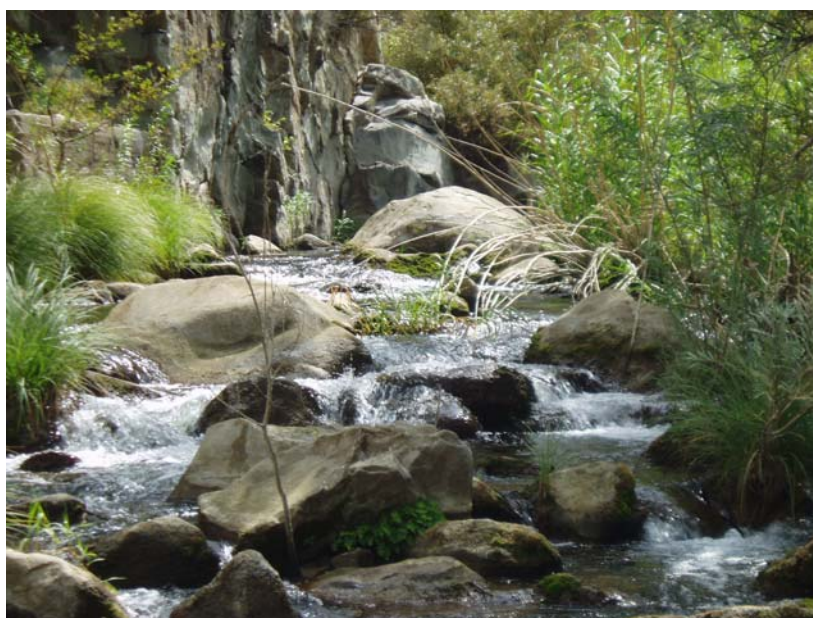


# 2005-06 Annual Report



## *Ventura Countywide Stormwater Quality Management Program*



*A cooperative project of the County of Ventura,  
the cities of Ventura County and the  
Ventura County Watershed Protection District*

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## EXECUTIVE SUMMARY

The purpose of this document is to comply with the NPDES Permit No. CAS004002/Order No. 00-108 which requires submittal by October 1, 2006 of an Annual Storm Water Report and Assessment. This Report discusses the Co-permittees' Second Term Permit compliance activities for the period of July 1, 2005 to June 30, 2006 and includes a description of all activities that were conducted during the reporting period and an assessment of program effectiveness.

The organization of the report reflects the organization of the 2001 Stormwater Management Plan (SMP). The implementation portion of the SMP consists of the following elements:

- Program Management
- Program for Residents
- Programs for Industrial/Commercial Businesses
- Programs for Planning and Land Development
- Programs for Construction Sites
- Programs for Public Agency Activities
- Programs for Illicit Discharges/Illegal Connections
- Stormwater Monitoring Program

Notable accomplishments that occurred during this reporting period include:

- Implementation of a new public education strategy *Community for a Clean Watershed* - A watershed-based public outreach program
- Co-permittee Coastal Cleanup Participation
- Research and analysis of new potential funding sources
- Stormwater Quality Monitoring (completion of 6 sampling events)
- Ventura River Macroinvertebrate Bioassessment Monitoring
- July 2006 Water Quality Monitoring Report
- TMDL participation
- CASQA participation
- Calleguas Creek Watershed Management Plan participation
- Southern California Coastal Water Research Project (SCCWRP) participation
- Renewal of the Hillside Erosion Control Ordinance (HECO Program)
- Integrated Regional Water Management Plan (IRWMP) participation

In realizing these notable accomplishments, the Co-permittees believe through implementation of various comprehensive program elements that all requirements of the permit have been met in this reporting period.

To provide a basis for annual Program Effectiveness Assessment (PEA), the Co-permittees have selected a series of measures (both *direct* and *indirect*) to respectively verify program implementation and ultimately validate achievement of program goals. The identified measures are designed to assess the effectiveness of a program to improve runoff water quality, however changes to ecosystem quality should not be expected to be immediately evident.

While evidence of a direct connection between program activity and changing environmental conditions remains elusive, the Co-permittees believe that there is strong evidence of increasing program effectiveness. Indeed, compared to the previous reporting period this year's PEA shows:

- Significantly increased understanding of watershed based pollution prevention;
- Better coordination between stormwater program and the countywide Household Hazardous Waste program;

## EXECUTIVE SUMMARY

- The achievement of 10,218,956 impressions in the countywide public outreach effort;
- Decrease in the number of complaints (thus decreased illegal activity) investigated by the Co-permittees; and
- Decreased need for enforcement tools provided by the Co-permittees' local Water Quality Ordinances due to increased compliance and public awareness.

In addition, key baseline data has been compiled on a watershed and countywide basis for future comparative assessment in the areas of municipal activities, new and existing development, and construction.

With respect to water quality monitoring, the Co-permittees continued to implement their comprehensive monitoring program. For the 2005/06 monitoring season, several key points have been identified and are highlighted below:

- The Ventura Countywide Stormwater Monitoring Program met the monitoring requirements of its NPDES permit;
- Water quality monitoring data were successfully collected during four wet weather and two dry weather events monitored by the Stormwater Monitoring Program;
- A new Mass Emission Monitoring Station (ME-VR2) was permanently installed on the Ventura River at the Ojai Valley Sanitation District's Treatment Plant above the POTW outfall;
- VCWPD employed the services of CRG Marine Laboratories, Inc. in order to achieve lower detection limits;
- VCWPD employed the services of Larry Walker Associates to design and implement an automated data entry import tool to improve the Countywide Stormwater Program's water quality database;
- VCWPD staff evaluated environmental and QA/QC water chemistry data using new *2005-2006 Data Quality Evaluation Plan* and *Data Quality Evaluation Standard Operating Procedures* guidance documents;
- Chronic toxicity on *Cerrodaphnia dubia* (water flea) was observed during one wet weather event on Receiving Water Site W-3;
- No chronic toxicity of *Strongylocentrotus purpuratus* (Purple Sea Urchin) was observed during wet or dry events at the Mass Emission stations during the 2005-06 monitoring season; and
- Elevated pollutant concentrations were observed at all monitoring sites during one or more monitored wet weather storm events, as well as at all Mass Emission sites during one or more dry weather events. See Section 9 for details and an explanation of monitoring results.

## SECTION 1.0 INTRODUCTION

The Watershed Protection District (subsequently referred to as the Principal Co-permittee), the County of Ventura and the incorporated cities of Camarillo, Fillmore, Moorpark, Ojai, Oxnard, Port Hueneme, San Buenaventura, Santa Paula, Simi Valley, Thousand Oaks, (collectively known as Co-permittees) operate municipal storm drain systems and discharge stormwater and urban runoff pursuant to the countywide NPDES permit. This permit administered by the Los Angeles Regional Water Quality Control Board (RWQCB), requires an Annual Storm Water Report and Assessment (Annual Report).

The permit was first adopted in 1994 and subsequently re-issued on July 27, 2000, extending the life of the permit for a second-term of five years, until July 27, 2005. The permit is currently on administrative extension awaiting renewal.

### 1.1 Purpose and Organization of Report

In accordance with the requirements of the permit, the primary purpose of the report is to document:

- The status of the general program and individual tasks contained in the SMP
- Results of the monitoring and reporting program CI 7388; and
- Compliance status and effectiveness of the implementation of permit requirements on storm water quality

The organization of the report reflects the organization of the Program's 2001 SMP. With respect to the Co-permittee activities, the following information is presented:

- A review of the program management framework (committee and subcommittee structure) and a fiscal analysis report (**Section 2.0**)
- A review of the status and effectiveness of the public information dissemination and pollution prevention outreach program (**Section 3.0**)
- A review of the activities directed at effectively prohibiting non-stormwater discharges in order to reduce stormwater pollution to the maximum extent practicable. (**Section 4.0**)
- A review of the efforts to minimize the impact of new development and significant redevelopment on stormwater quality. (**Section 5.0**)
- A review of construction site practices to ensure the protection of stormwater quality to the maximum extent practicable (**Section 6.0**)
- A review of the efforts to reduce the adverse effects that municipal activities may have on water quality. (**Section 7.0**)
- A review of the status of the control measures established under the Illicit Discharge/Illegal Connections elimination program (**Section 8.0**)
- A summary and analysis of the monitoring results from the water quality monitoring program (**Section 9.0**) and (**Appendix 3**)
- An overall evaluation of the Co-permittees efforts to meet SMP Performance Criteria and a discussion of future program goals (**Section 10.0**)

### 1.2 Major Program Accomplishments

As discussed above, the Second-term Permit was extended to provide coverage until a new permit is adopted and includes the reporting period 2005/06 (July 1, 2005 to June 30, 2006). Permit Year 6, Reporting Year 12 included continued dialogue redefining the relationship between the Co-permittees and the Principal Co-permittee, and revision of responsibilities, roles and accountability.

## SECTION 1.0 INTRODUCTION

Further notable accomplishments that occurred during the reporting period include:

- Survey of county residents on their awareness of stormwater quality issues
- Strategic development of a countywide stormwater public outreach program logo
- Implementation of a new public education strategy
- Countywide post-construction BMP Database development and coordination
- Countywide SQUIMP Training
- Development and submittal of Report of Waste Discharge (ROWD)
- Stormwater Quality Monitoring (6 events)
- Ventura River Macro-invertebrate Bioassessment Monitoring
- TMDL participation
- CASQA Participation
- Santa Clara River Enhancement and Management Plan (SCREMP) Participation
- Calleguas Creek Watershed Management Plan Participation
- Southern California Coastal Water Research Project (SCCWRP) Participation
- Renewal of the Hillside Erosion Control Ordinance (HECO Program)
- Integrated Regional Water Management Plan (IRWMP) Participation

### 1.3 Effectiveness Assessment Strategy

The SMP recognizes a number of separate, but nonetheless related, water quality planning processes. These processes are countywide, jurisdictional and watershed based water quality management tools. Each process is iterative and incorporates phases of assessment to determine whether programmatic goals are being achieved.

#### 1.3.1 *Measurable Goals*

Measurable goals are a primary implementation tool written into the SMP. They are described by USEPA as BMP design objectives or goals that quantify the progress of program implementation and the performance of BMPs. They are objective markers or milestones that track the progress of BMPs in reducing pollutants to the Maximum Extent Practicable (MEP).

Measurable goals may be categorized in a variety of ways. In this instance, two categories are acknowledged: (1) the shorter-term confirmation of BMP implementation (Implementation or Process Measures, also termed Programmatic Indicators) and (2) the longer-term verification of environmental improvement (Validation or Results Measures, typically actual indicators of environmental change). In essence, the categorization of measures reflects two basic assessment questions.

- Are program elements being implemented correctly?
- Are desired outcomes (i.e. environmental improvements) being achieved?

Programmatic and environmental indicators may be constructed into a hierarchical relationship (See **Table 1.1 Hierarchy of Indicators**). This relationship helps to illustrate the fact that environmental outcomes rest on, or follow from, jurisdictional program implementation. Moreover, it points to the reality that scientific evidence of changing ecosystem quality will follow program implementation and should not be expected to be evident concurrently.

## SECTION 1.0 INTRODUCTION

**Table 1.1 Hierarchy of Indicators (USEPA, 1998)**

Environmental Indicators (Direct Measures)	6	Ultimate Impacts: Ecological Health Welfare
	5	Body Burden/Uptake
	4	Ambient Conditions
	3	Discharge/Emission
Programmatic Indicators (Indirect Measures)	2	Actions by Regulated Community
	1	Actions by Regulators

In the context of evaluating stormwater management program implementation, the distinction is also often made between *direct* and *indirect* measures. Direct measures are typically environmental indicators such as determinations of water quality. Indirect measures are essentially non-water quality indicators, such as reductions in pesticide use, from which improvements in water quality can be inferred.

