigation
- Discharges from potable water sources other than water main breaks
- Irrigation water
- Lawn watering

Emergency fire fighting flows (i.e., flows necessary for the protection of life or property) will also be permitted to enter the City's MS4 system, and will not require BMPs. Non-emergency fire fighting flows (i.e., flows from controlled or practice blazes and maintenance activities) are discussed in Section 13.0.

These non-storm water exemptions will be evaluated as part of the IC/ID program and will be prohibited from entering an MS4 if future monitoring data indicates that they are a significant source of pollutants to receiving waters.

8.2 DRY WEATHER ANALYTICAL MONITORING (F.5.b)

In compliance with Order No. 90-42 (SDRWQCB 1990), the City of Solana Beach has been conducting dry weather analytical monitoring since 1993 for the purpose of detecting illicit discharges and/or illegal connections to the City's storm water conveyance system. The City's dry weather field-screening program implements a systematic approach to identify the source of illicit and/or illegal discharges. The results of this program have not indicated any substantial problems with illegal discharges or illicit connections. Testing has shown, that higher coliform counts than are desirable have been occasionally detected at some locations. The source of the coliform could be natural or illegal discharges. In most instances, the source was not clearly identified and subsequent tests have normal coliform counts.

In 1993, the City initiated the first phase of their dry-weather screening program with the visual inspection of selected outfalls within the corporate city limits. Based on the results of the visual inspections, four sites were sampled in Stevens Creek. In 1994, the program was expanded to include testing of the major City outlets. Between 1995 and 2000, dry weather testing sites were selected to target locations where the previous years analytical data had indicated possible pollutant discharges or illicit connections and to provide comprehensive citywide monitoring. This systematic approach fulfills the NPDES requirements of both the detection and the follow-up investigation of questionable discharges. Successful follow-up investigations facilitate the elimination of inappropriate storm water discharges and the prevention of future illicit discharging or illegal connections.

The recent focus of the inspection and dry-weather monitoring program has been on outfalls discharging to Stevens Creek and the Pacific Ocean at Fletcher Cove and Seascape Sur. Stevens Creek ultimately discharges to the San Dieguito Lagoon, south of the City of Solana Beach's corporate limit. Measurable dry-weather flows have not been detected at points discharging to San Elijo Lagoon, and therefore have not been tested. The monitoring data has identified three areas as receiving questionable discharges: Fletcher Cove, Seascape Sur, and Stevens Creek. Elevated levels of fecal and total coliform have been detected at outfalls discharging to Seascape Sur (site O-02) and Fletcher Cove (site O-03A). Elevated levels of ammonia have also been periodically detected at the Seascape Sur outfall (site O-02), and elevated levels of copper, ammonia, and detergents have been historically detected at site O-07A, located upstream of site O-02. Elevated pH readings have been periodically detected at several sites along Stevens Creek (sites S-11 and S-11A). Additionally, elevated chlorine and ammonia have been detected at site S-13A, located immediately north of Via de la Valle. The source of the detergents, ammonia, and chlorine are likely due to wash activities occurring in the vicinity of these outfalls. The elevated pH concentrations detected in Stevens Creek, may be due to naturally occurring alkaline soils or from a sewer leak into the MS4 in the vicinity of La Colonia Park. The source of the total and fecal coliform measured at Fletcher Cove and Seascape Sur is being monitored and tracked.

A low flow diverter has been installed at Fletcher Cove to divert dry-weather flow to the storm sewer system year round. The dry-weather monitoring reports indicate that the low-flow diverter is successful in preventing discharge into the ocean while it is operating. However, elevated total and fecal coliform is still present in runoff discharging into the low flow diverted, and the Pacific Ocean during non-operational periods.

8.2.1 Dry Weather Analytical Monitoring Stations

There are eight primary discharge points in the City of Solana Beach, which include minor and major discharge points. Two outfalls drain directly into the Pacific Ocean at Fletcher Cove and Seascape Sur; four discharge points drain near San Elijo Lagoon (but rarely reach the lagoon) in the vicinity of North Rios, Santa Inez, Santa Carina, San Lorenzo Court, and Helena Street along the northern boundary of the City limits; and Stevens Creek discharges into San Dieguito Lagoon, south of the City's corporate limit. All receiving waters are 303(d) listed waters. In an effort to eliminate illicit discharges and connections to the storm water system, monitoring sites that are suspected problem areas or have shown problems associated with water quality impacts in the past will continue to be monitored and investigated, where appropriate.

Table 8-1 lists the ten dry weather sites that were monitored in 2001. These sites are either located at an outfall location, or discharge into the storm water conveyance system within the City limits. These sites were selected either to investigate areas of possible illicit or illegal discharge or to provide citywide monitoring coverage.

In accordance with the Permit, the City of Solana Beach will continue to conduct dry weather analytical and field inspections between May 1 and September 30 or as often as the City of Solana Beach determines is necessary based on analytical results and field observations. The City is in the process of issuing a Request for Proposal (RFP) to contract with a qualified consulting firm to implement an updated dry weather field-screening program that meets the new Permit requirements. The RFP will be issued in April of 2002. The 2002 dry-weather monitoring sites will be presented in the Annual Monitoring Report to the SDRWQCB.

8.2.2 Dry Weather Analytical Monitoring and Field Screening

Field investigations will continue to be included as part of the annual dry weather analytical monitoring to detect flow from illicit discharges or illegal connections. The primary objective of the screening is to identify locations of illicit discharges or connections. Investigation will include reporting site information and visual observations on the Dry Weather Storm Drain Monitoring Data and Observation Sheet (Figure 8-1). Data forms will be completed for each site visit regardless of whether samples were collected. Site information recorded on the form will include time since last rain, quantity of last rain, conveyance type, dominant watershed land uses, and flow estimations (i.e., width of water surface, approximate depth of water, approximate flow velocity, flow rate). Visual observations recorded on the form will include discharge odor, color, and clarity, floatables, deposits/stains, vegetation condition, structural condition, and biology.

**Table 8-1
2001 MONITORING SITES**

Site Number	Location	Description	Land Use
O-02	Beach outfall below the beach access stairway to Seascape Surf Beach.	24" metal pipe on the beach	Commercial/Residential
O-3A	The outfall north of the access ramp to Fletcher Cove	Grated outfall structure on beach from the flow diverter	Commercial/Residential
O-07A	West side of Sierra Ave., south side of public beach access to Seascape Park beach.	2'x3'x6" combination inlet/catch basin Discharges at O-02.	Commercial/Residential
S-04	North side of Genevieve Street at Stevens Creek.	Concrete rip rap	Commercial/Residential
S-06A	West of S-06 on the west side of Stevens Ave.	Drop box with (2) 48" CMP to Stevens Creek	Commercial
S-11	La Colonia Park at Stevens St.	24" concrete channel	Commercial/Residential
S-11A (S-06)	Upstream of Site S-11, within Stevens Creek adjacent to extreme south corner of Fidel's restaurant. Between S-04 and S-11.	48" CMP into west side of Creek concrete channel.	Commercial
S-13	South side of Via de la Valle between Del Mar Downs Rd. and Pimlico Dr.	Double 4' x 12" concrete box culvert into natural channel	Commercial/Residential
S-13A	Upstream of site S-13, near southwest corner of Red Tractor's Restaurant building; 550 Via de la Valle	3' x 5' x 8" drop box	Commercial/Residential
S-15	Northeast corner of Santa Victoria and Santa Helena intersection	24" x 36" curb inlet	Residential

The flow rate will be estimated using one of two alternative methods. If the volume of flow is relatively low, and can be captured as the water falls from an outfall, a container of a known volume will be used to catch the water and the fill time will be recorded. If the volume of water is too great to use this method or if flow is not falling from an outfall, a reach of channel will be selected that has a similar cross-sectional area. The area of cross-section will be determined. The flow will then be calculated using the area-velocity method. The Flow Rate Calculation Sheet (Figure 8-2) will be used document flow rate at a given site.

If there is no flow or ponded water at the selected monitoring site other signs that may indicate illicit discharges or connections such as pungent odors, discoloration or oily substances, stains and waste residue in ditches, channels, or drain boxes will be noted. All applicable observations will be recorded and an alternate station will be selected for monitoring. The City will develop a GIS-based map of its municipal storm water system. The map will include corresponding drainage watersheds within city limits and the location of dry weather monitoring sites.

Field screening observations and analytical monitoring will not be conducted within 72 hours of a rain event, or if local hydrologic conditions indicate that storm flow is still occurring at a site.

**Figure 8-1
DRY WEATHER STORM DRAIN MONITORING DATA AND OBSERVATION SHEET**

**Figure 1
Dry Weather Storm Drain Monitoring Data and Observation Sheet
San Diego Municipal Storm Water Permit 2001-01**

Watershed ID _____
Date/Time _____
Monitor's Name _____

Weather Information

Light Conditions	Sunny	Overcast	Partly Cloudy	Precipitation	> 0.1"	< 0.1"
Last Rain	> 72 hours	< 72 hours	< 3 hours		> 0.1"	< 0.1"

Site Description **Location** _____

Earthen Drainage	Concrete Channel	SD Outfall	Manhole	Catchbasin
Other _____				

Flow Estimation	Flow	Yes / No / Ponded	Evidence of overland flow near sampling location?	Yes / No
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Area X Velocity (creek / channel)	Filling a Bottle	Area X Velocity (pipe)
1. Width (cm - ft - in) _____	1. Volume _____ (mL - L - oz)	1. Pipe Diameter _____ (ft/in)
2. Depth (cm - ft - in) _____	2. Time _____ (sec)	2. Depth _____
3. Velocity (cm - ft - in / sec) _____		3. Velocity _____
4. Flow 	***See formula on back	***See formula on back

Visuals	Photo Taken	yes / no	Pic# _____	Draw sample location / Picture
Odor	Chemical	Sewage	Rotten Eggs	None/Other _____
Color	Greyish	Greenish	Browish	None/Other _____
Clarity	Clear	Cloudy		Other _____
Floatables	Oily / Rainbow	Trash	Bubbles	None/Other _____
Vegetation	Limited	Extensive		None/Other _____
Biology	Mosquitos	Algae	Snails / Fish	None/Other _____

*Field Screening	Water Temp (°C) _____	NH ₃ -N _____	NO ₃ -N _____	React P-P _____
	pH (pH units) _____	TURB _____	EC / TDS _____	DO _____

*Laboratory Analysis	Cd (diss) _____	Cu (diss) _____	Pb (diss) _____	Zn (diss) _____
	MBAS _____	Hardness _____	O/G _____	Diazinon (µg/L) _____
	T. Coliform _____ (MPN)	Fec. Col _____ (MPN)	Entero _____ (MPN)	Chlorpyrifos (µg/L) _____

Lab Samples taken Yes / No **Bottle ID#’s** _____

Comments _____
Observations _____

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**Figure 8-2
FLOW RATE CALCULATION**

Figure 2: Methods of Flow Measurement

Calculating the Area (a) of the Cross Section of a Circular Pipe Flowing Partially Full										
D = Depth of water		a = area of water in partially filled pipe								
d = diameter of the pipe		Ta = Tabulated Value				Then a = Ta*d ²				
D/d	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.0	0.0000	0.0013	0.0037	0.0069	0.0105	0.0147	0.0192	0.0242	0.0294	0.0350
0.1	0.0409	0.0470	0.0534	0.0600	0.0668	0.0739	0.0817	0.0885	0.0951	0.1039
0.2	0.1118	0.1199	0.1281	0.1365	0.1440	0.1535	0.1623	0.1711	0.1800	0.1890
0.3	0.1982	0.2074	0.2187	0.2280	0.2355	0.2450	0.2540	0.2642	0.2780	0.2836
0.4	0.2934	0.3032	0.3130	0.3220	0.3328	0.3428	0.3527	0.3627	0.3727	0.3827
0.5	0.3980	0.4030	0.4130	0.4230	0.4330	0.4430	0.4520	0.4620	0.4720	0.4820
0.6	0.4920	0.5020	0.5120	0.5210	0.5310	0.5400	0.5500	0.5590	0.5690	0.5780
0.7	0.5870	0.5960	0.6050	0.6140	0.6230	0.6320	0.6400	0.6490	0.6570	0.6660
0.8	0.6740	0.6810	0.6890	0.6970	0.7040	0.7120	0.7190	0.7250	0.7320	0.7360
0.9	0.7450	0.7500	0.7560	0.7610	0.7660	0.7710	0.7750	0.7790	0.7820	0.7840
AREA x VELOCITY (CREEK/CHANNEL METHOD)			TIME REQUIRED TO FILL A KNOWN VOLUME (FILL A BOTTLE METHOD)				AREA x VELOCITY (PARTIALLY FILLED PIPE)			
a. Measure the width, depth, and velocity of the water. b. Convert each value to a common unit (i.e. all measurements converted to cm, ft, or in.). c. Multiply the width * depth * velocity to determine flow. d. Multiply the flow by 0.8 for creek measurements --or-- 0.9 for concrete channel measurements to account for channel roughness. e. The results if measured in o Ft = Ft ³ /sec o cm = cm ³ /sec (mL/sec) o in = in ³ /sec f. Convert to desired value.			1. Determine volume/capacity of the sample bottle. 2. Measure time required to fill the bottle. 3. Flow will be determined by initial volume units: • mL/s • oz/s 4. Convert to desired value.				a. All measurement must be converted to a common unit before calculation (ft, in, or cm). b. Let D = water depth. c. Let d = inside pipe diameter d. Calculate D/d. e. Find the tabulated (Ta) value on the partially filled pipe formula chart above using the D/d value. (i.e. if D/d = 0.263 then Ta = .1623). f. Find the area using the formula a = Ta*d ² . g. Multiply area (a) by the water velocity. h. Convert to desired value.			

If ponded or flowing water is present at the site, at least one grab sample will be collected in accordance with the monitoring guidelines and sampling procedures provided in Appendix B. Trained field personnel will analyze samples in the field at each site for the following constituents:

- Specific Conductance
- Temperature
- pH
- Turbidity
- Nitrate-N
- Ammonia-N
- Ortho-Phosphate

Results will be documented on the Dry Weather Monitoring Field Data Sheet provided as Figure 8-1. Twenty-five percent of all dry-weather samples collected will be packaged and transported to a California Department of Health Services certified laboratory for analysis of the following constituents:

- Total Hardness
- Surfactants (MBAS)
- Oil and Grease
- Diazinon and Chlorpyrifos
- Cadmium (Dissolved)
- Copper (Dissolved)
- Lead (Dissolved)
- Zinc (Dissolved)
- Enterococcus bacteria
- Total Coliform bacteria
- Fecal Coliform bacteria

A summary of laboratory sampling and analysis requirements are provided in Table 8-2. The laboratory results will be reported on the Dry Weather Storm Drain Monitoring Data and Observation Sheet for record keeping purposes.

A follow-up investigation will be conducted within 30 days to determine or verify the source of the contamination if analytical results indicate unusual and unexplainable levels significantly above natural background levels. The City will issue a Request For Proposal to contract for 2002 dry weather monitoring for Solana Beach.

An action level is a specific pollutant concentration that will trigger a source identification study when it is exceeded during dry weather monitoring. Two primary approaches and one secondary approach have been developed in interpreting dry weather field screening and analytical monitoring data. The primary approaches are (1) the use of numeric action levels, and (2) the identification of highly elevated analyte concentrations using a simple statistical method to calculate confidence intervals. The secondary approach involves the use of best professional judgment when interpreting all dry weather water quality data and/or field observations. The secondary approach should always be used in conjunction with the two primary approaches listed above and is the primary approach for interpreting turbidity and temperature data. All three approaches are described in detail below.

**Table 8-2
SUMMARY OF LABORATORY SAMPLING AND ANALYSIS REQUIREMENTS**

Physical and Inorganic Non-Metals	Analytical Method	Container	Volume (mL)	Preservative (Always @ 4o C)	Holding Time
Turbidity	SM 2130A	P	100		48 h
Alkalinity or Hardness	SM 2320B	P	100		14 d
pH	EPA 150.1	P	10		Field
Conductivity	SM2510B	P	20		28 d
Temperature		N/A			Field
Phosphorous, dissolved / reactive	SM4500PE	P	100	H2SO4	48 h
Nitrate	SM 4500 NO3 E	P	100		48 h
Ammonia	SM4500 NH3 D	P	500	H2SO4	28 d
Oil and Grease	EPA 413.1	G	500	HCl	14 d
Diazinon	EPA 8140	G	1000		
Chlorpyrifos	EPA 8140	G	1000		7 d
Methylene Blue Substances (MBAS)	SM 5540 C	P	250		48 h
Cadmium	EPA 6010	P	500	HNO ₃	6 m
Copper	EPA 6010	P	500	HNO ₃	6 m
Lead	EPA 6010	P	500	HNO ₃	6 m
Zinc	EPA 6010	P	500	HNO ₃	6 m
Coliform, total	SM 9221	P (sterile)	125	Na ₂ S ₂ O ₃	6 h
Coliform, fecal	SM 9221	P (sterile)	125	Na ₂ S ₂ O ₃	6 h
Enterococcus	SM 9230	P (sterile)	125	Na ₂ S ₂ O ₃	6 h

* ZHS (Zero Head Space Required)

V=VOA / G=Amber Glass / P = Plastic

Numeric Action Levels

The use of numeric action levels is the primary approach for interpreting pH, orthophosphate, nitrate, ammonia, conductivity, MBAS, and oil and grease data results (Table 8-3). If these action levels are exceeded, then a source identification investigation to determine the cause of the elevated levels is necessary unless best professional judgment indicates otherwise.

Statistical Confidence Interval

The identification of highly elevated concentrations using confidence intervals is the primary approach for interpreting diazinon, chlorpyrifos, dissolved trace metals (Cd, Cu, Pb, and Zn), total and fecal coliform bacteria, and enterococcus data. The City will calculate a running confidence interval (90% or 95%) as dry weather results are collected. If a reading exceeds the calculated confidence interval and a pre-established water quality criterion (see Table 8-3) then that result is considered a statistical outlier. The sampling site is then a candidate for source identification unless best professional judgment indicates otherwise.

**Table 8-3
ACTION LEVELS FOR FIELD SCREENING AND LABORATORY PARAMETERS**

Field Screening Analytes	Action Levels¹	Source/ Notes
Conductivity (umhos/cm) or TDS (mg/L)	5000 umhos/ cm conductivity or ~3500 mg/L TDS	General guideline - should consider sample variability, groundwater infiltration, influence of mineral dissolution and local background. The conversion factor for conductivity to TDS is approximately 0.7.
Temperature (° F or C)	Best Professional Judgment	Base judgment on season, air temperature, channel type, shade, etc.
pH	<6.5 or >9.0	Basin Plan, w/ allowance for elevated pH due to excessive photosynthesis
Turbidity (NTU) ²	Best Professional Judgment	USEPA Multi-sector General Permit level - 5 NTU. Typical levels are substantially higher. Base judgment on channel type and bottom, season, time since last rain, background, etc.
nitrate-N (mg/L)	10.0	Basin Plan, and drinking water standards
Ammonia-N (mg/L)	1.0	Workgroup experience, may also consider unionized ammonia fraction
orthophosphate-P (mg/L)	2.0	USEPA Multi-sector General Permit
Laboratory Analytes	Action Levels	Source/ Notes
MBAS (mg/L)	1.0	Basin Plan, w/ allowance based on Workgroup field experience and possible field reagent interferences
Oil and Grease (mg/L)	15	USEPA Multi-sector General Permit. If a petroleum sheen is observed, the sample should be collected from the water surface
Diazinon (ug/L)	<i>Confidence Interval Test³</i>	Acute LC ₅₀ for aquatic invertebrates range from 0.2 mg/L for <i>Gammarus fasciatus</i> to 4.0 mg/L for <i>Hyallela azteca</i>
Chlorpyrifos (ug/L)	<i>Confidence Interval Test</i>	Acute LC ₅₀ is 9 ug/L Rainbow Trout, higher for other fish, decreased survival and growth for fathead minnow at 30-day chronic exposure of 2 ug/L
Dissolved Cadmium (ug/L)	<i>Confidence Interval Test</i>	California Toxics Rule: 1-hr = 4.3 ppb
Dissolved Copper (ug/L)	<i>Confidence Interval Test</i>	California Toxics Rule: 1-hr = 13 ppb
Dissolved Lead (ug/L)	<i>Confidence Interval Test</i>	California Toxics Rule: 1-hr = 65 ppb
Dissolved Zinc (ug/L)	<i>Confidence Interval Test</i>	California Toxics Rule: 1-hr = 120 ppb
Enterococcus (MPN/ 100 mls)	<i>Confidence Interval Test</i>	Bacteria levels in many stormdrains are likely to exceed public health guidance criteria. Use confidence interval test and best professional judgment to identify conveyances for source ID.
Total Coliform (MPN/ 100 mls)	<i>Confidence Interval Test</i>	Bacteria levels in many stormdrains are likely to exceed public health guidance criteria. Use confidence interval test and best professional judgment to identify conveyances for source ID.
Fecal Coliform (MPN/ 100 mls)	<i>Confidence Interval Test</i>	Bacteria levels in many stormdrains are likely to exceed public health guidance criteria. Use confidence interval test and best professional judgment to identify conveyances for source ID.

- 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. Factors that should be considered include within-site and between-site sample variability.
- 2 Turbidity data will be re-evaluated after the 2002 dry weather season to determine whether action levels can be established for 2003.
- 3 The statistical outlier test uses the mean and standard deviation of a dry weather data set to determine whether a sample concentration exceeds a given confidence interval (usually 90 or 95%). Those readings that are above the confidence interval and exceed the referenced guidelines are identified as outliers and are appropriate for source identification.

The City will collect a substantial amount of water quality data for the above-listed parameters during the 2002 dry weather program. This data will allow for the determination of regional, jurisdictional-specific, or conveyance-specific background levels for the 2003 dry weather season for many or all of the parameters. The various action levels and the usefulness of identifying outlier values with confidence intervals will be re-evaluated after the 2002 dry weather season.

Best Professional Judgment

The use of best professional judgment is the primary approach for interpreting turbidity and water temperature data, and the secondary approach for interpreting the results of all other field and laboratory analyses. The use of best professional judgment may indicate that results, which either exceed certain action levels or are statistical outliers, may be the result of natural or background factors. For example, conditions like highly elevated summertime water temperatures in exposed concrete conveyances, high ambient pH (>9.0) levels due to photosynthesis and CO₂ depletion, or elevated NO₃ or electrical conductivity readings in channels with high groundwater input are unrelated to illicit connections and illegal discharges.

Other relevant factors that should be considered include the type of MS4 conveyance (i.e. storm drain, open concrete channel, natural channel, receiving water, etc.), the status of downstream receiving waters, and weather conditions when the samples/measurements were collected. Conversely, qualitative observations (dead animals, strong odors, the presence of an oily sheen on the water surface, excessive floatables or trash, etc.) may indicate that serious water quality problems are present at a location when field and analytical sampling results are either within action or confidence limits or not immediately available.