A number of Performance Measures have been identified based upon the following selection criteria:

- Relevance: It has demonstrable relation to the strategy and objectives
- Reliability: The measure will help identify the strengths and weakness of the program area/process
- Clarity of Naming System: It is readily understandable by its name; and
- Availability of Data: The data are available at reasonable cost

These Performance Measures comprise process and result (direct and indirect) measures that will be used to highlight the progress of the Co-permittees in implementing water quality management, protection and enhancement requirements of the Permit. The Performance Measures are defined in the SMP and presented in **Table 1.2**

**Table 1.2 Performance Measures**

Program Element	Performance Measure	Process Measure	Result Measure	
			Indirect	Direct
Program Management	Participation in Management Committee	X		
	Participation in subcommittee meetings	X		
	Submittal of Co-permittee Self-Audit	X		
	Submittal of the Annual Report	X		
	Annually submittal of Co-permittee program evaluation results	X		
	Stormwater program budget updates	X		
	Review and adopt or amend legal authority to implement stormwater management plan	X		
Public Outreach	Identify program contact person(s)	X		
	Catch basin stenciling	X		

## SECTION 1.0 INTRODUCTION

**Table 1.2 Performance Measures**

Program Element	Performance Measure	Process Measure	Result Measure	
			Indirect	Direct
	Signs prohibiting illegal dumping at designated public access points to creeks and channels		X	
	Educational activities and participation in countywide events		X	
	Household Hazardous Waste Collected		X	
	Used Oil Collected		X	
	Educational material distribution			
	No. of outreach contacts	X		
Industrial/Commercial Businesses	No. of site education/inspections to automotive, food service and other targeted businesses	X		
	No. of follow up inspections	X		
	No. of additional businesses targeted based on Pollutants of Concern (POCs) as appropriate	X		
	No. of facilities identified as potentially subject to the General Industrial Permit given educational materials	X		
	No. of targeted employees trained	X		
Planning & Land Development	No. of Projects reviewed and conditioned for stormwater	X		
	Area to which BMPs have been applied		X	
	No. of BMPs implemented		X	
	Stormwater quality conditions included in environmental checklists, initial studies or EIRs required by CEQA and/or NEPA	X		
	Watershed and stormwater management considerations in Co-permittees' General Plan	X		
	Technical Guidance Manual	X		
	Environmentally Sensitive Areas	X		
	Development Community Outreach		X	
	No. of targeted employees trained	X		
Construction Sites	No. of SWPCPs/SWPPPs developed and implemented		X	
	No. of NOIs filed with the State		X	
	No. of sites inspected	X		
	No. of follow up inspections	X		
	No. of enforcement actions	X		
	Construction Community Outreach		X	
	No. of targeted employees trained	X		
Municipal Activities	Co-permittee corporate yard SWPCP		X	
	Drainage System Operation and Maintenance		X	
	Roadway Operation and Maintenance		X	
	No. of Facilities Inspected	X		
	Solid Waste Collected		X	

## SECTION 1.0 INTRODUCTION

**Table 1.2 Performance Measures**

Program Element	Performance Measure	Process Measure	Result Measure	
			Indirect	Direct
	Pesticide, Herbicide and Fertilizer Protocols		X	
	Reduction in Total Pesticide Application		X	
	Reduction in Total Fertilizer (Nitrogen) Application		X	
	Reduction in Total Fertilizer (Phosphorus) Application		X	
	No. of targeted employees trained	X		
Illicit Discharge/Illegal Connections	No. of complaints		X	
	No. of enforcement actions	X		
	Educational material distribution		X	
	No. of targeted employees trained	X		
Water Quality	Monitoring			X

### 1.3.2 Effectiveness Assessment

Effectiveness assessment requires the initial establishment of a set of baseline conditions. Thereafter effectiveness can be evaluated by comparisons of successive years of indicator information against the baseline data. Where the period of evaluation is characterized by the implementation of new program requirements, determinations of program effectiveness will initially be limited to confirmation of program implementation. Indeed, it must be recognized that direct measures of program effectiveness may not be available within the terms of the Second Term Permit. This challenge arises because:

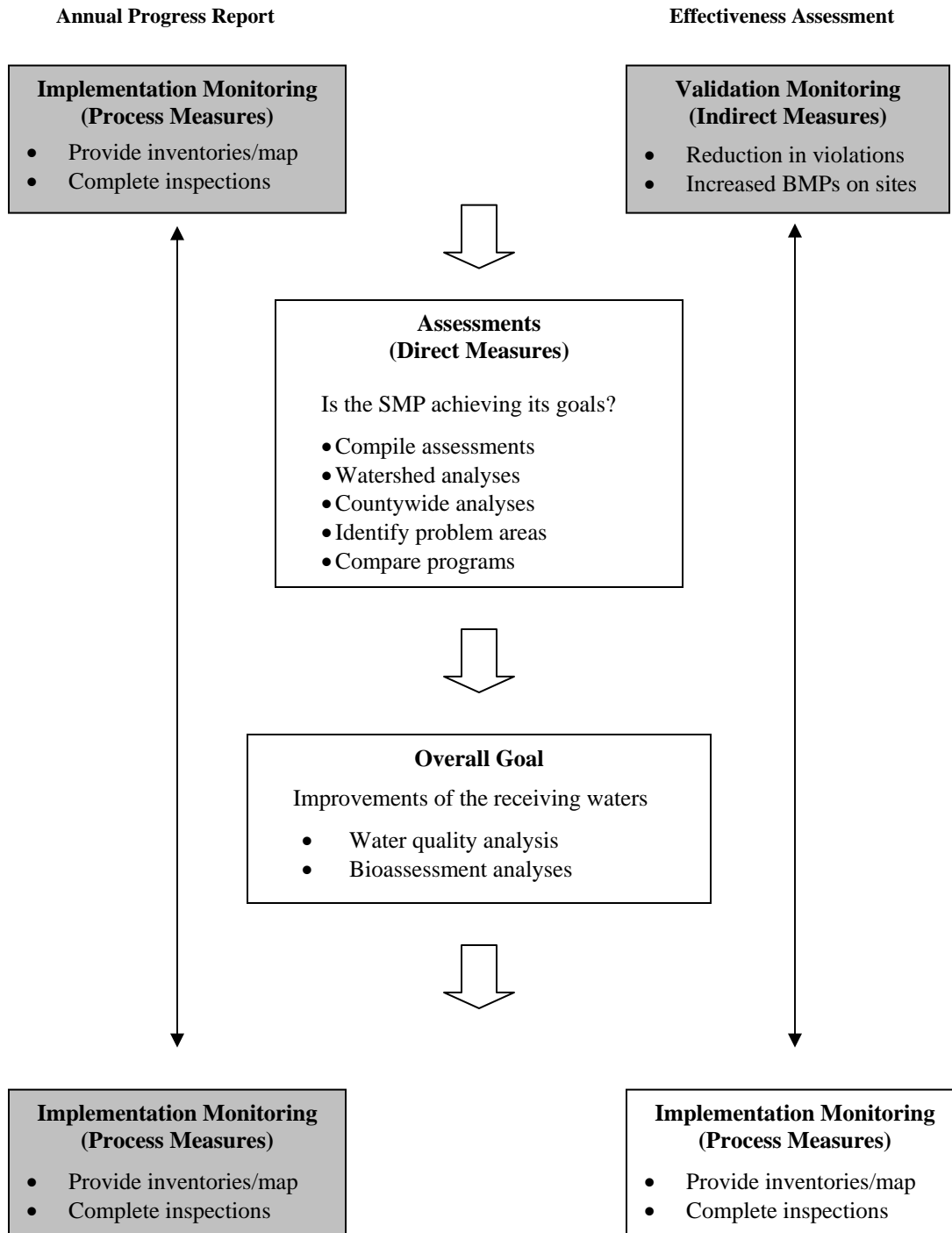
- Baseline water quality conditions are not readily established
- Water quality changes in response to program implementation are likely to be slow and may be marked by changes due to extreme weather events
- Establishing a link between receiving water condition and program activities is difficult at the watershed scale when program elements are being implemented incrementally with the development/redevelopment cycle

The evaluation of stormwater program effectiveness assessment is also conducted at two levels. At the jurisdictional or Co-permittee level, the assessment is conducted annually and focuses on program implementation. Inferences about the connection of management program elements to water quality improvements made in these assessments will be drawn from the assessment of programmatic indicators and indirect measures of progress. Further, the outcome of the assessment will be proposed revisions to the SMP. The Co-permittees' assessments are presented in **Sections 3.0 – 10.0**.

At the countywide program level, the major assessment is done principally on a five-year\* basis with an emphasis on using direct measures of progress. This assessment is used to update the review and revision of the SMP using information from the water quality-monitoring program. In the intervening periods, it is anticipated that this information will be used to direct SMP revision in intervening years as such information becomes available. The Annual Progress Report strategy is illustrated in **Figure 1.1**.



**Figure 1.1 Annual Progress Report Strategy**



## SECTION 2.0 PROGRAM MANAGEMENT

### 2.1 Responsibilities

The responsibilities of the Principal Co-permittee and Co-permittees are defined within the Permit, Implementation Agreement or as otherwise identified within separate funding agreements. These roles and responsibilities are outlined below.

#### 2.1.1 *Principal Co-permittee*

The role of the Principal Co-permittee is similar to the other Co-permittees with the addition of certain overall programmatic and management responsibilities. These responsibilities include the following:

- Coordinate Permit activities;
- Establish uniform data submittal format;
- Set time schedules;
- Prepare regulatory reports;
- Forward information to the Co-permittees;
- Arrange for public review;
- Secure services of consultants as necessary;
- Implement activities of common interest;
- Develop/prepare/generate all materials and data common to all Co-permittees;
- Update Co-permittees on RWQCB and US Environmental Protection Agency (USEPA) regulations;
- Convene all Management Committee and Subcommittee meetings;
- Manage the countywide educational program; and
- Manage the countywide stormwater quality monitoring program

*Note:* The Principal Co-permittee has *no regulatory authority* over the Co-permittees.

#### 2.1.2 *Co-permittees*

Each Co-permittee is responsible for implementing the NPDES Stormwater Program within their jurisdiction. The main responsibility of each Co-permittee includes:

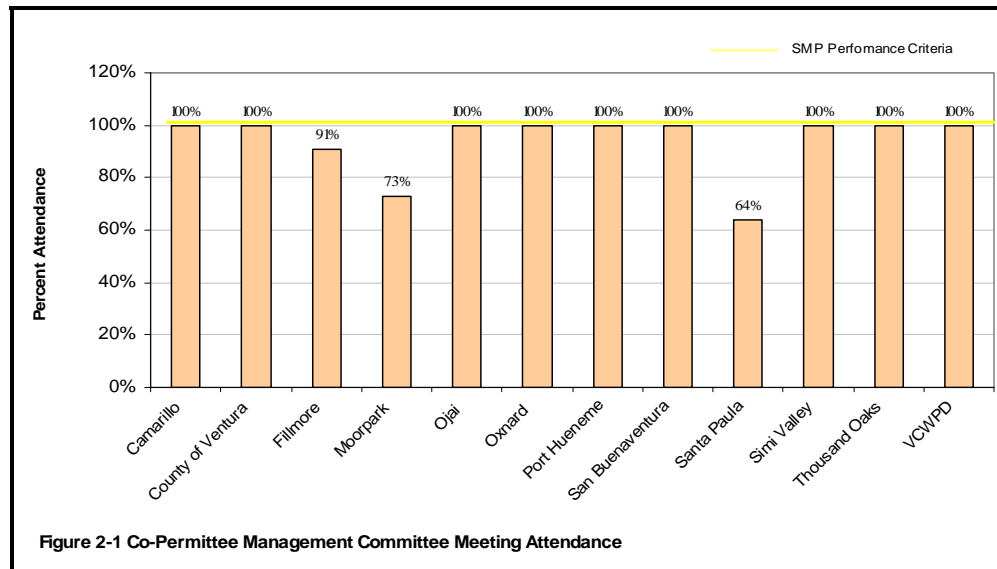
- Review, approve and comment on budgets, plans, strategies, management programs and monitoring programs developed by the Principal Co-permittee or any subcommittee;
- Implement the various stormwater management programs outlined in the Permit and the Stormwater Management Plan (SMP) within its jurisdiction;
- Establish and maintain adequate legal authority;
- Take appropriate enforcement actions as necessary within its jurisdictions to ensure compliance with applicable ordinances;
- Coordinate among internal departments and agencies, as appropriate, to facilitate the implementation of the Permit and the SMP;
- Respond to/or arrange for response to emergency situations, such as accidental spills, leaks, illicit discharges/illegal connections, etc., to prevent or reduce the discharge of pollutants to the storm drain systems and waters of the U.S. within its jurisdiction;
- Conduct inspections of and perform maintenance on municipal infrastructure within its jurisdiction;
- Conduct and coordinate any surveys and source identification studies necessary to identify pollutant sources and drainage areas;
- Participate in the Management Committee meetings and any subcommittee meetings as outlined in the SMP; and
- Prepare and submit all reports or requests of information to the Principal Co-permittee in a timely fashion

## SECTION 2.0 PROGRAM MANAGEMENT

### 2.2 Management Activities

#### 2.2.1 Management Committee

The NPDES Management Committee is the Principal forum for directing the Program's development and implementation. This Committee is attended by senior staff from all Co-permittee agencies and meets monthly to assure Program continuity. In addition, this committee periodically evaluates the need to create ad hoc committees or workgroups as required in order to accomplish the objectives of the NPDES Stormwater Program. Participation in the NPDES Management Committee is a specific requirement of the Permit. Co-permittee participation in the NPDES Management Committee is noted in **Figure 2.1**.