When the results of field screening or laboratory analytical sampling exceed the action levels or guidelines presented in Table 8-2, the City will initially confirm the results by resampling. In the case of a field analytical result, usually the resample should be collected between 4 and 24 hours after the initial sample. If the follow up results confirm the presence of elevated pollutant levels or visual evidence of gross contamination is present, then a source investigation will be performed.

When a laboratory sample exceeds the action level guidelines in Table 8-2, the City will initiate a source identification investigation as soon as possible after receiving the initial result. Another sample will be collected at the onset of the source identification investigation to confirm the initial laboratory results.

8.2.3 Reporting of Monitoring Results

The City of Solana Beach will present and report the results of the 2002 dry weather analytical monitoring as part of the JURMP Annual Report by February 21, 2003. The data will be presented in tabular and graphical form. The report will include a discussion of the overall dry weather program, an MS4 map with sampling locations, a short summary of the field methods used, a description of follow up and elimination activities for potential illicit connections and illegal discharges, and copies of all dry weather monitoring field sheets. Procedures for source investigation and elimination activities are described below in Section 8.3.

8.3 INVESTIGATION/INSPECTION AND FOLLOW-UP (F.5.c)

The City or its contractor will analyze the field and laboratory analytical results of the dry weather monitoring in order to identify discharges that are determined to impact water quality. As described in Section 8.2, if analysis results show an exceedance of criteria or visual inspection indicates a potential illicit connection or illegal discharge a follow-up investigation will be conducted within 30 days (time duration) to attempt to verify and document the source of the contamination. Visual source investigations may also be initiated within 24 hours after a third party report or the City receives a complaint. This procedure is imperative for determining whether the discharge originates from a non-prohibited source or from an illicit discharge or connection. If an illicit discharge or connection is detected, enforcement actions will be initiated (Refer to section 8.5).

Evaluation of Non-storm Water Discharge Exemptions

If the discharge is from a non-prohibited activity, the monitoring location will continue to be screened in subsequent years for water quality impacts to evaluate whether the discharge should be prohibited. If the City determines that the discharge is a significant source of pollutants to receiving waters, the discharge will either be prohibited from entering the MS4, or the City will require the responsible party(ies) to implement BMPs that will reduce pollutants to the MEP. The following information will be included in the Annual Report submitted to the SDRWQCB:

- Discharges that will continue to be allowed conditionally.
- BMP(s) for each newly prohibited discharge category that the Copermittee will implement, or require the responsible party(ies) to implement, to prevent or reduce pollutants to the MEP.

IC/ID Source Investigations

Identifying the source of IC/ID will be accomplished through both the dry weather monitoring program and the semi-annual inspections conducted by the City's Department of Public Works. General procedures that the City will implement for source identification of dry weather flow are listed below followed by a more detailed description:

- Locate the discharge.
- Track the dry weather flow to the source.
- Inspect the source.
- Contact operator/owner of the property.
- Document and report the incident.

As part of the dry weather monitoring program, outflow or discharge locations will be selected for inspection that are identified as likely sources of illicit discharges or illegal connections based on dry weather monitoring and field inspections. In order to locate the source of identified contaminated discharge, flows will be tracked from the location where it is first observed or reported in an upstream direction along the conveyance system with the aid of the MS4 Map. For belowground systems, upstream manholes will be inspected to track the flow. If multiple

inlets are present in the area being investigated, each inlet with measurable flow will be systematically tracked upstream. Factors such as visual observations, odors, and/or field screening sampling will be used to prioritize the order of investigation. The collection of upstream samples for chemical analysis will be conducted to help identify the source of the illicit discharges and/or illegal connections.

If the source of the flow is unable to be determined (e.g. it disappears between manholes; the pipe, network, or channel terminates, etc.) storm gutters, catch-basins and swales between manholes will be assessed for evidence of flows. Evidence of a new or illicit connection to the system will be assessed by looking for areas in the road that have been dug up and re-paved. The pipeline may also be televised if the source cannot be determined from surface observation.

Evidence of recent or past dumping such as wet or stained pavement or gutters will also be noted. If the source is still not apparent, the field investigation will be documented and the location of the last place that flow was observed will be recorded using a GPS unit or indicated on a map so that the area can be investigated again at a later date to determine whether the discharge was an isolated event, or the result of an illegal connection, which would likely lead to more permanent discharge. To date, no illegal connections have been identified by the City.

If a responsible party is identified, they will be notified by the City that the discharge is prohibited, verbally when possible, otherwise in writing. A Notice of Violation (NOV) and will be provided to the responsible party and alternative disposal options will be discussed. The responsible party will be informed that enforcement measures will be taken if the discharge continues. If the City determines that the incident is a serious violation, a more aggressive enforcement option may be used. Refer to Enforcement Options, Section 8.5.

During the source investigation, photographs will be taken to verify all suspected IC/IDs. Photographs, sample results, notice of violation, correspondence and other associated documents will be collected and filed on the incidents. All incidents and investigation results will be documented and provided to the SDRWQCB in the Annual Report.

Inspections

Other methods implemented by the City for identifying sources of illicit discharges/illegal connections are the annual inspections of the storm water conveyance system and complaint-response inspections conducted by the Engineering /Public Works Department . The semi-annual inspections are conducted prior to and during the wet season. The complaint response inspections will occur within 24 hours of receipt of the complaint. The inspector will note signs of illicit discharges or connections such as abnormal flows during the dry season, increased plant growth in soft-bottomed portions of conveyance channels, pungent odors, discoloration or oily substances in the water, or stains and waste residue in ditches, channels or drain boxes. For sites showing signs of a potential illicit discharge or connection, the inspector will record flow data if possible, take photographs and document site information. The inspector will contact the City of Solana Beach's Storm Water Coordinator. The Storm Water Coordinator will determine if a source investigation is required, or if other agencies including Code Enforcement or the Fire Department should be contacted.

Follow-up

The City of Solana Beach will perform follow-up investigations in order to prevent the reoccurrence of illicit discharges and connections. After an illicit discharge or connection has been identified, and the responsible party notified, the City will revisit the site to verify that the responsible party has complied with the NOV and Corrective Action Form, and that the illicit discharge or connection has been eliminated. If the responsible party has failed to comply with regulations, enforcement procedures will be initiated (Refer to Section 8.5 for enforcement procedures).

Reporting of Non-Compliant Sites

If any reported non-compliance discharge is determined by the City to be a threat to human or environmental health, the City of Solana Beach will provide an oral report to the RWQCB within 24 hours followed by a written report within 5 days of the incident.

8.4 ELIMINATION OF ILLICIT DISCHARGES AND CONNECTIONS (F.5.d)

The City will seek to eliminate illicit discharges and connections through the implementation and enforcement of Ordinances, Public Education and Outreach programs, and BMPs. Each of these components is described in greater detail below.

8.4.1 Ordinances

Chapter 13.10 Storm Water Management, Chapter 15.40 Excavation and Grading, and General Plan Amendment Ordinances were written by the City of Solana Beach in order to more effectively control non-storm water discharges to the storm water conveyance system and eliminate discharges to the storm water conveyance system from spills, dumping or disposal of exempted discharges. Pertinent sections of each of these ordinances related to elimination of illicit discharges and connections include:

Chapter 13.10 Storm Water Management

- 13.10.060 Discharge of pollutants
- 13.10.070 Discharge in violation of permit
- 13.10.080 Illicit Connections
- 13.10.090 Reduction of pollutants in storm water
- 13.10.100 Watercourse protection
- 13.10.110 Authority to inspect
- 13.10.120 Inspection procedures
- 13.10.130 Violations constituting misdemeanors or infractions
- 13.10.140 Penalties for violation

- 13.10.150 Continuing violation
- 13.10.160 Concealment
- 13.10.170 Acts potentially resulting in violation of Federal Clean Water Act and/or Porter-Cologne Act
- 13.10.180 Violations deemed a public nuisance
- 13.10.190 Civil actions
- 13.10.200 Administrative enforcement powers
- 13.10.210 Authority to arrest or issue citations

Chapter 15.40 Excavation and Grading

- 15.40.010 Purpose
- 15.40.090 Permit limitations and conditions.
- 15.40.210 Responsibility of permittee

General Plan

Land Use Element

Circulation Element

Safety Element

Open Space and Conservation Plan

8.4.2 Public Education and Outreach

The City of Solana Beach has developed public information and awareness programs to aid in eliminating illicit discharges and connections from the storm drain system. The following are the City of Solana Beach's current education programs:

Storm Drain Tile Marker Standard and Installation

The City of Solana Beach adopted a construction standard for Storm Drain Markers on April 7, 1998. This construction standard requires that all new or replaced storm drain inlets have a fish and the words "NO DUMPING, THIS DRAINS TO THE OCEAN" message on a tile marker permanently affixed on the curb face of each side of the inlet opening. The tile markers are applied with an adhesive and are durable enough to be visible after many years. The storm drain markers are an important part of the City's public education process as a permanent reminder to not dump pollutants into storm drains. On April 10, 1999, volunteers from Del Mar/Solana Beach Sunrise Rotary Club installed 62 of 309 City maintained curb inlets. Volunteers have since installed the remaining markings.

School Presentations

School presentations by Solana Recyclers focus on pollution prevention topics such as the importance of recycling used motor oil, identifying what a household hazardous material is, and how dumping or improper disposal harms the environment. The presentation utilizes an interactive model called *Enviroscape*.

Public Displays

Public displays are presented at street fairs to educate the public about the importance of proper disposal of used oil. Clean used oil containers are distributed at the events along with a list of certified used oil collection centers in North County. Solana Recyclers will present their display at the Fiesta del Sol event in Solana Beach in 2002.

Newsletters and Internet Sites not operated by the City

Articles in the newsletter *Down 2 E.A.R.T.H. News* and information on the Solana Recyclers website (www.beresourceful.org) also contribute to educating the public about used oil recycling and other storm water and storm drain related issues. Informative articles are published in each issue of *Down 2 E.A.R.T.H. News* for the past two years. *Down 2 E.A.R.T.H. News* is distributed to all residents in the cities of Solana Beach, Encinitas, and Del Mar via U.S. mail two times per year. The website contains storm water-related information and provides a complete list of certified used oil collection centers and household hazardous waste collection centers based on zip code. These outreach methods have proven to be more cost effective than direct mail brochures.

City-published Newsletters

The City of Solana Beach regularly publishes storm water-related articles in the City's "Shorelines" newsletter. The newsletter is distributed to Solana Beach residents and businesses twice a year.

Brochures

Future outreach efforts include publication of a series of informative brochures on pollution prevention, proper disposal methods, and the results /affects of pollutants in the storm drain. Solana Recyclers and the non-profit organization *I Love A Clean San Diego* will implement this education campaign from January 2002 to March 2003. In addition, the City is collaborating with other North County cities to develop standardized brochures for consistent publication of information.

Cal/EPA Environmental Hotline

The City of Solana Beach is participating in the Cal/EPA Environmental Hotline. The EPA is sponsoring a toll-free phone number that gives out environmental information. The City has provided information about our storm water programs to be placed on this hotline.

Storm Drain Outfall Caution Signs

The City of Solana Beach is cooperating with the County of San Diego Department of Environmental Health to ensure that the public is adequately notified of potential health risks associated with urban runoff on our beaches. The City permanently posted caution signs at Fletcher Cove and Seascape Sur storm drain outfalls.

8.4.3 BMPs

Table 8-4 lists the non-storm water discharges exempted for non-storm water discharge into the City’s MS4s and BMPs to reduce pollutants to the maximum extent practical (MEP).