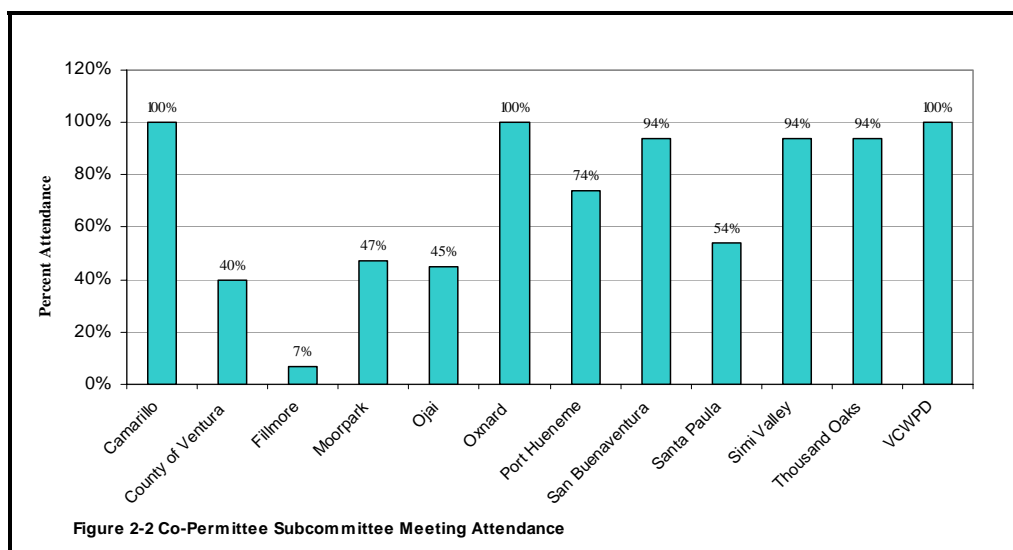
#### 2.2.2 Subcommittees/Work Groups

The Subcommittee/Work Groups, which are tasked principally with program material responsibilities are as follows:

- Residential/Public Outreach Subcommittee:  
Purpose: To help provide regional consistency and oversight for the stormwater public education program efforts.
- Business and Illicit Discharge Control Subcommittee  
Purpose: To oversee the development of the model industrial/commercial and illicit discharge/illegal connections programs.
- Planning and Land Development Subcommittee  
Purpose: To help provide regional consistency and oversight for the review and conditioning of new development and redevelopment projects.
- Construction Subcommittee  
Purpose: To oversee the development of model new development and construction programs.
- Public Infrastructure Subcommittee  
Purpose: To oversee the development of the model municipal activities program and integrate pesticide management, pesticide and fertilizer programs.

## SECTION 2.0 PROGRAM MANAGEMENT

Co-permittee participation in Subcommittees is noted in **Figure 2.2**.



### 2.2.3 Other Regional Committees/Work Groups

Many of the Co-permittees additionally participate in various watershed management advisory groups. These groups include: the Santa Clara River Enhancement and Management Committee, the Calleguas Creek Watershed Management Committee, the Matilija Dam Ecosystem Restoration Study, the Channel Islands Beach Park Action Plan for Improving Water Quality, the Malibu Creek Watershed Management Committee, and the Steelhead Restoration and Recovery Plan. These watershed groups focus their activities and discussions on watershed specific concerns such as water quality, habitat restoration and flood control, as well as short, medium and long-term solutions.

### 2.2.4 Management Framework – Program Implementation

In addition to the countywide and watershed management framework for program development, the Co-permittees at a jurisdiction level have formally identified which departments have responsibility for implementation of each program elements within their jurisdictions.

## 2.3 Legal Authority

Although adequate legal authority existed for most potential pollutant discharges at the inception of the stormwater program, in 1994, the Co-permittees determined that a Model Stormwater Quality Ordinance should be developed to provide a more uniform countywide approach and to provide a legal underpinning to the entire Ventura Countywide NPDES Stormwater Program.

Subsequently, all of the Co-permittees adopted largely similar versions of the model Stormwater Quality Ordinance. In addition, each Co-permittee has designated Authorized Inspector(s) responsible for enforcing the Ordinance. The Authorized Inspector(s) is the person designated to investigate compliance with, detect violations of and/or take actions pursuant to the Ordinance.

The detection, elimination and enforcement activities undertaken by the Co-permittees during 2005/06 are described further in **Section 8**. In addition to prohibiting un-permitted discharges, the Stormwater Quality Ordinance in conjunction with the SQUIMP also provides for requiring BMPs in new development and significant redevelopment. A Stormwater Quality Ordinance has been adopted in each Co-permittees' jurisdictions as indicated in **Table 2.1**.

## SECTION 2.0 PROGRAM MANAGEMENT

Table 2-1		
Ordinance Adoption Dates		
Co-permittee	Adopted Date	Amendment Date
Camarillo	3/25/1998	
County of Ventura	7/22/1997	
Fillmore	12/27/1998	
Moorpark	12/3/1997	
Ojai	2/9/1999	
Oxnard	3/24/1998	
Port Hueneme	4/1/1998	2/1/2001
San Buenaventura	1/11/1999	
Santa Paula	11/16/1998	
Simi Valley	7/23/2001	4/22/2002
Thousand Oaks	9/14/1999	

### 2.4 Watershed Protection Stormwater Program Representation

The Principal Co-permittee represents the Co-permittees participating in the following organizations and associations:

#### 2.4.1 *California Association for Stormwater Agencies (CASQA)*

The California Association of Stormwater Quality Agencies (previously California Storm Water Quality Task Force) serves as advisory body to the State Water Resources Control Board (SWRCB) on stormwater quality program issues. CASQA is primarily comprised of agencies, organizations, businesses and individuals responsible for and/or interested in the implementation of municipal stormwater management programs in California. Since its inception in 1989, CASQA has evolved into the leading organization in California dealing with stormwater quality issues.

#### 2.4.2 *Southern California Coastal Water Research Project (SCCWRP)*

The Southern California Coastal Water Research Project (SCCWRP) is a joint powers agency focusing on marine environmental research. SCCWRP's mission is to gather the necessary scientific information so that member agencies can effectively and cost-efficiently protect the Southern California marine environment. In addition, SCCWRP's mission is to ensure that the data it collects and synthesizes effectively reaches decision-makers, scientists and the public.

#### 2.4.3 *California Coalition for Clean Water (CCCW)*

The California Coalition for Clean Water (CCCW) is an alliance of local governments and public agencies, labor, agriculture, business, housing and development interests working together towards the development and implementation of water quality standards that protect water quality while balancing economic and social needs of local communities and the State. CCCW's mission is to assist the California Regional Water Quality Control Boards and SWRCB to adopt and implement sound water quality standards that reflect the intent and spirit of state and federal clean water laws.

#### 2.4.4 *National and Global Organizations*

As Principal co-permittee, the Watershed Protection District (District) participated jointly with SCCWRP and various other federal and international organizations such as the Society of

## SECTION 2.0 PROGRAM MANAGEMENT

Environmental Toxicology and Chemistry (SETAC). SETAC is a nonprofit, worldwide professional society comprised of individuals and institutions engaged in the study, analysis, and solution of environmental problems. SETAC's mission is to support the development of principles and practices for protection, enhancement and management of sustainable environmental quality and ecosystem integrity.

SETAC promotes the advancement and application of scientific research related to contaminants and other stressors in the environment, education in the environmental sciences, and the use of science in environmental policy and decision-making.

### 2.4.5 *Southern California Agencies*

Beginning in 2003, and continuing through 2005 the District began participating in the Storm Water Advisory Team (SWAT) meetings. SWAT was created by stormwater-regulated agencies who believed that coordination amongst the regulated community would be beneficial to not only providing an unified voice to the Regional Board but would also encourage regional consistency in pollution prevention efforts. Meetings are held to discussions various issues such as TMDL development and progress, permit negotiations, and regional monitoring opportunities.

### 2.4.6 *Local Involvement*

Watershed Protection District staff participates in various watershed-specific local subcommittees and groups that are focused on water quality and TMDLs. For example, staff regularly attends Calleguas Creek water quality subcommittee meetings and is involved in developing appropriate methods for monitoring water quality. Similarly, in the Malibu Creek watershed, staff provides technical expertise for the water quality monitoring technical advisory committee, reference water quality study workgroup, and bacteria compliance monitoring workgroup.

## 2.5 Fiscal Analysis

This Section presents a summary of the costs incurred by the Co-permittees in developing, implementing and maintaining programs in order to comply with permit requirements and includes information on the funding sources used by the Co-permittees. The total cost to each Co-permittee is the sum of *shared* costs and *individual* costs.

### 2.5.6 *Total Program Costs for Permit year 2005/06*

In 2005/06 the total cost of the activities undertaken by the Co-permittees implementing the stormwater program within their jurisdictions are estimated to be \$15,429,018. This total compares to \$14,205,276 in the 2004/05 reporting period. In 2006/07, the total cost of the activities to be undertaken by the Co-permittees implementing the countywide stormwater program within their jurisdictions is estimated to be \$19,158,359.

### 2.5.2 *Fiscal Resources*

Each Co-permittee prepares a stormwater budget annually and allocates resources to be applied to the stormwater program. **Table 2.2** presents the projected stormwater budget for each Co-permittee for Fiscal Year 2006/07 and **Figure 2.4** presents the countywide budget obtained through the Benefit Assessment Program and other sources for the stormwater budget. As expected, there is some variability between the stormwater program budgets reported by the Co-permittees. This variability is due in part to the accounting practices utilized by each Co-permittee and the allocation of activity costs amongst programs implemented by each Co-permittee.

## SECTION 2.0 PROGRAM MANAGEMENT

**Table 2.2 Agency Annual Budget Update for Stormwater Management Program - Fiscal Year 2005-2006**

Item	Co-Permittee													
	Camarillo	County of Ventura	Fillmore	Moorpark	Ojai	Oxnard	Port Hueneme	San Buenaventura	Santa Paula*	Simi Valley	Thousand Oaks	VCWPD	Principal Co-Permittee	
I. Program Management	\$209,877	\$150,000	\$24,159	\$47,345	\$12,000	\$260,523	\$25,000	\$142,339	\$23,072	\$192,958	\$133,171	\$93,850	\$486,008	
II. Illicit Connections/Illicit Discharge	\$41,640	\$26,190	\$2,500	\$20,600	\$3,000	\$85,058	\$9,000	\$86,969	\$74,382	\$233,159	\$97,850	\$4,512	\$7,469	
III. Development Planning/Development Construction	\$32,685	\$30,000	\$40,479	\$150,000	\$3,000	\$91,404	\$5,000	\$71,059	\$9,823	\$27,922	\$50,094	\$5,520	\$9,762	
IV. Construction Inspection Activities	\$66,611	\$20,300	\$140,135	\$100,000	\$5,000	\$180,894	\$5,000	\$169,828	\$7,694	\$212,829	\$112,584	\$13,898	\$5,602	
V. Public Agency Activities (PA)														
V.a. PA Operations and Maintenance	\$128,791	\$104,900	\$0	\$26,700	\$40,800	\$467,809	\$30,000	\$135,488	\$139,774	\$371,312	\$158,685	\$2,869,570	\$6,101	
V.b. PA Municipal Street Sweeping	\$270,000	\$45,403	\$29,215	\$104,000	\$48,000	\$525,000	\$63,600	\$484,405	\$134,289	\$392,272	\$584,088	NA <sup>1</sup>	NA <sup>2</sup>	
V.c. PA Fleet and Public Agency Facilities (Corporate Yards)	\$4,587	\$35,526	\$0	\$2,060	\$2,000	\$33,581	\$5,000	\$9,977	\$3,614	\$849,435	\$2,925	\$55,373	\$0	
V.d. PA Landscape and Recreational Facilities	\$12,771	\$6,120	\$108,308	\$1,030	\$35,000	\$8,179	\$354,700	\$0	\$1,901	\$1,205	\$1,500	NA <sup>1</sup>	NA <sup>2</sup>	
VI. Capital Costs	\$107,500	\$5,000	\$0	\$30,000	\$0	\$390,000	\$5,000	\$0	\$0	\$51,558	\$0	\$0	\$0	
VII. Public Information and Participation	\$14,700	\$10,000	\$512	\$7,315	\$2,000	\$17,294	\$5,000	\$53,147	\$3,856	\$45,464	\$43,655	\$0	\$302,693	
VIII. Monitoring Program	\$0	\$0	\$15,400	\$0	\$0	\$29,144	\$0	\$8,000	\$0	\$4,064	\$0	\$0	\$697,203	
IX. Other	\$37,657	\$480,539	\$0	\$0	\$0	\$185,998	\$0	\$16,016	\$0	\$792,163	\$0	\$0	\$0	
Totals	\$926,819	\$913,978	\$360,708	\$489,050	\$150,800	\$2,274,884	\$507,300	\$1,177,228	\$398,405	\$3,174,341	\$1,184,552	\$3,042,733	\$1,514,838	
Percent Benefit Assessment	16%	8%	5%	0%	20%	25%	6%	22%	0%	3%	35%	0%	95%	

\* Note that Santa Paula did not submit Budget annual report data this reporting year.