**Table 8-4
BMPs¹ FOR EXEMPTED NON-STORM WATER DISCHARGES**

Discharge Category	Potential Best Management Practices (BMPs)	
Diverted stream flows Flows from riparian habitats and wetlands	<ul style="list-style-type: none"> • Sediment filters • Infiltration 	<ul style="list-style-type: none"> • Community clean-up / trash removal days
Rising ground water Springs	<ul style="list-style-type: none"> • Reduced irrigation • Sewer 	<ul style="list-style-type: none"> • Diversion to pervious area
Uncontaminated ground water infiltration	<ul style="list-style-type: none"> • Water conservation 	<ul style="list-style-type: none"> • MS4 preventive maintenance
Water line flushing	<ul style="list-style-type: none"> • Sewer • Irrigation use 	<ul style="list-style-type: none"> • Containment / diversion
Landscaping irrigation Irrigation water Lawn watering	<ul style="list-style-type: none"> • Drip irrigation • Water conservation • Xeriscape 	<ul style="list-style-type: none"> • Soaker hoses • Pesticide / fertilizer management
Discharges from potable water sources other than water main breaks	<ul style="list-style-type: none"> • Diversion to pervious area • Sewer 	<ul style="list-style-type: none"> • Water conservation
Uncontaminated pumped ground water	<ul style="list-style-type: none"> • Use for irrigation 	<ul style="list-style-type: none"> • Sewer

Note: The BMPs listed here are potential options only, and may not be appropriate in all situations. Site specific Necessary approvals should always be obtained prior to the use of any BMP

8.5 ENFORCE ORDINANCE (F.5.e)

Establishment of Legal Authority

The City of Solana Beach will establish, maintain, and enforce adequate legal authority to control pollutant discharges into and from their MS4s through ordinance (refer to Section 8.4), statute, permit, contract, or other means. The City will review and revise their ordinances and other applicable authorities as necessary to implement and enforce all storm water and non-storm water discharge prohibitions for all areas and activities within their jurisdiction.

Voluntary Compliance

Parties responsible for illicit discharges or connections may elect to voluntarily comply with corrective action when notified of their violation. Voluntary compliance, without enforcement, will only be acceptable for first-time, minor incidents. If compliance is achieved and the discharge is eliminated, no other enforcement actions will be required.

Enforcement Actions

If follow up investigations indicate that the illicit discharge or connection is still occurring, more aggressive enforcement will be taken until compliance is achieved. The type of enforcement action taken will be decided on by the City and will depend on a number of factors including the severity of the violation, past compliance history, and site-specific circumstances. These include:

- Administrative actions with or without fines and/or cost recovery -Administrative Penalties, Cease and Desist orders, Notice and Order to Clean, Test, and Abate, and Public Nuisance Abatement, Stop Work Orders, Denial or Revocation of Permits
- Legal Action -Civil Penalties and Remedies, Injunctive Relief, and Arrest or Issue Citations.
- Enforcement of Contracts/Leases

Enforcement Responsibilities

For all violations, The City will be responsible for the following enforcement procedures:

- Assessing the threat to public health and the environment,
- Obtaining a sample of the discharge(s) to submit to a testing facility,
- Identifying the responsible party,
- Identifying individuals involved in the activity,
- Photographing the violation(s),
- Obtaining reports or records related to the incident,
- Issuing a NOV to the responsible party, and
- Submitting referrals to other regulatory agencies and requesting assistance, when appropriate.

Documentation of Violation

It is the responsibility of the City to document all non-compliant activities and actions taken by the City to achieve compliance. Documentation will include site investigation information, analytical results, if applicable, records of previous violations or complaints, and overall compliance history. A case file will be prepared for serious violations in the event the case should go to court. This file will include the following information when applicable:

- Chronology of events
- Witness list
- Case summary
- Explanation of the violations

- Time and City expense log
- Inspection reports
- Field notes
- Complaining party information
- Emergency incident reports
- Lab results
- Correspondence
- Chain-of-custody for samples
- Maps and diagrams
- Permit applications
- Photographs
- Sampling plans
- Reports from regulatory agencies
- Other supporting documents

8.6 PREVENT AND RESPOND TO SEWAGE SPILLS AND OTHER SPILLS (F.5.f)

The Public Works Department of City of Solana Beach is responsible for preventing, responding to, containing and cleaning up all sewage spills and other spills that may discharge into the MS4 from any source (including private laterals and failing septic systems). The City of Solana Beach contracts with the City of Encinitas Sanitation Department and the San Elijo Joint Powers Authority for sewer related services. This section describes the compliance strategies that will be implemented to meet these requirements.

Spill/Discharge Prevention

Preventive Maintenance Activities

The City will implement measures to control the infiltration of seepage from the municipal sanitary sewer system to MS4s. These measures include sanitary sewer surveys, MS4 surveys, and routine maintenance of both systems. In order to prevent, or minimize, the potential for sewer overflow the Solana Beach Sanitation District has developed a sewer overflow prevention plan which consists of the following components:

- **The implementation of a Sewer Maintenance Schedule** – The Solana Beach Sanitation District adheres to a sewer maintenance schedule that insures that all sewer lines within the District are generally cleaned on an annual basis with both a combination sewer cleaner and the continuous rodder. Also, under the current maintenance schedule, known trouble spots are cleaned more frequently such as quarterly, monthly, bimonthly, or an as needed basis.
- **The development of a Sewer Master Plan and Capital Improvement Projects Schedule** – The Solana Beach Sewer Master Plan was adopted by the Solana Beach City Council in May of 2001. This was a comprehensive study, which involved televised inspections of the sewer system and an evaluation of the capacity and integrity of the sewer mains and the District's four pump stations. The District intends to update the Plan about every five years in order to identify and address those areas needing improvement. \$500,000 is proposed to be expended on system improvements between fiscal years 1996/97 and 1999/02.

In addition, the Encinitas Sanitation Department is in the process of purchasing computer software to track work orders, problem areas, spills, and customer complaints. The software will aid the District in maintaining up-to-date records on the size, condition, location, age, and type of sewer lines.

The City's Public Works Department will be responsible for annual inspections of the storm drain conveyance system. Inspections will include a survey to detect infiltration of sewage to the MS4 or any current or potential spills or discharges from the sewer system. Inspections will be documented on an Inspection Field Data Form. Necessary preventative maintenance measures and locations will be included on the form. A description of the MS4 maintenance procedures is addressed in the Municipal Component of this JURMP (See Section 2.0 –Municipal Component)

Spill Response

The City has developed a Sanitary Sewer Overflow Response Plan. A copy of this plan is provided in Appendix C.. This plan develops two response plans for handling sewer overflow emergencies: "During Working Hours Response Plan" and "After Working Hours Response Plan". The Working Hours Response Plan applies to releases to occur on Monday through Friday between 7:00 A.M. and 4:00 P.M. All other releases will be covered by the After Hours Response Plan.

The During Working Hours Plan assumes that any of the 3 crew members and/or Public Works Superintendent will respond to the emergency call. The plan assumes that when responding to an emergency call staff will assess the situation to determine whether to contact Encinitas Sanitation Department to respond. The Encinitas Sanitation Department will usually have the necessary equipment and/or vehicles. The Division maintains the following equipment and vehicles: continuous rodder, combination sewer cleaning machine, easement cleaner, safety equipment and confined space equipment.

The After Hours Plan assumes that the standby person will respond to the emergency call. The standby person is determined through a monthly rotation of crew members who serve on a one-week "on-call" basis. The standby person will respond to the call and will request additional help from the City of Solana Beach Public Works Department and/or City of Encinitas Sanitation Department , as needed.

The Response Plan currently consists of the following elements and will be amended if improved BMPs are identified for response plans and/or improvements to the plan are shown to reduce the likelihood of pollutants entering the storm drain:

1. Emergency call received by the City of Solana Beach Public Works Department (During Work Hours) or the Ranch Dispatch (After Hours). Public Works Superintendent or lead worker paged.
2. Crew member(s) and/or Public Works Superintendent (During Work Hours) or stand-by person (After Work Hours) notified and dispatched to emergency.
3. Situation evaluated to determine if a sewer related problem exists. If yes, City of Encinitas Sanitation Department contacted.

4. Encinitas Sanitation Department personnel and Solana Beach Public Works personnel evaluate situation to determine: a) cause of overflow; b) plan of action; and c) resources needed.
5. Initiate Plan of Action – call for additional help, appropriate vehicles and equipment, etc.
6. Clear blockage.
7. Clean-up overflow by a) thorough cleansing; b) disinfecting site; and c) determine size of spill.
8. Prepare written report including size of spill, address, time, and persons notified.

To facilitate timely response to spills, the following measures will be implemented by the City.

- Copermittee Complaint Programs - Storm water-related complaints will be received through the use of a hotline (refer to Section 8.7), referrals from other staff or agencies, or a number of other channels. The City will coordinate as closely as possible with other agencies and departments that receive IC/ID or related reports within their jurisdictions to ensure that all reports are appropriately received, routed, and investigated. Complaint investigation is discussed further in section 8.7.
- Emergency Response Program -The City will be responsible for coordinating with other emergency responders (e.g., hazardous materials or fire agencies) to ensure compliance with their local and permit requirements associated with responding to reported spills.

Reporting of Sewage Spills

The City of Solana Beach will report sewage spills or reports of sewage spills from third parties to the following agencies when appropriate:

1. County of San Diego Department of Environmental Health (DEH)

California Health and Safety Code Section 5411.5 require that all sewage spills be immediately reported to the DEH 24 hours a day. During standard work hours (M-F, 7:30 a.m. to 4:30 p.m.) these can be called in to the Proposition 65 / Recreational Water Duty Specialist at 619-338-2386 or faxed to 619-338-2848. All immediately reportable spills should be called in by telephone regardless of whether an accompanying fax has been sent. After hours reports should be phoned in to County Communications at 858-565-5255, and a request made to page the Environmental Health Specialist.

2. State Office of Emergency Services (OES)

California Water Code Section 13271 and the California Code of Regulations Section 2250 also require that the State Office of Emergency Services (OES) be notified of sewage spills of 1000 gallons or more by telephone at 800-825-7550 and by fax at 916-262-1677 (follow up only).

3. SDRWQCB

Order No. 96-50 requires that dischargers report to the SDRWQCB all sewage spills of at least 1000 gallons, or to surface waters, within 24 hours by fax (858-571-6972) or telephone (858-467-2952). In all instances, the discharger must fax a Sanitary Sewer Overflow (SSO) Report Form to the SDRWQCB within five days of the spill. The completed SSO form must also be

faxed to the DEH. A quarterly report of all sewage spills, including those not meeting the criteria stated above, must also be submitted electronically to the Regional Board.

8.7 PUBLIC REPORTING OF ILLICIT DISCHARGES AND CONNECTIONS (F.5.g)

In an effort to prevent the improper disposal of pollutants, the City of Solana Beach will publicize, promote and facilitate public reporting of illicit discharges and connections through the following methods.

Public Hotline

The City of Solana Beach currently uses the public hotline operated by the County of San Diego for reporting illegal discharge of pollutants into storm drains. The hotline is used to facilitate public complaints and reports of illicit discharges or water quality impacts associated with discharges into or from the storm water conveyance system within the City of Solana Beach, including sewage spills from private laterals and septic systems. The hotline is in operation 24 hours a day/ 7 days a week and is capable of receiving reports in both English and Spanish. Any reports made to the hotline that have occurred within the City of Solana Beach are reported immediately to a city contact. The public hotline phone number is (888) 844-6525.

The public hotline will be publicized on the City of Solana Beach Web site, in *Shorelines*, a newsletter, circulated semi-annually by the City, and *down 2 E.A.R.T.H. News*, a newsletter circulated semi-annually by Solana Recyclers.

The City will examine the effectiveness of the public hotline for reporting spills that occur within the City of Solana Beach. If the City determines that a local number would be more beneficial to receiving reports of spills, the City will take steps to develop a local hotline telephone number.

In addition, the City Web site is able to receive citizenry complaints, questions and reports of problems. The Web site responses are forwarded to the appropriate agencies.

Complaint Receipt and Referral

A complete and accurate account of all third party complaints will be documented to facilitate a timely investigation. Documented information will include all complaint information provided, responsible party information, location and description of the discharge, and materials and waste involved. Standardized complaint forms will be used for documenting complaint information. All complaints will be assessed and prioritized based on consideration of the following information:

- Is a hazardous or unknown material involved?
- Is the spill or discharge occurring now?
- Is there an immediate threat to public health or the environment?

Internal program staff will be assigned to investigate most complaints. However, in some cases higher priority complaints (e.g., those involving hazardous materials, threat to public safety, etc.) or ongoing discharges will require immediate referral to other staff or appropriate agencies, the City will coordinate as closely as possible with other agencies and departments that may receive IC/ID or related reports to ensure that their respective responsibilities are clearly understood.

This will ensure that all reports are appropriately received, routed, and investigated. When complaints are routed to other entities, The City will confirm that they have been received. For discharges involving hazardous or unknown materials, the local fire department will be dispatched to investigate. Fire departments will dispatch the San Diego Hazardous Incident Response Team (HIRT) if needed.

8.8 DISPOSAL OF USED OIL AND TOXIC MATERIALS (F.5.h)

The City of Solana Beach will facilitate the proper management and disposal of used oil, toxic materials, and other household hazardous wastes through implementation of educational activities, public information activities, and establishment of collection sites/or collection days.

Used Oil Recycling

Currently, the non-profit organization Solana Recyclers, Inc. facilitates the used oil recycling program for the City of Solana Beach and five other cities in North County. The program consists primarily of public education through school presentations, public displays at street fairs, articles in the newsletter *down 2 E.A.R.T.H. News*, and surveying of established certified used oil collection centers. These programs are funded through Used Oil Block Grants awarded to the cities of Solana Beach, Del Mar and Encinitas by the California Integrated Waste Management Board (CIWMB). Refer to Section 8.4 for a description of these programs.

Staff members at Solana Recyclers perform quarterly surveys of the 26 certified used oil collection centers in North County either in person or by phone. The purpose of the survey is to establish a working relationship with the centers, verify that the collection centers have the proper signage and containers, and to gauge the level of public participation. Funds from the Block Grant are also used to purchase equipment and tanks for the centers. Clean used oil containers are available at some centers at no charge to the public. Currently there are no certified used oil collection centers within the city limits of Solana Beach, however several centers are located nearby in Encinitas.

Household Hazardous Waste (HHW) Collection

The HHW program for the City of Solana Beach is facilitated by the Regional Solid Waste Authority (RSWA), which represents the cities of Solana Beach, Del Mar, Encinitas, National City, Vista and Poway. The RSWA sponsors programs using funds obtained from a Household Hazardous Waste Grant awarded by the CIWMB. Programs include permanent HHW collection facilities, public education and outreach, and equipment and disposal costs. Refer to Section 9.0 for a description of the public outreach programs.

Two permanent HHW collection facilities are available to the residents and businesses of Solana Beach. These facilities are located in Vista and Poway, and are open to the public on Saturdays between the hours of 9:00AM and 3:00PM excluding holiday weekends. Businesses that are conditionally exempt small quantity generators can make appointments to drop-off HHW at either facility and are charged a disposal fee. Door-to-door HHW collection is available for elderly and homebound residents of Solana Beach by appointment. The HHW grant supports this program, covering the recycling fee of \$20.00 per monitor. Grant funds are fixed so the cost is covered until the funds are exhausted.

SECTION EIGHT

Illicit Discharges Detection and Elimination Component (F.5)

The City of Solana Beach will continue public education efforts associated with HHW by including information on the City website and in the newsletter *Shorelines*.

In accordance with Permit Section F.4, this Section of the JURMP describes the education program that the City of Solana Beach will implement to increase knowledge of target audiences with regards to MS4s, impacts of urban runoff to receiving waters, and potential BMP solutions. The goal of the education program will be to measurably change the behavior of the target audience in an effort to reduce pollutant releases to MS4s and the environment.

The City of Solana Beach will develop a jurisdictional specific educational program that addresses local specific issues and educates citizens on the importance of non-polluting behaviors and points out the specific impacts that pollution has had in their community. In addition, the North County Copermittees will work cooperatively with each other to develop educational information to allow for a systematic and efficient use of existing resources, and to promote a watershed-based approach to pollution prevention. The City of Solana Beach will also coordinate with the City of San Diego to take advantage of educational programs it has developed. Use of the City of San Diego's programs will help the City of Solana Beach to develop and utilize clear, concise, and broad-based messages. Educational programs and activities developed by profit and non-profit groups will also be utilized, where appropriate.

The City of Solana Beach's education program will be directed at the following target audiences:

- Municipal Departments and Personnel
- Construction Site Owners and Developers
- Industrial Owners and Operators
- Commercial Owners and Operators
- Residential Community, General Public, and School Children
- Quasi-Governmental Agencies/Districts (i.e. educational institutions, water districts, sanitation districts, etc.)

9.1 REQUIRED EDUCATIONAL TOPICS (F.4.a, F.4.b, AND F.4.c)

The City will expand its existing educational program to address each of the issues listed in Table 9-1, where applicable to each target audience. Table 9-1 identifies information that is required for: All Target Communities (F.4.a), Municipal, Construction, Industrial, Commercial, and Quasi-Governmental Communities (F.4.b), and Residential Communities, General Public, School Children (F.4.c). Where possible, outreach and education activities will be developed to target specific populations, sub-populations, activities, areas, and/or constituents considered to be "high priority".

**Table 9-1
POTENTIAL OUTREACH CONTENT BY TARGET AUDIENCE (PERMIT SECTION F.4.)**

Content / Information	Target Audience				
	Residential, General Public, Schoolchildren	Municipal	Construction	Industrial, Commercial	Quasi- Governmental
Permit section F.4. requires that the Copermittees' education programs address the following types of information where applicable for each of the target audiences indicated					
State and Federal water quality laws	X	X	X	X	X
Requirements of local municipal permits and ordinances	X	X	X	X	X
Impacts of urban runoff on receiving waters	X	X	X	X	X
Watershed concepts	X	X	X	X	X
Distinction between MS4s and sanitary sewers	X	X	X	X	X
Importance of good housekeeping	X	X	X	X	X
Pollution prevention and safe alternatives	X	X	X	X	X
Household hazardous waste collection	X	X	X	X	X
Recycling	X	X	X	X	X
Best Management Practices (BMPs): Site specific, structural and source control	X	X	X	X	X
BMP maintenance	X	X	X	X	X
Non-storm water disposal alternatives	X	X	X	X	X
Pet and animal waste disposal	X	X	X	X	X
Proper solid waste disposal	X	X	X	X	X
Equipment and vehicle maintenance and repair	X	X	X	X	X
Public reporting mechanisms	X	X	X	X	X
Green waste disposal	X	X	X	X	X
Integrated pest management	X	X	X	X	X
Native vegetation	X	X	X	X	X
Proper disposal of boat and recreational vehicle waste	X	X	X	X	X
Traffic reduction, alternative fuel use	X	X	X	X	X
Water conservation	X	X	X	X	X
Public reporting information services	X				
Residential and charity car-washing	X				
Community activities	X				
Basic urban runoff training for all personnel		X	X	X	X
Additional urban runoff training for appropriate personnel		X	X	X	X
Illicit Discharge Detection and Elimination observations and follow-up during daily work activities		X	X	X	X
Lawful disposal of catch basin and other MS4 cleanout wastes		X	X	X	X
Water quality awareness for Emergency/First Responders		X	X	X	X
California's Statewide General Industrial NPDES Permit		X	X	X	X
California's Statewide General NPDES Construction Permit		X	X	X	X
SDRWQCB's General NPDES Permit for Groundwater Dewatering		X	X	X	X
401 Water Quality Certification by the SDRWQCB		X	X	X	X
Statewide General NPDES Utility Vault Permit		X	X	X	X
SDRWQCB Waste Discharge Requirements for Dredging Activities		X	X	X	X
Local requirements beyond statewide general permits		X	X	X	X
Federal, state and local water quality regulations that affect development projects		X	X	X	X
Water quality impacts associated with land development		X	X	X	X
Alternative materials & designs to maintain peak runoff values		X	X	X	X
How to conduct a storm water inspection		X	X	X	X
Potable water discharges to the MS4		X	X	X	X
De-chlorination techniques		X	X	X	X
Hydrostatic testing		X	X	X	X
Spill response, containment, & recovery		X	X	X	X
Preventive maintenance		X	X	X	X

How to do your job and protect water quality		X	X	X	X
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9.2 OUTREACH TOOLS / APPROACHES

The City of Solana Beach currently benefits from public education programs implemented by private organizations in addition to the programs that are City-sponsored. The City’s existing programs will be continued and/or expanded to comply with the requirements of the Permit. The effective implementation of BMPs relies on educating the parties who ultimately must undergo behavioral changes, whether it includes the general public, school children, public interest groups, businesses or agency personnel. Outreach may include information on both nonstructural (pollution prevention, good housekeeping, etc.) and structural (treatment control) BMPs, but will generally emphasize non-structural measures and behavioral change. Where applicable, outreach will be presented in a bilingual format to educate both English-speaking and Spanish-speaking residents. A description of the City of Solana Beach’s Public Outreach Program is described below. This program will be updated throughout the five-year Permit Period.

9.2.1 Publish Press Releases

The City will submit press releases to the local newspaper, *North County Times*, and to the regional newspaper, *Union Tribune*, on a regular basis, such as once per month. The City will pursue arrangements with these publications to ensure that the press releases are printed.

9.2.2 Publish Articles in Newsletters

The City newsletter, *Shorelines*, is distributed biannually to the residents of Solana Beach. The City has printed articles regarding storm water awareness and pollution prevention in past issues. The City will continue to print articles of this nature, and each article will give an overview of the permit requirements and priority issues, discuss the difference between MS4s and sanitary sewers, announce upcoming public events, and provide contact information (web address, hotline, etc).

The non-profit organization, Solana Recyclers, Inc. distributes a biannual newsletter, *down 2 E.A.R.T.H. News*, to the residents of Solana Beach, Del Mar, and Encinitas. The newsletter has included articles about pollution prevention and urban runoff awareness since 1999 and will continue to include storm water-related articles in future issues.

9.2.3 Participate in Regional Programs/Produce Television and Radio Ads

The City of San Diego has produced advertisements for television and radio that educate the public on urban runoff. These ads aired during December 2001. Since these announcements are also broadcast to North County, the City of Solana Beach, as a Copermittee with the City of San Diego, will use these announcements as part of their public education component. The City of Solana Beach will work with the City of San Diego and other Copermittees to continue the production of television and radio ads.

Video Production

The City helped facilitate a cooperative effort between the San Diego County Department of Health Services and Surfriders Foundation to produce a video entitled “Surfin’ Highway 101: Yesterday, Today and Tomorrow” that addresses the impacts of urban development on storm water quality. The City prepared the grant application for this project. As of January 2001 the video is complete and is expected to air on community television.

Magazine Ads

The City of Solana Beach participated in the two-page, color, storm water pollution message published in San Diego Magazine with other Copermittees. This education program reached City of Solana Beach households subscribing to the magazine.

Publish Local Newspaper Ads

The City of Solana Beach will work with other Copermittees to publish advertisements in local newspapers.