## SECTION 2.0 PROGRAM MANAGEMENT

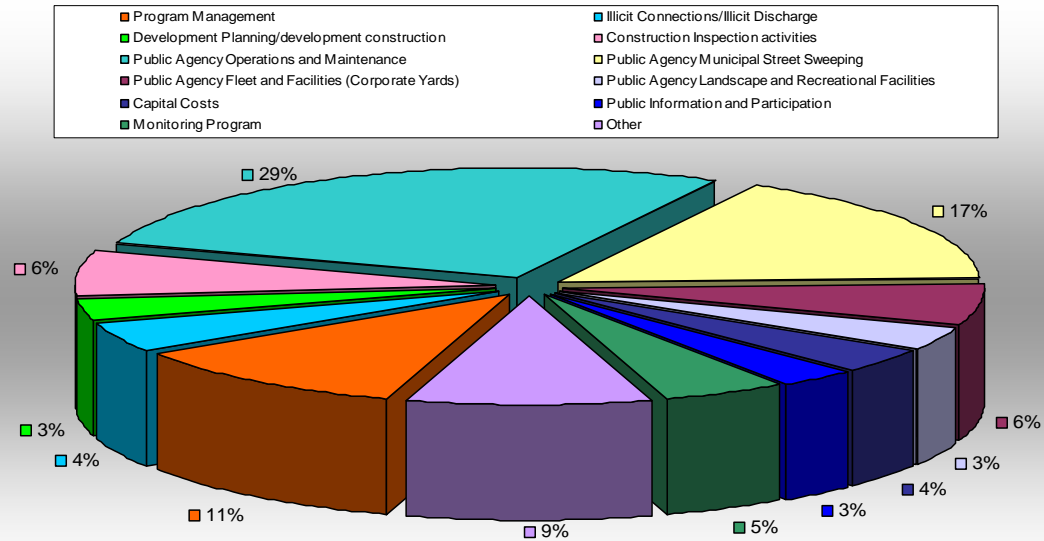


Figure 2-3 Countywide FY 2006-2007 Stormwater Program Budget

In addition, the Co-permittees vary significantly in their jurisdictional area and population (**Table 2.3**), which may explain some differences in resources dedicated to various program areas. Yet, a review of the annual budgets produces some nominal findings. In general, Co-permittees with the largest populations tend to have budgets greater than the budgets reported by Co-permittees with the smallest populations. However, within the group of cities with the largest populations and within the group with the smallest populations, there is still variation in program budgets.

Co-permittee	Population	Area (Sq. Mi.)
Camarillo	61,746	19.6
County of Ventura	46,328	10.7
Fillmore	15,128	2.7
Moorpark	34,887	19.2
Ojai	8,097	4.4
Oxnard	186,122	25.3
Port Hueneme	22,137	4.3
San Buenaventura	104,952	21.7
Santa Paula	29,121	4.6
Simi Valley	118,793	39.4
Thousand Oaks	126,081	57.2



## SECTION 2.0 PROGRAM MANAGEMENT

### 2.5.3 *Funding Sources*

Funding sources to implement the stormwater program, including pre-existing programs that meet permit objectives, include both general and specific funds, taxes, maintenance and user fees and grants. Volunteer groups like Surfrider Foundation implement some stormwater program elements and thus no fiscal value was attributed to these contributions.

The funding sources used by the Co-permittees include: Watershed Protection District Benefit Assessment Program, General Fund, Utility Tax, Separate Tax, Gas Tax, Special District Fund, Others (Sanitation Fee, Fleet Maintenance, Community Services District, Water Fund, Grants and Used Oil Recycling Grants).

## SECTION 3.0 PROGRAM FOR RESIDENTS

### 3.1 Program Development

Public Education is an essential part of a municipal stormwater program. Developing programs to increase the awareness of and involve the public can be an effective method for controlling stormwater pollution. Emphasizing the relevant impact of stormwater pollution to each particular target audience increases the likelihood the messages will be noticed and the audience will support and participate in program implementation. When a community has a clear idea where the pollution comes from, how it can affect them and what they can do to prevent those affects, it will be more likely to support and participate in program implementation.

In an effort to plan for anticipated additional public education permit requirements from the forthcoming third term permit, the Co-permittees significantly re-tooled the past years' outreach efforts. In early 2005, the Co-permittees selected a public relations and marketing firm to help the Co-permittees integrate public awareness survey results and apply relevant findings into a comprehensive countywide outreach message and direction. The Co-permittees' desire is to impact the public's immediate awareness of stormwater pollution, laying a foundation that can help establish an pro-environmental ethic with Ventura County residents. This in turn will serve to prevent stormwater pollution at its most effectual point, at its source.

The Co-permittees envision building upon the many successes of the current program and refining those portions having little impact or utility. As a starting point for these discussions, early in the permit year, the Co-permittees identified those key elements crucial to establishing a successful outreach campaign. These elements include:

- Watershed Awareness
- Public Awareness Surveys
- Identification of general and specific goals of the program
- Identification of target audiences and key messages for those audiences
- Development of program strategies and plan overview
- Pollution prevention program using a unified "brand name"
- Development of a watershed based outreach program
- Identification of opportunities to reach out to regulatory agencies
- Development of a methodology for public awareness surveys
- Development of a model public education/public participation strategy for localization at the Co--permittee level
- Development and implementation of a school education outreach program
- Development and implementation of restaurant/food facilities outreach program materials
- Development and implementation of automotive facilities outreach program materials
- Development and implementation of industrial facilities outreach program materials

### 3.2 Countywide Outreach Efforts

#### 3.2.1 *Community for a Clean Watershed*

The result of these efforts has yielded the *Community for a Clean Watershed*. The Community for a Clean Watershed public education program serves as an integral planning tool and presents an overall universal formula for developing and implementing various watershed-specific outreach campaigns. The formula can be applied to multi-year comprehensive outreach programs or can be utilized for Co-permittee specific outreach programs or short-targeted outreach activities in the coming years.

## SECTION 3.0 PROGRAM FOR RESIDENTS

Following are the four main elements of the Community for a Clean Watershed program:

- a) Countywide & Watershed-Based Public Education Program  
This element addresses the sources, pathways and impacts of stormwater pollution and provides common-sense BMPs that can be implemented to reduce pollutant discharges.
- b) Focus on watershed specific water quality problems  
This element enhances regional information to address specific urban water quality problems within a watershed such as bacteria levels in Ventura River and nutrients in the Santa Clara River watershed.
- c) Focus on particular constituents causing water quality problems  
This element addresses urban chemicals/materials of concern such as pesticides, fertilizers, automotive fluids, trash and debris, cleaners, solvents, paints, pool chemicals, household hazardous waste, sediment, etc. and provides BMP guidance for proper use, clean up and disposal.

To ensure that a consistent and coordinated effort is disseminated countywide, the Co-permittees are calculating that the Community for a Clean Watershed program will serve as an effective umbrella campaign, which will be periodically augmented and reinforced with local efforts to address specific needs, issues and requirements. This synergistic program is designed to move the public education program from a scattered approach of sporadic, disconnected efforts, to a consistent, comprehensive and coordinated approach that increases the odds of achieving program objectives.

The Co-permittees continue to implement their long-term coordinated, multi-media countywide municipal NPDES public education outreach campaign. The year's efforts included the following elements:

### 3.2.2 *Revision/Development of Countywide Public Education Materials*

The first goal was to review the current public countywide public education materials that have been developed and create a plan to identify and develop the additional materials necessary to communicate an effective overall pollution prevention message. Based on this review a prioritized list of materials to develop was created. The prioritization was based significantly on the materials already produced and in anticipation of potential future third term permit requirements. The materials developed during the reporting period include:

- "Watershed Protection Tips for Residents" - A Homeowner Brochure
- "Illicit Discharge Prevention for Business Owners" – A Business Brochure

### 3.2.3 *New Public Outreach Materials*

Newly created educational materials include: three 60-second television commercials, a public service announcement, various advertising artwork, posters, and four new print advertisements. All materials contain a common look and theme and are recognizable as consistent stormwater educational materials. At a minimum, all of the developed and revised program materials:

- Explain the concept of a watershed and how individual actions affect the overall water quality of the watershed in which they reside;
- Focus on specific pollution-causing behaviors and addressed them directly and individually, to increase the likelihood of changing those behaviors and reducing pollution;

## SECTION 3.0 PROGRAM FOR RESIDENTS

- Emphasize the relevant impact of stormwater pollution to the specific target audience;
- Include a positive alternative to pollution-causing behaviors;
- Tailor the personality, focus and depth of program messages appropriately for each audience and venue;
- Facilitate a local and countywide “branded identity” (theme and look); and
- Include the Community for a Clean Watershed logo.

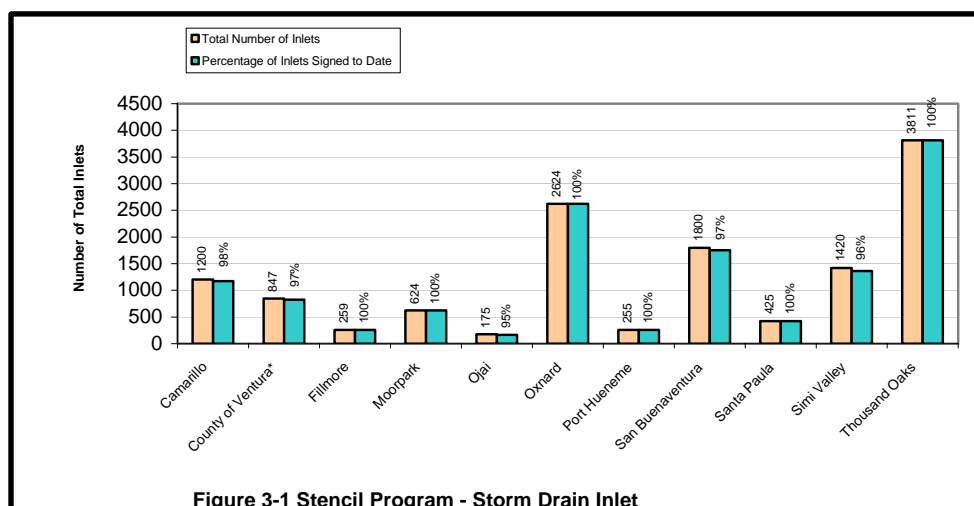
Additionally, all newly created materials are available both in English and in Spanish.

### 3.2.4 Public Reporting

Each Co-permittee has identified staff serving as the contact person(s) for public reporting of clogged catch basin inlets and illicit discharges/dumping. Designated staff is provided with relevant stormwater quality information, including program activities and preventative stormwater pollution control information. Contact information is updated as necessary and published in the government pages of the local phone book and other appropriate locations. In addition, this information is posted on the Program’s website at [www.vcstormwater.org](http://www.vcstormwater.org).

### 3.2.5 Curb Inlet Stenciling

As required by the Permit, most Co-permittees have completed labeling or marking the curb inlets to their entire storm drain system. During the reporting period, some Co-permittees maintained their inlet signs by reapplying stencils/markers as they wore out and applying stencils/markers to new inlets as they were installed. **Figure 3-1** depicts the progress the Co-permittees have made in their efforts to install and maintain their curb markers.



\* Number from last year's count. No updated values this permit year.