Participated in the Sunday Paper Bag Program

The City of Solana Beach participated in the Sunday Paper Bag Program with other Copermittees. The bags used to contain the Sunday editions of *The Union-Tribune* and *North County Times* presented the message “Don’t Pollute”. The newspapers were distributed to subscribers.

9.2.4 Develop a Display to Provide Information about the Storm Drain Issue and Educate the Public about Storm Drain Pollution

Representatives from the City have presented urban runoff information to the public in past community events. At the annual block party, Fiesta del Sol, they set up a booth promoting pollution prevention to keep our beaches clean. The City will develop several multi-purpose information display boards including a residential BMP display board, a commercial BMP display board, a construction BMP display board, and a school-oriented display board for use in the school curriculum program. These informational boards will be displayed at community events, such as Fiesta de Sol, and public buildings, such as the library and city hall.

Solana Recyclers has developed a display board that they present at street fairs to educate the public about pollution prevention and the importance of proper disposal of used oil. They will also present their display at the Fiesta del Sol event in Solana Beach in 2002.

9.2.5 Use the City’s Website to Publicize the Storm Drain Issue, Advertise Upcoming Events

The City of Solana Beach has developed and is maintaining a website (www.ci.solana-beach.ca.us) where users can find information about the community, city government, agendas and minutes, service directory, arts and recreation, and news and events. The City has posted storm water information through the news and events link, which contains the current *Shorelines*

newsletter, and in the City Governments/City Projects page. The City will expand the website by providing a separate storm water page. Information on this page will include general urban runoff information, upcoming community events, activity-specific BMPs, hotline phone numbers, a list of certified used oil collection centers, a list of household hazardous waste (HHW) collection facilities, regulations and permit requirements, and links to other informative websites such as CAL/EPA, RWQCB, Earth's 911, Think Blue San Diego, Project Clean Water, Solana Recyclers, I Love a Clean San Diego, Surfriders Foundation, San Diego Baykeepers, etc.

9.2.6 Establish a Hotline for the Public to Report Illegal Dumping, Illicit Connections and Obtain Public Information

Residents in the City of Solana Beach currently use the hotline established by the County of San Diego to report instances of illegal dumping, illicit connections, and to obtain general storm water information. The hotline is used to facilitate public complaints and reports of illicit discharges or water quality impacts associated with discharges into or from the storm water conveyance system within the City of Solana Beach including sewage spills from private laterals and septic systems. The hotline is in operation 24 hours a day/ 7 days a week and is capable of receiving reports in both English and Spanish. Any reports made to the hotline that have occurred within the City of Solana Beach are reported immediately to a city contact. The public hotline phone number is (888) 844-6525.

The public hotline will be publicized on the City of Solana Beach website, in *Shorelines*, a newsletter, circulated semi-annually by the City, and *down 2 E.A.R.T.H. News* a newsletter circulated semi-annually by Solana Recyclers.

The City of Solana Beach participates in the Cal/EPA Environmental Hotline. The EPA sponsors a toll-free phone number (1-800-CLEANUP) that gives out environmental information such as recycling information, buying recycled products, household hazardous waste, kids' section, energy conservation, composting, and dozens of other resources. The hotline is currently publicized in *down 2 E.A.R.T.H. News* and will be publicized on the City's website, in the newsletter, and in brochures.

9.2.7 Develop Brochures/Flyers, Door Hangers, Signs, etc.

The City will coordinate with other North County cities to develop brochures, flyers, door hangers, signs, etc. for north-county wide distribution. The City has also developed brochures with information about the locations of used oil collection centers and household hazardous waste (HHW) collection facilities. They will develop brochures that include content about key urban runoff issues, discuss the difference between MS4s and sanitary sewers, provide contact information (web address, hotline, etc), and provide activity-specific BMPs. Different brochures will be developed to discuss priority issues for residents, the business/commercial industry, and the construction industry as part of the "Clean Business Program" discussed in subsection 9.2.16 below. The brochures will be available at community events, public buildings, and distributed via direct mail. The City of Solana Beach will coordinate with other North County cities to update these brochures to address new storm water requirements.

Solana Recyclers has developed brochures that provide information on proper used oil and HHW disposal. The brochures contain a list of the certified collection centers in North County, including contact information, and are available in English and Spanish. Other informative brochures have been developed about composting. The brochures are distributed at community events, school presentations, and upon request.

9.2.8 Provide Pet Waste Disposal Facilities

The City installed pet waste bag dispensers to address high bacteria levels and educate the public about the importance of proper disposal of pet waste. The bag dispensers are located adjacent to the coast along Sierra Avenue. Historically there had been high bacteria levels in the storm drain runoff from the North Seascape Surf outfall due to pet waste. The City will maintain these dispensers and provide receptacles and signage for the proper disposal of pet waste in public parks and along walkways.

9.2.9 Identify Storm Drain Inlets with Tile Markers

The City of Solana Beach adopted a construction standard for storm drain markers on April 7, 1998. It requires that a tile marker with the message “NO DUMPING, THIS DRAINS TO THE OCEAN” be permanently affixed on the curb face of each side of the drain inlet on all new or replaced storm drain inlets. The City replaced the less durable painted stencils that had been applied in the past with a tile marker. Volunteers have installed the tile markers on all 309-storm drain inlets in Solana Beach.

9.2.10 Conduct Beach Clean up Days

The City has coordinated efforts with other organizations to conduct beach cleanup days. Past cleanup events include “Coastweek” with the California Coastal Commission and I Love a Clean San Diego, and “Adopt a Beach Cleanup Day” with I Love a Clean San Diego. The City will continue to support and host beach cleanup days with other organizations.

9.2.11 Post Warning Signs

The City of Solana Beach is cooperating with the County of San Diego Department of Environmental Health to ensure that the public is adequately notified of potential health risks associated with urban runoff on our beaches. The City permanently posted caution signs at the Fletcher Cove and North Seascape Surf storm drain outfalls.

9.2.12 Establish Used Oil Recycling and HHW Collection Facilities

Used Oil Recycling

Currently, the non-profit organization Solana Recyclers, Inc. facilitates the used oil recycling program for the City of Solana Beach and five other cities in North County. The program consists primarily of public education through school presentations, public displays at street

fairs, articles in the newsletter *down 2 E.A.R.T.H. News*, and surveying of established certified used oil collection centers. The California Integrated Waste Management Board (CIWMB) funds these programs through Used Oil Block Grants awarded to the cities of Solana Beach, Del Mar and Encinitas.

School presentations focus on pollution prevention topics such as the importance of recycling used motor oil, identifying what a household hazardous material is, and how dumping or improper disposal harms the environment. The presentation utilizes an interactive model called *Enviroscape*.

Public displays are presented at street fairs to educate the public about the importance of proper disposal of used oil. Clean used oil containers are distributed at the events along with a list of certified used oil collection centers in North County. Solana Recyclers will present their display at the Fiesta del Sol event in Solana Beach in 2002.

Articles in the newsletter *down 2 E.A.R.T.H. News* and information on the Solana Recyclers website (www.beresourceful.org) also contribute to educating the public about used oil recycling and other storm water and storm drain related issues. Informative articles have been published in each issue of *down 2 E.A.R.T.H. News* for the past two years. *Down 2 E.A.R.T.H. News* is distributed to all residents in the cities of Solana Beach, Encinitas, and Del Mar via U.S. mail two times per year. The website contains storm water-related information and provides a complete list of certified used oil collection centers and household hazardous waste collection centers based on zip code. These outreach methods have proven to be more cost effective than direct mail brochures.

Staff members at Solana Recyclers perform quarterly surveys of the 26 certified used oil collection centers in North County either in person or by phone. The purpose of the survey is to establish a working relationship with the centers, verify that the collection centers have the proper signage and containers, and to gauge the level of public participation. Funds from the Block Grant are also used to purchase equipment and tanks for the centers. Clean used oil containers are available at some centers at no charge to the public. Currently there are no certified used oil collection centers within the city limits of Solana Beach, however several centers are located nearby in Encinitas. Residents can locate their nearest used oil collection center by calling Solana Recyclers at (760) 436-7986 or logging onto their website at www.beresourceful.org and clicking the link.

The City of Solana Beach will expand on these programs utilizing funds from the Used Oil Opportunity Grant offered by the CIWMB. The City will form a collective effort with other coastal cities to utilize funds and implement programs on a regional level. These programs will include curbside used oil recycling, establishment of certified collection centers in the City, providing used oil recycling information on the City website, and potentially implementation of storm drain inlet filters (pending legislation).

HHW Collection

The HHW program for the City of Solana Beach is facilitated by the Regional Solid Waste Authority (RSWA), which represents the cities of Solana Beach, Del Mar, Encinitas, National City, Oceanside, Vista, and Poway. The RSWA sponsors programs using funds obtained from a

Household Hazardous Waste Grant awarded by the CIWMB. Programs include permanent HHW collection facilities, public education and outreach, and equipment and disposal costs.

Two permanent HHW collection facilities are available to the residents and businesses of Solana Beach. These facilities are located in Vista and Poway, and are open to the public on Saturdays between the hours of 9:00AM and 3:00PM excluding holiday weekends. Businesses that are conditionally exempt small quantity generators can make appointments to drop-off HHW at either facility and are charged a disposal fee. Door-to-door HHW collection is available for elderly and homebound residents of Solana Beach by appointment.

In addition to accepting HHW, these facilities accept “e-waste”, televisions and computer monitors. The HHW grant supports this program, covering the recycling fee of \$20.00 per monitor. Grant funds are fixed so the cost is covered until the funds are exhausted.

Public education and outreach efforts include articles in newsletters, information on the Solana Recyclers website, a link to the Earth 911 website (california.earth911.org) from the Solana website, which provides a complete list of certified used oil collection centers and household hazardous waste collection centers based on zip code, information on the County of San Diego Department of Environmental Health website (www.co.san-diego.ca.us), and a regional hotline (1-800-714-1195) operated by Philip Services, an HHW disposal contractor. Future outreach efforts include publication of a series of informative brochures on pollution prevention, development of a brochure on proper disposal methods targeted toward people that are moving, and movie theater advertisements. Solana Recyclers and the non-profit organization I Love A Clean San Diego will implement this education campaign from January 2002 to March 2003.

The City of Solana Beach will implement new programs such as curbside collection of HHW and expand public education efforts by including information on the City website and in the newsletter *Shorelines*.

9.2.13 City Sponsored Workshops and Meetings

The City of Solana Beach will hold monthly meetings and workshops beginning in March 2002 for business and property owners. The early workshops will be entitled “Storm Water - What is New” and will be educational in nature. Later workshops will provide more specific instructions as to the strategic plan of the City/Copermittees in administering the Watershed URMP and SUSMP.

The City will also give a presentation centering on the harmful effects of urban runoff and pollution prevention BMPs to the City Council by June 2002. The presentation will also explain the new requirements of the Permit, summarize the City’s efforts to date, and identify what the public can do to help. Added presentation will be offered to interested groups such as water districts, sanitary districts, etc.

Solana Recyclers currently offers composting workshops to the public, and will add other workshops such as “Less Toxic Gardening” and “Alternative Cleaners”. The composting workshops are conducted monthly at the Compost Demonstration site at Quail Botanical Gardens in Encinitas.

Other presentations available to the public and focus on pollution prevention are given by organizations such as Solana Recyclers and I Love a Clean San Diego.

9.2.14 Develop Public School Presentations and Curriculum

The City of Solana Beach will present age-appropriate pollution prevention educational programs to City of Solana Beach Schools starting in March 2002.

Additionally, several organizations in the community offer school presentations to students in Solana Beach, including Solana Recyclers and Surfrider Foundation.