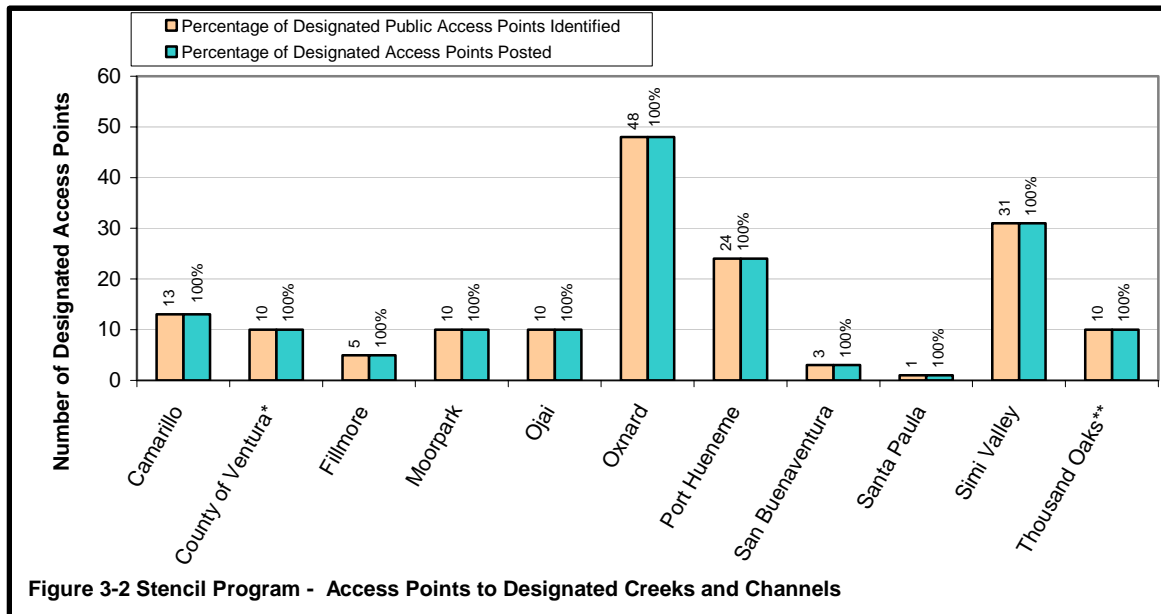
The percentage of inlets signed to date meets the performance criteria established in the SMP for all Co-permittees. Signs at curb inlets have varying useful lives due to the materials from which they are constructed (e.g., paint, thermoplastic), their position (e.g., on top of curb, on face of curb), and wear factors (e.g., traffic, street sweeping, sunlight). As a result, the Co-permittees have different programs to maintain curb inlet signage within their respective jurisdictions. Some Co-permittees replace a portion of their signs each year whereas others re-sign all inlets every few years. Regardless of the specific inlet signage practice, all Co-permittees understand the importance of signage to the education component of their program and are committed to installation and maintenance of signage that meets both the educational goal of the program as well as the 90% performance criteria set forth in the SMP.

## SECTION 3.0 PROGRAM FOR RESIDENTS

### 3.2.6 Access Points to Designated Creeks & Other Water Bodies

In addition to the Storm Drain Inlet Stenciling Program, the Co-permittees are required to designate appropriate access points to the creeks and channels within their jurisdiction for the placement of signs with prohibitive language to discourage illegal dumping. Each Co-permittee is responsible for designating the appropriate access points to creeks and channels within their jurisdiction, which requires some field verification and mapping. This program element also required in some cases, the cooperation between the City and special districts outside the City's jurisdiction.

**Figure 3-2** depicts the progress the Co-permittees have made in their efforts to post their signs at appropriate access points to creeks and channels. A review of Figure 3-2 shows that all the Co-permittees met the performance criteria that 90% of the designated public access points be posted with signs regarding the prohibition of illegal dumping.



\* No updated information on this task for this year

\*\* The designated public access areas to creeks within the City are under the jurisdiction of the Conejo Recreation and Parks District.

### 3.2.7 Development of Media Outreach Plan

In order to support the Community for a Clean Watershed program, the Co-permittees implemented a strategic media relations campaign to reach a selected target groups with sufficient frequency, measurably increasing their knowledge and changing their behavior. The media plan included the following criteria:

- Use targeted ad placement. Place print ads in sections or features that have a high probability of being read by the target audience;
- Take advantage of seasonal behaviors and activities. Schedule paid media and non-media activities to coincide with the seasonal nature of certain behaviors and activities associated with stormwater pollution;
- Use geographic targeting. Focus paid media and non-media activity in areas that have a particular relevance;
- Coordinate paid media and non-media activities to maximize their impact and effectiveness; and

## SECTION 3.0 PROGRAM FOR RESIDENTS

- Identify the expected number of impressions that may be achieved for each event.

In summary, the Community for a Clean Watershed media plan achieved a total of 6,442,372 countywide impressions. These are as follows:

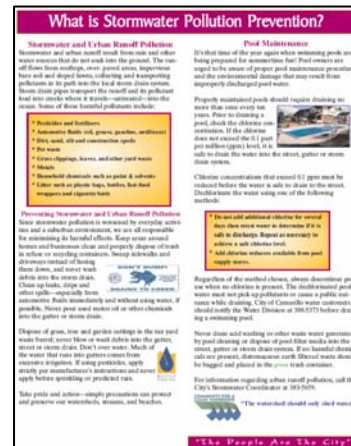
- Print Advertising - 947,152 Impressions
- Radio Advertising - 902,551 Impressions
- Television Advertising (local network and cable broadcasts) - 1,610,656 Impressions
- Outdoor Advertising (billboards, bus stops, mall kiosks) – 2,982,013 Impressions

Since the media outreach campaign targeted the general public and Ventura County has a population of approximately 750,000 people it was estimated that in order to be successful the campaign should make approximately 2.25 million impressions. This also correlates with the permit requirement to deliver a minimum of 2.1 million impressions within Ventura County. The campaign delivered more than *four times* the required amount and therefore was very effective.

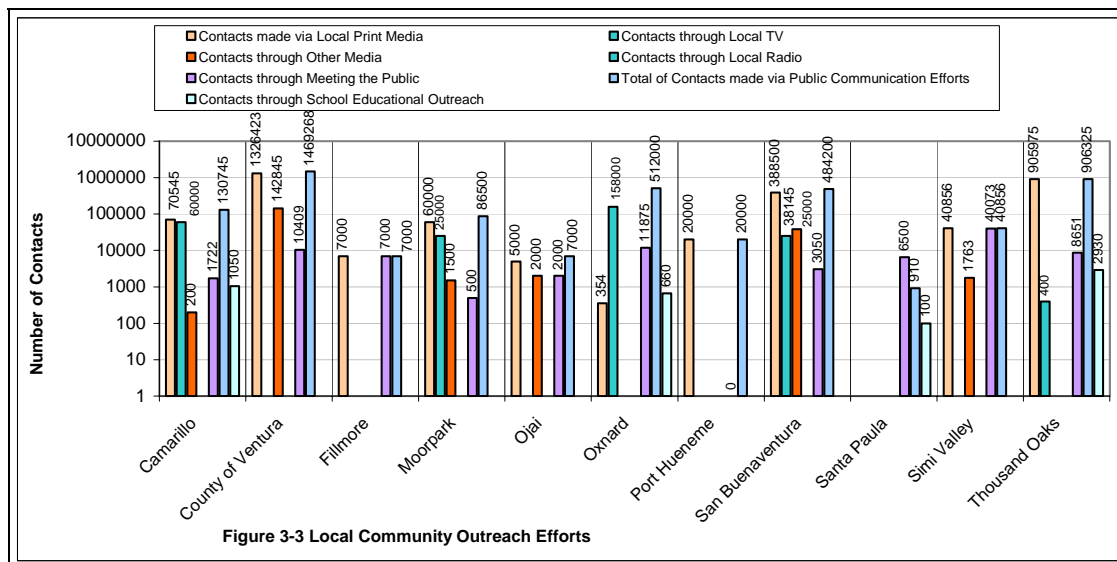
### 3.2.8 Local Community Outreach Efforts

Each of the Co-permittees organized community-oriented outreach events, training and other activities on stormwater quality within their jurisdiction. The Co-permittees emphasized the importance of using environmentally safe practices at home and work to prevent stormwater pollution. Outreach efforts included community newsletters, small group learning activities and other media to deliver a stormwater message that educates and informs the general public.

One such effort is demonstrated by the City of Camarillo. The city regularly publishes *City Scene*, a newsletter for City of Camarillo residents, providing local community and neighborhood focused information. In a recent edition, readers were provided city specific information how they could help prevent stormwater pollution from harming their community's watershed.

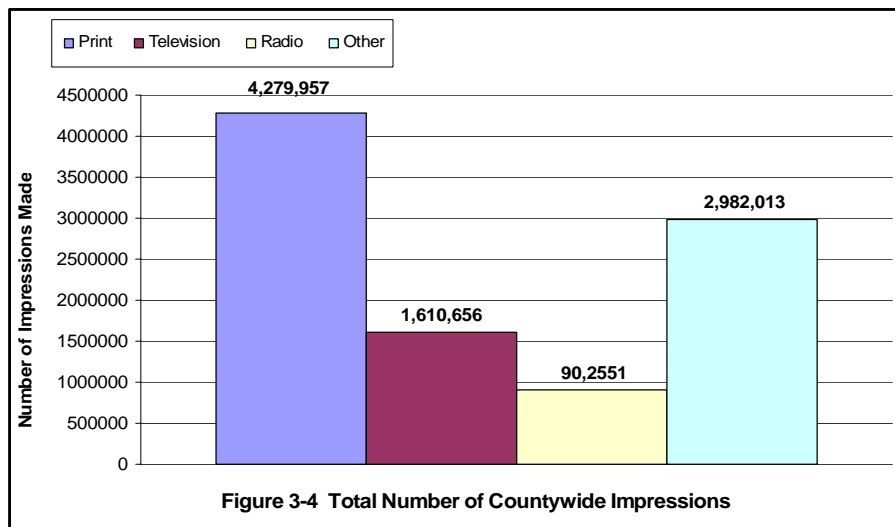


**Figure 3-3** indicates the number of educational contacts made by the Co-permittees at local community outreach events/activities during this reporting period.



## SECTION 3.0 PROGRAM FOR RESIDENTS

**Figure 3-4** shows the grand total of impressions created by *both* the media plan advertising campaign and the Co-permittees, totaling 10,218,956 impressions during the reporting period.



### 3.2.1 Public Awareness

In an effort to better understand the public's awareness regarding water quality issues, the Co-permittees have conducted several surveys over the past two years. These surveys incorporated a number of questions relating to issues such as: pesticide, herbicide and fertilizer use; sewer and storm drain system awareness; and pollution prevention ideas. This offers Co-permittees a real-time insight into public attitudes towards stormwater pollution prevention. Additionally, these results provide the Co-permittees with valuable data, critical in determining the efficacy of program efforts and resources.

In July 2006, VCWPD enlisted theAgency, a Camarillo based public relations and advertising firm, to conduct a study of public attitudes among residents of Ventura County regarding issues related to watershed awareness, stormwater quality, illicit discharges and storm drains. The goal of the study was to provide empirical data that would serve to measure the past years' direct future public outreach campaign efforts to increase public awareness of watershed and reduce storm drain pollution and stormwater quality issues. Specific objectives of the study included:

- Measure the public's recognition and acceptance of the Community for a Clean Watershed program's campaign and messages;
- Measure the current level of concern regarding pollution of local ocean, creek, lake and stream waters and compare with those from the 1996 survey;
- Explore attitudes about and knowledge of the stormwater system, which will provide information that can be compared with similar information from 1996 and then used as a future baseline for measuring the effectiveness of stormwater education efforts in Ventura County;
- Identify actions that residents would be willing to take to help reduce stormwater pollution ;
- Identify key messages, and means for delivering those messages, that will help encourage people to prevent stormwater pollution; and
- Identify particular target audiences for this public education effort.

## SECTION 3.0 PROGRAM FOR RESIDENTS

For this on-line, computer based survey, random samples of 330 Ventura County adults were interviewed the week of August 7, 2006. Study participants had to be Ventura County residents, age 18 and over, and involved in the decision making for their household. Additionally, respondents were recruited according to specific demographic criteria used in previous focus group recruiting, mirroring the U.S. Census profile of Ventura County.

The margin of error was statistically valid to the 95% level of confidence. The results were compared to those found in a previous research study conducted in June of 2006, and compared to a 2005 comprehensive focus group study and random surveys taken in April 2005 and December 1996. The survey resulted in two key findings:

- Respondents were very clear that it is illegal to dump into storm drains, with statements that related *directly back to recent public outreach messaging (Community for a Clean Watershed campaign efforts)*
- One out of five respondents had seen or heard something regarding the Community for a Clean Watershed and watershed pollution, yielding an awareness level of 20% - a *very high percentage for the first year of any advertising campaign!*

In total, the survey results indicated Ventura County residents understand the importance of pollution prevention measures. In fact, the number of residents performing preventative activities has more than doubled since 1996, highlighting the high effectiveness of the current Community for a Clean Watershed campaign.

### 3.3 Five Year Permit Summary of Program Accomplishments

#### 3.3.1 Coastal Cleanup Day

California Coastal Cleanup Day is a premier volunteer event focused on the cleanup of beaches and creeks throughout the country. On this day, more than 50,000 volunteers turn out to over 700 cleanup sites statewide to conduct what has been hailed by the Guinness Book of World Records as “the largest garbage collection.” Since the program started in 1985, over 552,000 Californians have removed more than 8.5 million pounds of debris from our state’s shorelines and coast. When combined with the International Coastal Cleanup organized by the Ocean Conservancy and taking place on the same day, California Coastal Cleanup Day is one of the largest volunteer events of the year.

Coastal Cleanup Day is also the highlight of the California Coastal Commission’s year round “Adopt-a-Beach” program and takes place every year on the third Saturday of September. Coming at the end of the summer beach season and right near the start of the school year, Coastal Cleanup Day is a great way for families, students, service groups and neighbors to join together, take care of our fragile marine environment, show community support for our shared natural resources, learn about the impacts of marine debris and how we can prevent them.

Beginning in 1996, the Co-permittees have participated in this extremely successful statewide Coastal Cleanup Day. This annual event has been an excellent opportunity for volunteers to help clean and beautify local beaches and inland waterways. Over the past ten years, the Co-permittees have worked hard to encourage more volunteer participation in addition to targeting additional beach and inland areas for cleanup. This volunteer program continues to be a huge success, not only in cleaning local sensitive environments but also in creating a heightened awareness on proper trash disposal and its benefit to stormwater quality. This permit year, approximately 2,000 volunteers removed over 25,000 pounds of trash and recyclables from 47 miles of inland and coastal shorelines in Ventura County.



## SECTION 3.0 PROGRAM FOR RESIDENTS

### 3.3.2 *Pet Waste Program*

The Pet Waste Program was developed and implemented in 1999 by the Co-permittees to educate pet owners on bacterial contamination from pet waste to our ocean and streams. The first year of the program, the Co-permittees installed 75 dispensers and ordered 170,400 pet waste bags to dispose of pet waste in public areas. This program has been a huge success with the demand for more dispensers and pet waste bags growing annually.

### 3.3.3 *Solid Waste Collection/Recycling*

The Co-permittees have solid waste collection programs for public, residential, commercial and industrial areas. The Co-permittees recognize the public needs education and encouragement to properly dispose of their trash in order to understand that the storm drains are not waste receptacles. The Co-permittees conduct education outreach through a variety of methods including community newsletters, radio and television public service announcements, brochures and utility bill inserts. Many Co-permittees have combined recycling, litter control and hazardous materials disposal messages.

### 3.3.4 *Mobile Satellite City Hall Event*

The City of Oxnard continues to host their Helen Putnam award winning Mobile Satellite City Hall events in centralized city locations in an ongoing effort to educate a greater number of local residents in stormwater pollution prevention methods and in the importance of taking ownership of their local environment. These events provide the Oxnard residents with the opportunity to voice their water quality concerns to the city's department/division appointed representatives, the citywide enhancement staff, city council members, and neighborhood council executive boards. This innovative approach of providing educational outreach to the general public has been extremely successful in promoting a positive environmental awareness, sound stormwater pollution prevention practices, and illicit discharge identification/abatement throughout the city's targeted demographic areas.



## SECTION 4.0 PROGRAM FOR INDUSTRIAL/COMMERCIAL BUSINESSES

The Co-permittees attend a Business and Illicit Discharge/Illegal Connection Subcommittee meeting to coordinate and implement a comprehensive program to control pollutants in stormwater discharges to municipal systems from targeted commercial facilities. The Subcommittee is comprised of representatives of the Co-permittee cities and other municipal staff from various departments (Environmental Health, Environmental Services and Wastewater Services). Each Co-permittee has implemented an Industrial/Commercial Business Program, which includes the following components to meet the goals and objectives of the program:

- Tracking Critical Sources
- Inspecting Critical Sources
- Ensuring compliance at industrial and commercial facilities that are critical sources of pollutants in stormwater

### 4.1 Program Implementation

The Industrial/Commercial Business Program provides a framework and a process for each Co-permittee to develop its own commercial/industrial program consistent with Permit and SMP requirements. Key program components include:

- Pollution Prevention
- Source Identification and Facility Inventory
- Prioritization for Inspection
- Implementation of Best Management Practices
- Site Education/Inspections
- Enforcement
- Non-compliant Industrial Site Identification and Regional Board Notification Procedures
- Program Reporting

#### 4.1.1 *Business Community Site Education/Inspection Program*

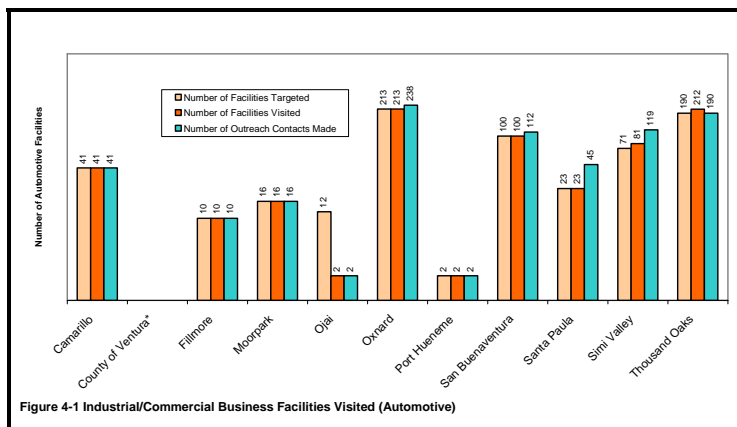
The goal of the site education/inspection program is to confirm that stormwater Best Management Practices (BMPs) are effectively implemented in compliance with state law, county and municipal ordinances and the SQUIMP. During site visits, the Co-permittees:

- Consulted with a representative of the facility to explain applicable stormwater regulations;
- Distributed and discussed applicable BMP and educational materials; and
- Conducted a site walk-through to inspect for evidence of illicit discharges, prevention BMPs, and stormwater quality management education programs for employees.

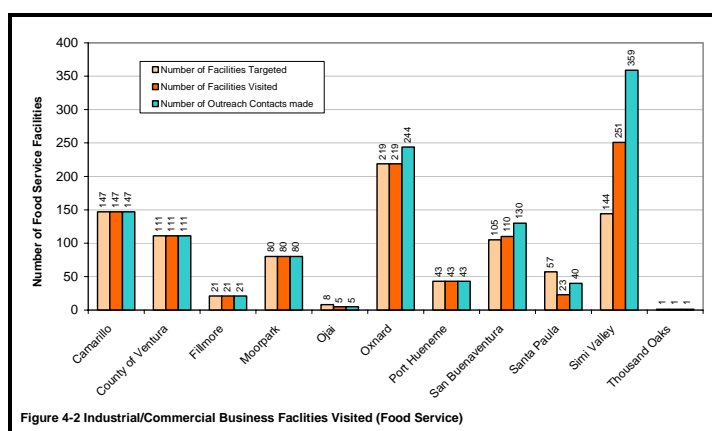
**Figure 4-1** shows the total number of targeted automotive service facilities and the total number visited within each Co-permittee's jurisdiction. **Figure 4-2** shows the total number of food service facilities targeted and the total number visited within each Co-permittee's jurisdiction.

Upon examining Figure 4-1, it becomes clear that in some cases the number of facilities visited exceeded the number of targeted for inspection. This situation may result from multiple site visits to some facilities, which could occur for a number of reasons, including deliberate multiple visits and multiple visits resulting from changes in facility ownership. Note that the data reflect the number of facilities visited in this reporting period only, the first year of a two-year performance criterion.

## SECTION 4.0 PROGRAM FOR INDUSTRIAL/COMMERCIAL BUSINESSES



\* Data not submitted for this Permit Year



During site visits, Co-permittee inspection staff would meet with the business owner/manager to review the objectives of the inspection. After performing a walk-through of the facility, inspection results were discussed with the business owner/manager. In the event a Co-permittee determined a facility required additional BMPs, the Co-permittee provided their recommendations to the facility owner/manager. Source control BMPs were recommended as a first step in BMP implementation before requiring the facility to implement costly structural BMPs. In addition, inspection staff informed facilities of their responsibility to prevent pollutant discharges even if the recommended BMP is unsuccessful.

Whenever evidence of an illicit discharge was found, facilities were scheduled for follow-up visits within six months of the inspection. If continued stormwater violations were found, another visit was scheduled and/or enforcement actions initiated. Enforcement actions may include any of the following: Warning Notice, Notice of Violation(s), Administrative Civil Liability actions and monetary fines.

In addition, the Co-permittees maintain a database of inspected automotive and food service facilities that includes the following information for each facility:

- Name of Facility
- Site Address
- Applicable SIC Code(s)
- NPDES Permit Coverage
- SWPPP Availability
- Facility Contact

## SECTION 4.0 PROGRAM FOR INDUSTRIAL/COMMERCIAL BUSINESSES

A print out of the Co-permittees' database is attached in Appendix 1. The Co-permittees annually update the database with their activities for the current reporting period and provide a copy as part of this Annual Report.

### 4.1.2 Targeted Business Outreach Program based on Pollutants of Concern

Individually, the Co-permittees have concentrated their efforts on businesses with the greatest potential to contribute known Pollutants of Concern (ammonia, bacteria, etc.). Businesses that have recently been targeted for education and outreach include agriculture-related facilities, commercial equestrian stable facilities, car washes, and mobile businesses (vehicle detailers and concrete pumping).

The Cities of Camarillo and Thousand Oaks both educate and inspect mobile businesses as time permits as part of their normal inspection duties. The City of Simi Valley concentrated their efforts on car washes (fixed facilities), equestrian waste education, and required Stormwater Pollution Control Plan (SWPCP) from 317 auto, food service and designated industrial facilities in an effort to control POCs. Also during this reporting period, the City of Oxnard performed over 450 commercial and industrial inspections/contacts addressing stormwater issues and POCs.



Site Inspection of a Commercial Facility

### 4.1.3 General Industrial Permit Facility Site Visit Program

The Permit requires each Co-permittee to identify industrial/commercial facilities potentially subject to the General Industrial Permit and target these facilities for education and outreach. Targeted facilities include wastewater treatment plants, landfills, large transportation yards and airports that may be publicly-owned by Co-permittees. However, this does not include public facilities such as municipal maintenance yards that may contain industrial types of activity. Co-permittee-owned facilities are not subject to the Industrial/Commercial Business Program (with the exception of the City of Thousand Oaks). Requirements for these public facilities are discussed in the Program for Public Agency Activities. Inspection and enforcement of the General Industrial Permit is accomplished by the permitting agency, either the SWRCB or the RWQCB.

Co-permittees use a variety of methods to create their lists of facilities subject to this program element. Some of the resources used to facilitate identifying facilities included:

- State Water Resources Control Board (SWRCB) database of facilities covered by the General Industrial Permit;
- Hazardous materials inventories maintained by fire or environmental health departments;
- List of facilities subject to local wastewater utility's industrial pretreatment programs;
- City business license records;
- Commercially available business listings (e.g., the Dun & Bradstreet database);
- Telephone book business listings;
- Non-filers database; and

## SECTION 4.0 PROGRAM FOR INDUSTRIAL/COMMERCIAL BUSINESSES

- Letters/Use surveys/Mailer with response requested/checklist, etc.

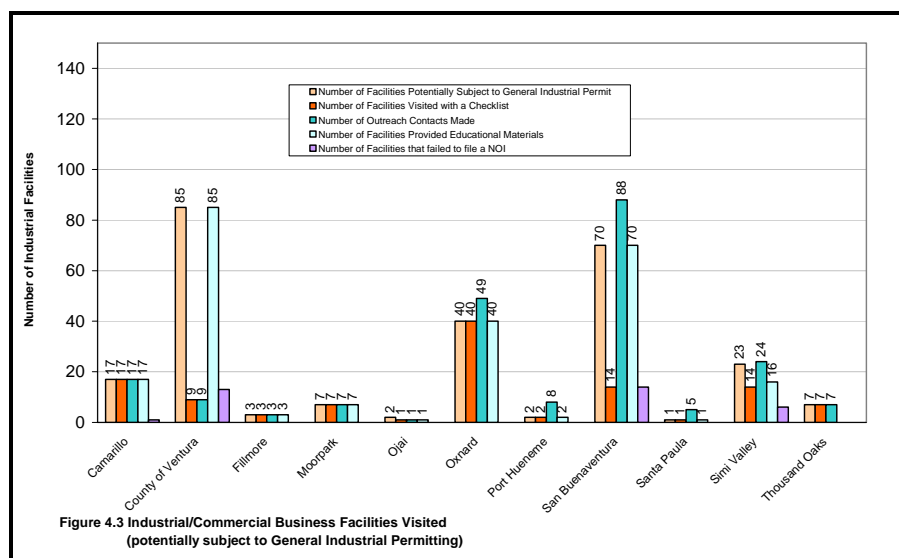
Once the list of facilities was compiled, the Co-permittees implemented an education outreach effort that provided an introduction of stormwater pollution prevention to those business owners/operators.