School presentations given by Solana Recyclers focus on recycling and pollution prevention topics such as the importance of recycling used motor oil, identifying what a household hazardous material is, and how dumping or improper disposal harms the environment. The presentation utilizes an interactive model called *Enviroscape* that visually allows students to make rain and watch the path pollution takes to the ocean, see how pollution can occur and ways to prevent pollution, understand what a watershed is and why they should be concerned, learn how used oil from cars can be properly disposed of or improperly disposed of and end up in the ocean, and learn how they can make a difference no matter what their age. Composting presentations are also offered.

Surfriders Foundation provides three different classroom presentations for elementary level, junior high, and high school. The elementary program is called “Kids for Clean Water” and is a hands-on presentation that educates children about the effects trash has on marine life. They learn about storm drains and the effects that pollution has on animals in the ocean. They learn ways of preventing pollution, and that their actions can make a difference. The junior high program is called “Pollution Solutions” and it allows active participation from the students, and teaches the differences between point source and non-point source pollution. Students learn ways to minimize urban runoff and other types of pollution, and how to be part of the solution. The high school program is called “Keepers of the Coast” and it includes a 30-minute video that educates viewers on the water cycle, beach erosion, urban runoff, and specific projects that Surfrider has done and is doing worldwide.

9.2.15 Coordinate Efforts with Non-profit Organizations

The City has coordinated efforts with non-profit organizations in the past to accomplish programs such as beach cleanups and storm drain marking. The City will continue or establish working relationships with organizations such as the Boy Scouts, Del Mar/Solana Beach Sunrise Rotary Club, I Love a Clean San Diego, Solana Recyclers, Surfrider Foundation, and San Diego Baykeepers. Volunteers can be used as a resource to implement several public outreach programs.

9.2.16 Develop a “Clean Business Program” to Encourage Businesses to Participate in Programs that have Potential Benefits to Water Quality

The City of Solana Beach will implement minimum BMPs for high priority sites through an outreach program called the “Clean Business Program” and will consist of development and distribution of an activity-specific BMP guide, and development and annual distribution of a

follow-up flyer stating the status of the program. The program will also target the construction industry by continuing to provide a construction guide, pre-construction meetings, and a rainy season reminder.

Activity-specific BMP Guide

An activity-specific BMP guide will be developed for each of the categories listed in the Municipal, Commercial, and Industrial Components of this JURMP. The BMP guides will identify pollution prevention measures, potential pollutant sources, types of pollutants, and recommended BMPs for each activity. The guide will include an introduction that explains that the BMPs are required to be implemented and why they are required, that annual inspections will be conducted, and that the City has the authority to enforce implementation of the BMPs. Utilizing the City's business license database, the flyers will be circulated to all businesses in Solana Beach, according to their respective activity category.

As part of the "Clean Business Program" an annual follow-up flyer will be developed and distributed to businesses that describes how the program is doing. This description will be based on compliance through inspections or changes in the dry weather monitoring program.

Construction and Building Activities Guide

The City of Solana Beach, with the permission of the County of San Diego, has modified the County's "Storm Water Best Management Practice Guide for Construction and Building Activities" for City use. The guide is currently provided to developers, homeowners, or contractors with the issuance of engineering grading or improvement permits.

Pre-construction Meetings

The City of Solana Beach holds pre-construction meetings prior to issuance of the grading or improvement permit. As part of the agenda in the Pre-construction Grading Guidelines, the Engineering Staff informs the developers, homeowners, or contractors about the storm water pollution issues and mitigation methods.

Rainy Season Reminder

During the rainy season the City of Solana Beach notifies by mail all developers, homeowners or contractors, who have an active grading permit, of their responsibilities to control and reduce pollutants in runoff from their construction activity.

9.2.17 Conduct Training Programs for City Staff

The City will conduct training programs for all City Staff to update them on new Permit Requirements and storm water issues. These training sessions will begin in March 2002. City staff currently attends local Storm water Quality Task Force meetings, Copermittee meetings and other regional conferences. Additionally, the City inspector and plan checker attended a County sponsored BMP Seminar in 2000.

9.2.18 Keep Street Sweeping Records

The City of Solana Beach street sweeping program collects debris from residential streets, which are swept once each month, and major arterial streets, which are swept four times each month. The City will keep records of the volume and characteristics of street sweepings to use when evaluating the effectiveness of BMP implementation.

9.2.19 Conduct Storm Drain Maintenance

The Public Works Department inspects the City's storm drain system twice a year. They clean out inlets, catch basins, and lines upon determination by the City Engineer. The City will keep records of the volume and characteristics of the collected debris to use when evaluating the effectiveness of BMP implementation.

9.2.20 Complete Daily Construction Inspection Reports

The construction inspection report forms used by the City's inspector include two comment items for permit compliance. These are "NPDES Measures Required" and "NPDES Measures In Place." These items were added to maintain a record in the construction file to identify the efforts that were in place and the additional measures the inspector directed the contractor to make.

9.2.21 Implement BMPs to Address High Priority Areas

The City of Solana Beach, as part of the North County Transit District's Lomas Santa Fe Grade Separation project, upgraded and relocated the storm drain system from Cedros Avenue to the Fletcher Cove outfall. Since high bacteria levels were detected at the Fletcher Cove outfall in August 1996, the City was required to implement a BMP to reduce pollutants to comply with their permit issued by the California Coastal Commission. The City installed a low flow diverter at Fletcher Cove in 1998, which continuously operates except during heavy rainfall.

Actual implementation of the activities listed above is dependent on available funding in future annual budgets and City Council approval.

In accordance with Section F.6, this Public Participation component describes how public participation will be included in the implementation of the JURMP. Although closely related to education, public participation complements education by providing an interactive means by which education programs are implemented. The public participation program will help achieve the goal of the education program, which is to measurably change the behavior of the target audience in an effort to reduce pollutant releases to MS4s and the environment. The City of Solana Beach's public participation program, like the education program, will be directed at the following target audiences:

- Municipal Departments and Personnel
- Construction Site Owners and Developers
- Commercial/Industrial Owners and Operators
- Residential Community, General Public, and School Children
- Quasi-Governmental Agencies/Districts (i.e. educational institutions, water districts, sanitation districts, etc.)

Table 10-1 below summarizes the interactive programs that will be implemented for each target audience.

**Table 10-1
IDENTIFICATION OF TARGET AUDIENCE AND
ASSOCIATED PUBLIC PARTICIPATION PROGRAM.**

Target Audience	Public Participation Program
Municipal Departments and Personnel	Training Programs for City Staff, Hazardous Waste Management Team
Construction Site Owners and Developers	Clean Business Program
Commercial/Industrial Owners and Operators	Public Meetings and Workshops, Website, Clean Business Program
Residential Community, General Public, and School Children	Public Meetings and Workshops, Community Events, Public Hotline, Website, Partnerships
Quasi-Governmental Agencies/Districts (i.e. educational institutions, water districts, sanitation districts, etc.)	Public Meetings and Workshops, Public School Presentations and Curriculum

Training Programs for City Staff

The City will conduct training programs for all City Staff to update them on new Permit requirements, new City programs, and general storm water issues. These training sessions will begin in March 2002. City Staff currently attends local Storm Water Quality Task Force meetings, Copermittee meetings and other regional conferences. Additionally, the City inspector and plan checker attended a County sponsored best management practices seminar in 2000.

Hazardous Materials Management Program

The City of Solana Beach Fire Department has established an emergency response program to contain hazardous materials from spills and illegal dumping, preventing the materials from entering the City's MS4s. The City Fire Department works cooperatively with the County of San Diego Hazardous Materials Team, who recovers and properly disposes of the material.

Clean Business Program

Construction site owners and developers will participate in the education program through pre-construction meetings. The City of Solana Beach holds pre-construction meetings prior to issuance of the grading or improvement permit. As part of the agenda in the Pre-construction Grading Guidelines, the Engineering Staff informs the developers, homeowners, or contractors about the storm water pollution issues and mitigation methods. The City will continue to sponsor these meetings and will provide updated educational materials.

Commercial/industrial owners and operators will participate in the education program primarily through interaction with the inspector during annual site visits. The inspector will meet with a site representative and perform a walk-through of the site to evaluate compliance, and to observe areas that require implementation of BMPs. The inspector will provide the site representative with his recommendations and a list of minimum required BMPs. Overall compliance and recommendations will be compiled into a follow-up flyer that will be distributed to all businesses.

Public Meetings and Workshops

The City of Solana Beach will hold monthly meetings and workshops beginning in March 2002 for business and property owners. The early workshops will be entitled "Storm Water - What is New" and will be educational in nature. Later workshops will provide more specific instructions as to the strategic plan of the City/Copermittees in administering the watershed URMP and SUSMP.

The City will also give a presentation centering on the harmful effects of urban runoff and pollution prevention BMPs to City Council by the June 2002. The presentation will explain the new requirement of the Permit, summarize the City's efforts to date, and identify what the public can do to help. Added presentations will be offered to interested groups, such as water district, sanitary districts, etc.

Website

The City of Solana Beach has developed and is maintaining a website (www.ci.solana-beach.ca.us) where users can find information about the community, city government, agendas and minutes, service directory, arts and recreation, and news and events. The City will expand the website by providing a separate storm water page. The information contained on the storm water page will encourage public involvement by emphasizing the importance of pollution prevention and other storm water issues. The website will also encourage public participation through on-line surveys and an e-mail link to a City representative if further information is requested.

Community Events

The City of Solana Beach will take advantage of the annual street fair, Fiesta del Sol, to present information to the public about urban runoff and pollution prevention. This will give the public a chance to interact with City representatives, ask questions, and obtain information. The City will set-up a booth at the event where display boards can be viewed and informative materials, such as brochures, obtained.

Display boards will also be exhibited at the public meetings and workshops, and high-traffic areas, such as City Hall, the Library, and other public buildings.

The City will also continue to support activities such as beach cleanup days. The City has previously coordinated efforts with other organizations to conduct beach cleanup days. Past cleanup events include “Coastweek” with the California Coastal Commission and I Love a Clean San Diego, and “Adopt a Beach Cleanup Day” with I Love a Clean San Diego.

Public Hotline

The general public in the City of Solana Beach currently uses the hotline established by the County of San Diego to report instances of illegal dumping, illicit connections, and to obtain general storm water information. The hotline is in operation 24 hours a day/ 7 days a week and is capable of receiving reports in both English and Spanish. Any reports made to the hotline that have occurred within the City of Solana Beach are reported immediately to a City contact. Although the hotline is primarily used to facilitate public complaints and reports of illicit discharges, the City contact provides storm water information upon request.

Partnerships

The City will coordinate efforts with already established organizations to gain input and support from their members. The City currently benefits from educational programs implemented by private organizations, and developing a partnership will allow future programs to focus specifically on urban runoff and pollution prevention issues. The types of organizations that the City will establish partnerships with include educational institutions, environmental groups, scouting groups, construction industry groups, business and industry groups, tourism, and civic associations.

School Presentations and Curriculum

The City of Solana Beach will present age-appropriate pollution prevention educational programs to City of Solana Beach Schools starting in March 2002. The presentations will generally focus on the importance of pollution prevention, the harmful effects of urban runoff, and ways the students can make a difference.

Several organizations in the community currently offer school presentations to students in Solana Beach, including Solana Recyclers, Surfrider Foundation, and I Love a Clean San Diego.

An integral task of the City's Urban Runoff Management Program is to assess the program's effectiveness at reducing pollutants in urban runoff and storm water. The Program Assessment component describes both the annual and long-term strategy to evaluate the accomplishments of the JURMP using both direct and indirect measurements.