The Co-permittees strongly believe most business representatives are conscientious and want to do the “right thing” after they are made aware of what they need to do and how easy compliance can be achieved with simple changes. An informational site visit, in which an agency representative walks the site with the facility owner/operator, provides useful information about stormwater requirements and BMPs. These efforts have proven to be an effective approach for education and outreach.

In addition to the Co-permittees’ efforts, the RWQCB has performed a number of industrial site inspections in Ventura County and this has greatly increased the number of facilities exposed to stormwater regulations and requirements. The RWQCB has also indicated an interest in coordinating with VCWPD to host an educational training workshop on the General Industrial Permit and its requirements in the near future. The Co-permittees look forward to this opportunity to work with RWQCB staff and provide additional stormwater education to the business community.

Due to the efforts of the Co-permittees during the last reporting period, many of the facilities targeted through this program have applied for permit coverage and have developed and implemented Storm Water Pollution Prevention Plans (SWPPPs).

**Figure 4-3** shows the total number of facilities targeted for an outreach contact and how many were provided educational materials within each Co-permittee’s jurisdiction. Note that the data reflect the number of facilities contacted in this reporting period only, the second year of a two-year performance criterion.



### 4.1.4 Stormwater Quality Staff Training

Each Co-permittee identified inspection staff and other personnel for training based on the type of stormwater quality management and pollution issues that they might encounter during the performance of their regular inspections or daily activities. Targeted staff may include those who

## SECTION 4.0 PROGRAM FOR INDUSTRIAL/COMMERCIAL BUSINESSES

perform inspection activities as part of the HAZMAT, and wastewater pretreatment programs as well as staff who may respond to questions from the public or industrial/commercial businesses.

Staff was trained in a manner that provided adequate knowledge for effective business inspections, enforcement, and answering questions from the public or industrial/commercial operators. Training included a variety of forums, from informal "tailgate" meetings, to formal classroom training, and self-guided training methods. In addition, Co-permittee industrial/commercial staff training included appropriate information on the prevention, detection and investigation of illicit discharges and illegal connections (ID/IC). See **Section 8** for more information regarding ID/IC training.

During this reporting period, the Co-permittees trained 58 inspection staff in stormwater pollution prevention. **Figure 4-4** depicts the number of staff trained in the program area for each Co-permittee. Ten of the eleven Co-permittees exceeded the performance criterion established in the SMP and trained more than the required 90% of targeted employees.

The Co-permittees continued to emphasize consistency among inspection programs, both in terms of requirements and procedures countywide. The Co-permittees realize the importance of providing a "level playing field" for the business community and of requiring compliance in a similar and clear manner. In order to facilitate countywide consistency, the Co-permittees met regularly to discuss coordination of efforts and strategies for the inspection program at the Business & Illicit Discharge/Illegal Connection Subcommittee. As a part of this effort the Co-permittees encouraged the participation of the County of Ventura Environmental Health Department (EHD) in these discussions and to provide comments and guidance in the development of educational materials.

EHD continues to play an important role in the Co-permittees' efforts to inspect and assure compliance with stormwater regulations in the business community countywide. EHD conducts stormwater inspections of automotive service facilities on the behalf of several Co-permittees, and also performs the County unincorporated program for food service inspections. Implementation of these program elements required the Co-permittees to spend significant time and resources on communication, coordination and comprehensive training, both for Co-permittee staff as well as EHD inspection staff.

Although the Co-permittees need the flexibility to develop inspection programs that are appropriate for local conditions, the Co-permittees have worked hard to incorporate similar baseline elements in their individual programs.

The Co-permittees will continue to work on coordination and providing the business community of Ventura County a fair and congruent, but effective, inspection program.

### 4.1.5 *Joint Industrial Site Inspections*

Beginning in the 2003-04 reporting period and continuing through this permit period, VCWPD in coordination with the RWQCB, targeted several state permitted industrial sites for a joint inspection program. The Co-permittees recognize the potential for problems with these facilities being subjected to different inspection agencies and the likelihood of industrial operators receiving different direction and feedback on how to best implement stormwater pollution prevention measures and meet state permit compliance. In order to avoid this situation and ensure continued countywide consistency with respect to BMP selection and implementation, VCWPD staff with RWQCB inspectors visited several state permitted industrial facilities for joint inspections. These inspections provided both VCWPD and the RWQCB an opportunity to see the other in action and the chance to discuss at length their style, method and primary concerns at industrial facilities.

## SECTION 4.0 PROGRAM FOR INDUSTRIAL/COMMERCIAL BUSINESSES

The results of these joint inspections were discussed in detail at Business & Illicit Discharge/Illegal Connection Subcommittee meetings where the Co-permittees were able to evaluate the best way to not only ensure a consistent countywide approach but also the best method for streamlining the regulatory process for the industrial community. These discussions are on-going with dual goals of protecting stormwater quality in Ventura County and implementing an inspection program that is efficient and responsive to the industrial business community.

### 4.1.6 Educational Brochure for Industrial Facilities

Early on, during the 2001-02 reporting period, the Business & Illicit Discharge/Illegal Connection Subcommittee formed a small work group to develop an educational brochure for the General Industrial Permit Facility Site Visit Program. The work group spent considerable time and effort collecting information on the state's permit and closely examined what other municipalities has done to educate industrial facilities.

The work group consolidated this information and developed a tri-fold brochure that included the following specific requirements of the General Industrial Permit:

- Facilities subject to the General Industrial Permit must file a Notice of Intent (NOI) with the SWRCB; and
- A Storm Water Pollution Prevention Plan (SWPPP) must be developed and available on site.

### 4.1.7 Watershed Protection Tips for Business

In addition, the Co-permittees provided information on prohibited discharges, illicit discharges, preventative methods for controlling illicit discharges, what to do in the event of an illicit discharge and penalties that can be assessed for non-compliance. These brochures were created as part of the *Community for a Clean Watershed* campaign and distributed during site visits.

Table 4-1 Permit Required Activities	
Industrial/Commercial Business Program	
Required Activity	Performance Criteria
Site Education/Inspection	Each Co-permittee will conduct site education/inspections of 90% of automotive, food service and other targeted businesses in their jurisdiction every two years.
	Businesses will be scheduled for a follow-up visit whenever evidence of an illicit discharge is found, within six months of the education site inspection.
Targeted Businesses/POCs	Co-permittees will target additional businesses based on Pollutants of Concern (POCs) as appropriate.
General Industrial Permit Facility Visits	Co-permittees will distribute educational materials to 90% of facilities identified as potentially subject to the General Industrial Permit and perform site visits as locally determined necessary to complete a checklist.
	The checklist will include the SIC Code of the industrial user; indicate whether an identified site has obtained coverage under the State General Industrial Permit, and if a SWPPP is available on site.
Stormwater Quality Staff Training	Co-permittees will train 90% of targeted employees by January 27, 2001 and annually thereafter.

## SECTION 5.0 PROGRAM FOR PLANNING & LAND DEVELOPMENT

### 5.1 Program Description

The Co-permittees have developed and implemented a Program for Planning and Land Development addressing the planning of development projects. This program describes the minimum standards the Co-permittees are to follow to implement their own development planning programs in compliance with the Permit. The term “development project” as used in this Program encompasses those projects subject to a planning and permitting review/process by a Co-permittee. A development project includes any construction, rehabilitation, redevelopment or reconstruction of any public and private residential project, industrial, commercial, retail and other non-residential projects, including public agency projects.

To meet the goals and objectives of the Program, the Co-permittees attend Planning and Land Development Subcommittee meetings to coordinate and implement a comprehensive program to mitigate impacts on water quality from development projects to the maximum extent practicable (MEP). However, the Co-permittees may modify their programs to address particular issues, concerns or constraints unique to a particular watershed or to an individual municipality. The subcommittee is comprised of representatives of the Co-permittee cities, other municipal staff from various departments and the Resource Conservation District (RCD).



Predevelopment Meeting

### 5.2 Program Implementation

#### 5.2.1 *Project Review and Conditioning*

Development and redevelopment projects can potentially discharge pollutants of concern that may contribute stormwater runoff pollution. Recognizing this potential and addressing it throughout the development process can control these impacts. The Co-permittees approach stormwater concerns early in the project development process when the options for pollution control are greatest and the cost to incorporate these controls into new development and redevelopment projects is least.

In planning and reviewing a development project, the Co-permittees consider three key questions with respect to stormwater quality control: (1) what kind of water quality controls are needed?; (2) where should controls be implemented?; (3) what level of control is appropriate? During the planning and review process, the Co-permittees document the method used to identify potential stormwater quality problems, develop design objectives, and evaluate the plan for the most appropriate alternatives and design.

#### 5.2.2 *Stormwater Quality Urban Impact Mitigation Plan (SQUIMP)*

The Permit requires the implementation of the Stormwater Quality Urban Impact Mitigation Plan (SQUIMP) for new development projects that fall into one or more of the following categories:

- Single-family hillside residences
- 100,000 square foot commercial development
- Automotive repair shops
- Retail gasoline outlets
- Restaurants
- Home subdivisions with 10 or more housing units
- Locations within, or directly adjacent to or discharging to an identified Environmentally Sensitive Area (ESA)



## SECTION 5.0 PROGRAM FOR PLANNING & LAND DEVELOPMENT

- Parking lots of 5,000 square feet or more with 25 or more parking spaces and potentially exposed to stormwater runoff

In addition, redevelopment projects of one of the SQUIMP categories that result in the creation or addition of 5,000 square feet or more of impervious surfaces are subject to SQUIMP requirements. If a redevelopment project creates or adds 50% or more impervious surface area to the existing impervious surfaces, then stormwater runoff from the entire area (existing and additions) must be conditioned for stormwater quality mitigation. Otherwise, only the additional area of the redevelopment project requires mitigation.

The SQUIMP lists the minimum required BMPs that must be implemented for new development and redevelopment projects subject to the SQUIMP. The minimum requirements include the following BMPs:

- Control peak stormwater runoff discharge rates
- Conserve natural areas
- Minimize stormwater pollutants of concern
- Protect slopes and channels
- Provide storm drain stenciling and signage
- Properly design outdoor material storage areas
- Properly design trash storage areas
- Provide proof of ongoing BMP maintenance
- Meet design standards for structural or treatment control BMPs
- Comply with provisions applicable to individual priority project categories, which include the following: 100,000 square foot commercial development; restaurants; retail gasoline outlets; automotive repair shops; and parking lots

### 5.2.3 SQUIMP Related BMP Evaluation

The Co-permittees collectively utilize the countywide Technical Guidance Manual for Stormwater Quality Control Measures. This manual addresses the SQUIMP requirements of the NPDES permit, specifying design storm volumes and flows and identified various site, source and treatment control BMPs applicable to Ventura County and the SQUIMP project.

The Co-permittees consider site-specific conditions of development projects when determining which BMPs are most appropriate for a site. Prior to selecting BMPs, the Co-permittees evaluate post-construction activities and potential sources of stormwater pollutants. The Co-permittees consider BMPs that would address the potential pollutants reasonably expected to be present at the site once occupied or operational. BMPs for the project during the construction phase are addressed in the Construction Program.

In order to fulfill these goals and objectives, the Co-permittees use the following common criteria in screening and selecting BMPs during the planning stage:

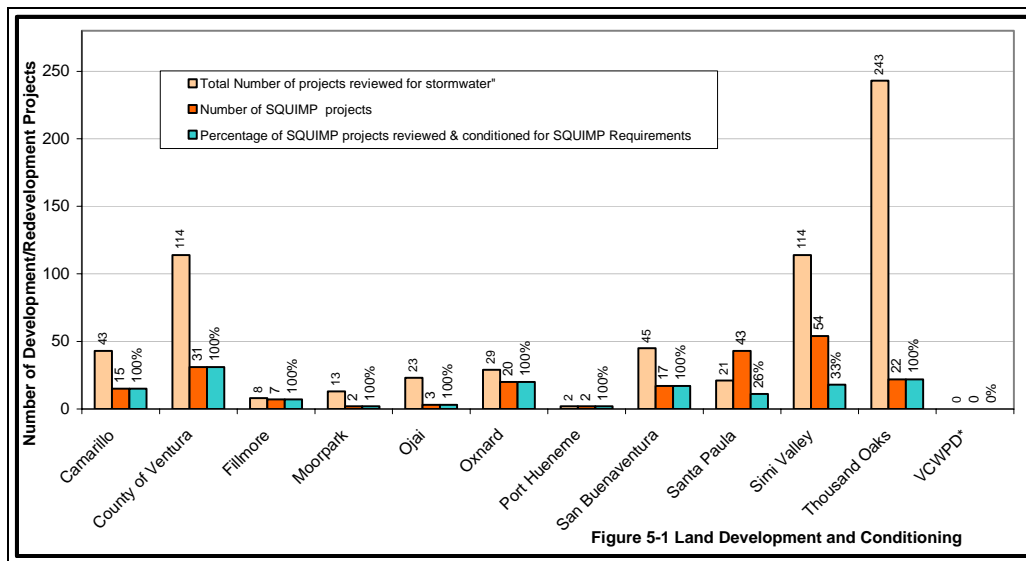
- Project characteristics
- Site factors (e.g., slope, high water table, soils, etc.)
- Pollutant removal capability
- Short term and long term costs
- Responsibility for maintenance
- Contributing watershed area
- Environmental impact and enhancement

## SECTION 5.0 PROGRAM FOR PLANNING & LAND DEVELOPMENT

The BMP selection criteria listed above is applied by the Co-permittees in accordance with the overall objective of the Planning and Land Development Program, i.e., to reduce pollutants in discharges to the MEP. Some BMPs will clearly be more appropriate and effective in some site-specific situations than others and BMP selections reflect this variability.