The City's Storm Water Coordinator in the Engineering Department has the primary responsibility for the assessment of the overall program. The Public Works Department is also responsible for self-evaluation and reporting to the Storm Water Coordinator. Each of the components of the City's JURMP contains an Assessment Form that will be distributed to responsible departments to provide an evaluation of each component. These component assessments will rely heavily on ongoing record keeping, and status reports for the JURMP annual assessments.

Section F.7.a of the Permit requires that the City must develop a long-term strategy for assessing the effectiveness of the Urban Runoff Management Program using direct and indirect measurements. Section F.7.b. of the Permit requires that the results of the Urban Runoff Management Program be submitted in the Annual Report to the SDRWQCB.

The objectives of this program component are to:

- Assess the performance of the Storm Water Program;
- Assess the effectiveness of improving receiving water quality;
- Identify changes that will increase the effectiveness of the components within the program;
- Identify a phased implementation schedule for the assessment activities and estimated annual costs needed to implement the Program Assessment component through the five-year life of the Permit.
- Document assessment activities conducted which will be submitted in the Annual Report to the SDRWQCB.

11.1 EFFECTIVENESS EVALUATION

The City will evaluate both the annual and long-term effectiveness of the program through direct and indirect measurement. Direct measurements include water quality monitoring results and pollutant load reduction estimations. Indirect results include performance or accomplishments.

The water quality monitoring data that has been collected for eight years, and dry weather urban runoff monitoring data that has been collected for nine years will be incorporated into the Programs data set. This existing data, plus the future data collected from on-going wet and dry weather monitoring will be evaluated throughout the length of the program to assess for trends in water quality. Other forms of direct assessment will be conducted including quantifying the pollutant load reduction due to street sweeping and MS4 cleaning.

Indirect measurements include quantifying activities that cannot be linked directly to a measurable pollutant load reduction. Interpretation of indirect measures of effectiveness is often difficult, and must be used done with a good understanding of the data in order to be meaningful.

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Examples of some of the assessment tools for indirect measurement of the individual components include tracking the following:

- Number of inspections, violations, and enforcement actions
- Rate of compliance in follow-up inspections
- Public information survey results over time
- Number of complaints and type of complaints on hotlines
- Quantity of educational materials distributed

Each JURMP component will be evaluated by comparing this quantitative and qualitative data against the general goals of the component. The evaluation will also include a qualitative accounting for the component effectiveness. Based on the self-assessment, each component will identify changes or improvements to their activities. Assessment Forms have been developed for each component to allow for consistent reporting of specific activities. These forms will be used to record the direct and indirect measures of water quality, and will serve as an assessment tool. Copies of these forms are included in Appendix D.

Concurrent with the annual component self-assessments, the overall program as a whole will be assessed. The overall program assessment will track and evaluate the direct and indirect measures of effectiveness, as well as review the individual component self-assessments, and recommend changes and improvement to the program, where necessary.

The assessment program will focus on data evaluation to assess for baseline conditions, water quality trends, and reductions in pollutants. In compliance with the Permit assessment will be expanded to evaluate water quality on a watershed basis in the third year of the program.

The City will use the following direct and indirect measurements as to assess the program's effectiveness. This list will be evaluated and modified appropriately as the program progresses.

Municipal Facilities

- Number of Storm Water Pollution Prevention Plans prepared/implemented (Statewide General Construction Permit)
- Number of municipal facilities inspected for storm water compliance
- Quantity of material removed from storm water conveyance system
- Quantity and type of major structural BMPs in place within the jurisdiction
- Illicit connections corrected
- Illegal dischargers cited with Notices of Violation

Commercial/Industrial Uses

- Number of facilities in compliance with State General Industrial Permit
- Number of noncompliant facilities referred to the SDRWQCB
- Number of facilities inspected

SECTION ELEVEN

- Quantity of educational material distributed
- Number of educational workshops performed

Residential Uses

- Number of complaints received
- Number of follow-up visits required

Land-Use Planning

- Changes in General Plan (scheduled for adoption in February, 2002).

Development Review & Permitting

- Number of developments complying with the State General Permit for Construction
- Number of staff-approved projects subject to SUSMPs requirements
- Number of SWPPPs reviewed
- Number and frequency of construction sites inspected
- Number of staff and planning group educational programs related to storm water

City CIP Project Planning & Design

- Number of developments complying with the State General Permit for Construction
- Number of SWPPPs reviewed
- Number of high priority construction sites in inventory

Construction Contracts

- Number of high priority sites in inventory
- Number of developments complying with the State General Permit for Construction
- Number of construction sites inspected
- Number of construction inspectors trained to enforce storm water ordinances
- Number of noncompliant sites referred to the SDRWQCB
- Number of follow-up enforcement activities resulting in Notices of Violation or citations

Enforcement of Storm Water Ordinance

- Number of citations for storm water ordinance violations
- Number of Notices of Violations (NOV) for storm water ordinance violations
- Number and amount of civil penalties assessed

Water Quality Monitoring

- Number of sites monitored during dry weather
- Number of coastal outfalls monitored during wet weather

SECTION ELEVEN

Education

- Annual awareness surveys completed
- Percent of population statistically represented by awareness survey
- Storm water developed
- Storm water educational/instructional materials/brochures printed
- Storm water advertisements (public service announcements (PSA), display ads, interviews, purchased on-air time, radio commercials, etc.)
- Employees trained on general and activity-specific storm water issues
- Percent of employees trained on general and activity-specific storm water issues

Public Participation

- Use of storm water hotline
- Participation in public storm water events
- Complaints logged regarding storm water violations

Non-Emergency Fire Fighting

- Procedures implemented to minimize the water quality impact of non-emergency fire fighting.

11.2 PHASING***Year 1***

- Develop/prepare standardized reporting format on Assessment Forms for appropriate program components.
- Collect assessment data from individual components and develop appropriate assessment tools (trend analysis, graphing, statistical analysis) for evaluation and analysis of data.
- Complete Annual Assessment Form with assessment conclusions and recommendations.

Year 2

- Collect assessment data from individual components and develop appropriate assessment tools (trend analysis, graphing, statistical analysis) for evaluation and analysis of data.
- Revise assessment program based on conclusions and recommendations of Annual Assessment Form.
- Prepare Annual Assessment Form with assessment conclusions and recommendations.

SECTION ELEVEN***Year 3***

- Shift assessment program to watershed-based
- Revise assessment program based on conclusions and recommendations of Annual Assessment Form.
- Prepare Annual Assessment Form with assessment conclusions and recommendations.

Year 4

- Revise assessment program based on conclusions and recommendations of Annual Assessment Form.
- Prepare Annual Assessment Form with assessment conclusions and recommendations.

Year 5

- Evaluate planned long-term assessment program
- Revise assessment program based on conclusions and recommendations of Annual Assessment Form.
- Prepare Annual Assessment Form with assessment conclusions and recommendations.

Actual implementation of the activities listed above is dependent upon identification of funding in future yearly budgets and City Council approval.

In accordance with Permit Section F.8, this Section of the JURMP describes the City of Solana Beach's strategy to conduct a fiscal analysis of its urban runoff management program. The City of Solana Beach's Storm Water Program is funded out of our General Fund. The City has funded the past NPDES programs through the General Fund by actual costs. The street sweeping program will be funded by the Street Sweeping Account. The Storm Water Program is administered under the Engineering and Public Works Department, The Public Works crew Department oversees the street sweeping, storm drain maintenance and inspection.

The 2000-01 budget for funding the Storm Water Program included the following:

Dry and Wet Weather Testing Program	\$20,000
Household Hazardous Waste Program (drop off sites)	\$10,000
Household Hazardous Waste Program (collection events)	\$45,000
City Personnel	\$15,911
Membership Dues	\$ 100
Street Sweeping	\$21,320
Stevens Creek Cleaning	\$20,000
Storm Drain Cleaning	\$12,000
Postage/Educational Materials	\$ 3,000

The final 2001-02 budget has not been finalized however; the following monies proposed in the 2001-02 budget for various programs dealing with storm water issues (JURMP, SUSMP, Watershed URMP).

Brochures/ workshops	\$15,000
City Personnel	\$50,000
Documentation	\$10,000
GIS Mapping	\$50,000 - \$100,000
Household Hazardous Waste Program (collection events)	\$45,000
Household Hazardous Waste Program (drop off sites)	\$10,000
NPDES wet and dry weather monitoring	\$60,000 (increase in sites)
Postage	\$ 3,000
Stevens Creek Cleaning	\$20,000
Storm Drain Cleaning	\$25,000 - \$50,000
Storm Water Permit Fees	\$17,500
Street Sweeping	\$22,000

The City will fund additional educational programs, and inspection programs through the General Fund. The final 2001-02 fiscal analysis will be submitted in the Annual Report.

Currently, the City of Solana Beach has one fire station, located at 500 Lomas Santa Fe Drive. Training measures involving controlled burning and extinguishing are performed off-site, outside of the city of Solana Beach. . Pressure testing of fire hydrants are not performed by the Fire Department; the testing is conducted by Santa Fe Irrigation District. The non-emergency fire flows that may have occurred in the past in Solana Beach include washing of fire trucks and overflow when filling the water tanks on the fire trucks. However, in April, 2001, the City implemented BMPs that will reduce or eliminate the water runoff into the storm drain. At the present time, all truck washing takes place inside the fire department's garage, and the wash water is discharged to the sanitary sewer. The following BMPs were implemented in April 2001:

13.1 FIRE DEPARTMENT BMPs (APRIL 2001)

Vehicle Washing

Any vehicle that is washed and/or hosed off must be in the apparatus floor and placed in such a manner so that any runoff of water will enter the floor drains that are on the apparatus floor. Special care must be taken so that water does not hit the station walls or other vehicles. The middle bays would be the most appropriate section to use.

Hose Washing

This activity will take place on the apparatus floor as well. The hose may be dried outside.

Hose Testing

Water in the hoses must be discharged onto station-landscaped areas and not on any hard surface. The Pumper at the hydrant should make every effort possible to minimize water run-off from pumping operations.

Pump Testing

Similar to hose testing, any discharge of water must be onto station-landscaped areas.

Station Landscape Watering

The station landscape watering system should be adjusted to eliminate water runoff from landscaped areas to hardscape areas. This will require that the use of the "rain settings" and timer settings may have to be adjusted on a frequent basis to accommodate changes in temperature and weather.

New BMPs

Occasionally, small volumes of water are discharged to the storm drain when the water tank is being filled, and is overfilled.

The following BMPs will be implemented to reduce the amount of non-emergency fire flows to the storm drain system:

- Monitor the amount of water when filling the fire truck water tank.
- If overfilling occurs, block the storm drain entrance and divert the flow to a vegetated area or pond the water and allow it to evaporate.

A fire suppressant, Phos-chek WD881, is carried on the fire trucks, and may be discharged through the hose as an additive, if deemed necessary. However, the application of this foam is rare, and should not need to be applied for a non-emergency reason. In the event that non-emergency fire flows with or without the fire suppressant have the potential to impact the storm drain system, the appropriate measures will be taken to comply with Permit requirements.

The City of Solana Beach is committed to implementing programs to reduce pollution in urban runoff. The City will achieve this through educating targeted communities, inspecting high priority facilities, and enforcing new storm water ordinances, which will eventually result in behavioral changes and less polluted urban runoff. The City will gradually implement more programs each year, and will evaluate the effectiveness of the programs annually. This approach will allow the City to change programs as needed. The City expects to achieve compliance with the comprehensive and specific requirements of the Permit through with the assistance of the Regional Water Quality Control Board, collaborating with other copermitees, internal leadership, and public support in order to accomplish the goal of improved water quality.

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