### 5.2.4 SQUIMP Implementation

**Figure 5-1** indicates the number of SQUIMP category projects that were reviewed and conditioned to meet stormwater and SQUIMP requirements by each Co-permittee. These results exceed the performance criterion established in the SMP. Besides the projects subject to SQUIMP requirements, the Co-permittees reviewed and condition additional development projects for stormwater quality. These projects included structural improvement projects that did not qualify for one of the SQUIMP categories. A review of Figure 5-1 shows most of the Co-permittees met the performance criteria of reviewing 90% of all private development subject to SQUIMP requirements.



\* No SQUIMP project requirements

### 5.2.5 Environmental Review

The California Environmental Quality Act (CEQA) sets forth requirements for the processing and environmental review of many projects. The Co-permittees view CEQA processing and review as an excellent opportunity to address stormwater quality issues related to proposed projects early in the planning stages. The National Environmental Quality Act (NEPA) comes into play less often than CEQA, but may be included on projects involving Federal funding. Like CEQA, NEPA processing and review provide excellent opportunities to address stormwater quality issues related to proposed projects early in the planning stages.

Each Co-permittee has reviewed their internal planning procedures for preparing and reviewing CEQA (and NEPA when applicable) documents and has linked stormwater quality mitigation conditions to legal discretionary project approvals. In addition, when appropriate, the Co-permittees consider stormwater quality issues when processing environmental checklists, initial studies and environmental impact reports.

## SECTION 5.0 PROGRAM FOR PLANNING & LAND DEVELOPMENT

### 5.2.6 General Plan Revisions

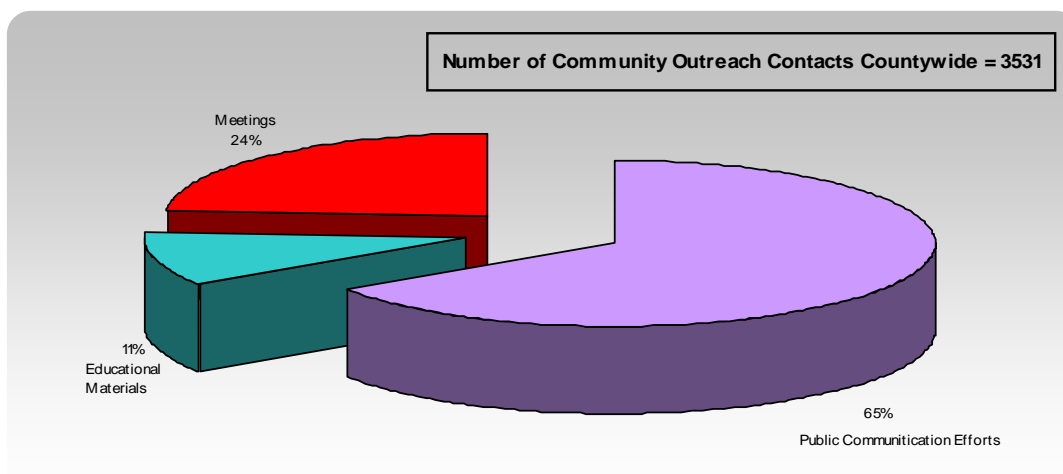
The Co-permittees' General Plans provide the foundation and the framework for land use planning and development. Therefore, the General Plans reflect overall policies for protection of stormwater quality. The Co-permittees will include watershed and stormwater management considerations in the appropriate elements of their General Plans whenever these elements are significantly rewritten. **Table 5-1** indicates the scheduled date of a significant rewrite to the Co-permittees' General Plan. Note that some Co-permittees have already modified their General Plan to include stormwater requirements and thus no date is provided.

**Table 5-1**  
**Date of Significant Update of General Plan**

Co-permittee	Date of General Plan	Scheduled date for significant rewrite
Camarillo	10/2003	Plan already updated to include stormwater
County of Ventura	10/1997	
Fillmore	4/2003	Plan already updated to include stormwater
Moorpark	1/1984	2005
Ojai	5/1997	Plan already updated to include stormwater
Oxnard	1/1990	Ongoing
Port Hueneme	8/1997	2015
San Buenaventura	8/1989	2005
Santa Paula	1/1998	2012
Simi Valley	10/1988	7/1/2008
Thousand Oaks	7/1996	Plan already updated to include stormwater

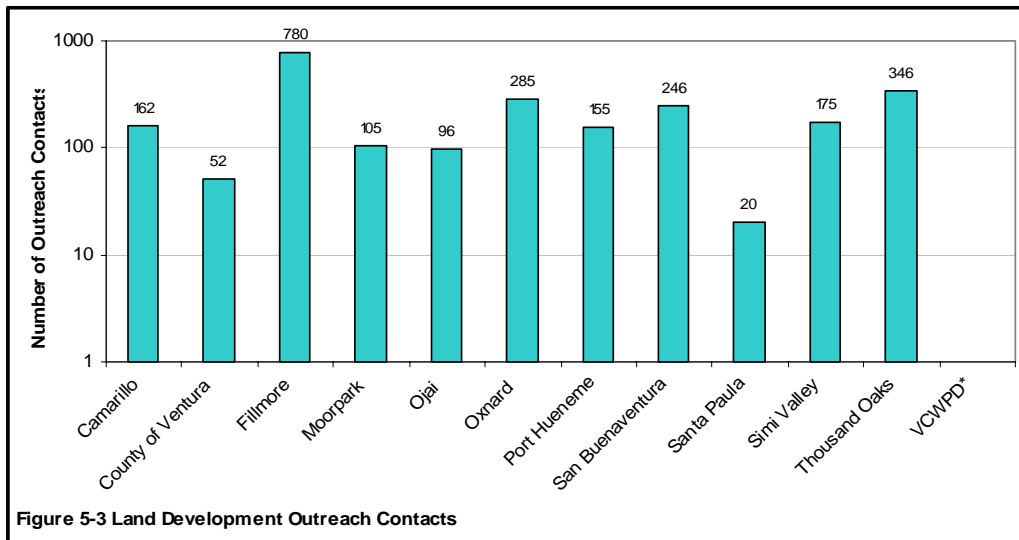
### 5.2.7 Community Outreach Development

During the reporting period, the Co-permittees made over 1,600 contacts to development community representatives through public communication efforts (counter assistance, phone conversations/discussions, etc.), professional society presentations, community group presentations, workshops/seminars, and educational outreach materials. These numbers are reflected in **Figure 5-2** which indicates the percentage of outreach methods used, and **Figure 5-3** shows the number of contacts made by each Co-permittee.



**Figure 5-2 Land Development Outreach Activities Used Countywide**

## SECTION 5.0 PROGRAM FOR PLANNING & LAND DEVELOPMENT

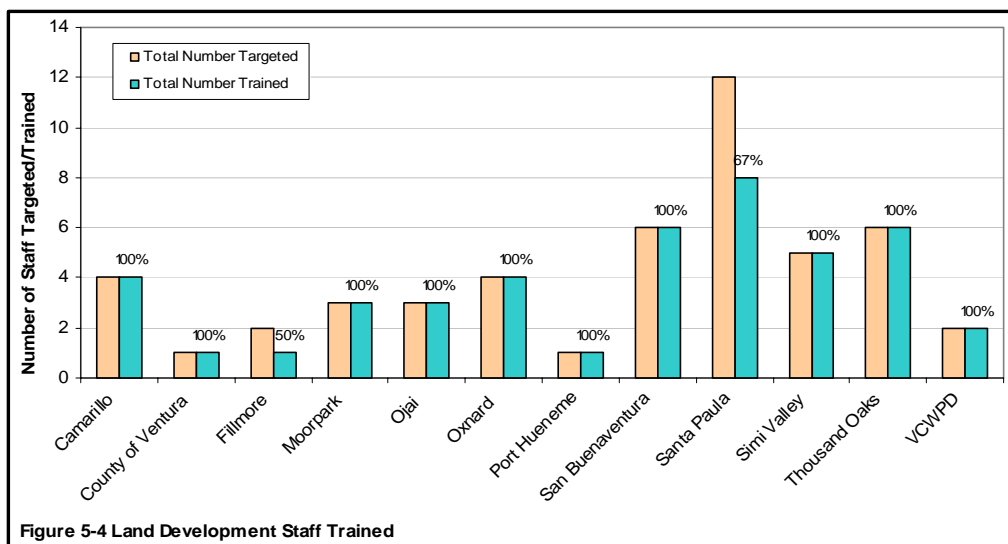


\* No SQIMP projects this Permit Year

### 5.2.8 Stormwater Quality Staff Training

The Co-permittees identified employees for training regarding the requirements of the Planning and Land Development Program and SQUIMP requirements. Targeted employees include staff involved with planning, review, conditioning, permitting of development projects and administration of departments that conduct these activities.

Training methods varied amongst the Co-permittees and ranged from informal meetings to formal classroom training or self-guided training. During the reporting period, the Co-permittees trained 34 development staff in stormwater management, plan review and SQUIMP requirements. **Figure 5-4** depicts the number of staff trained in the program area for each Co-permittee. The majority of the Co-permittees exceeded the performance criterion established in the SMP and trained more than the required 90% of targeted employees.



## SECTION 6.0 PROGRAM FOR CONSTRUCTION SITES

### 6.1 Program Implementation

The Co-permittees regulate construction activities and have responsibility for the construction and renovation of municipal facilities and infrastructure. Water quality concerns relating to construction have been a focus of the Co-permittees' compliance program since the permit's inception. Major components of the Co-permittee's Construction Program include:

- Inspect sites with SWPPPs for storm water quality requirements a minimum of once during the wet season;
- Develop and implement a checklist for inspecting storm water quality control measures at construction sites;
- Require proof of filing a Notice of Intent (NOI) for coverage under the State General Construction Permit prior to issuing a grading permit for all projects requiring coverage.

Additionally, the Construction Program provides requirements and guidelines for pollution prevention/BMP methods used by construction site owners, developers, contractors and other responsible parties in order to protect water quality. To ensure the Program is implemented properly, each jurisdiction conducts inspections during the rainy season to verify the appropriateness and implementation of BMPs, taking enforcement action as necessary. Furthermore, training and outreach is regularly scheduled to make certain implementation occurs consistently throughout Ventura County.

To meet the goals and objectives of the Program, the Co-permittees attend Construction Subcommittee meetings to coordinate and implement a comprehensive program to mitigate impacts on water quality from construction sites to the maximum extent practicable (MEP). However, the Co-permittees may modify their programs to address particular issues, concerns or constraints that are unique to a particular watershed or to an individual municipality. The Subcommittee is comprised of representatives of the Co-permittees cities and other municipal staff from various departments (Engineering Services, Planning and Land Development and Inspection Services). In order to facilitate effective inspections and to document compliance with this requirement, VCWPD staff developed a Stormwater Quality Checklist for Co-permittee use.

#### *6.1.1 SWPCP/SWPPP Preparation, Certification and Implementation*

Prior to receiving a grading permit, the Co-permittees require a Storm Water Pollution Control Plan (SWPCP) to be submitted for projects located in a hillside area, or are within or discharging directly to or directly adjacent to an ESA. The SWPCP remains in effect until the construction site is stabilized and all construction activity is completed. The SWPCP includes identification of potential pollutant sources and the design, placement and maintenance of BMPs to effectively prevent the entry of pollutants from the construction site to the storm drain system. In addition, the Co-permittees require construction projects include the following requirements:

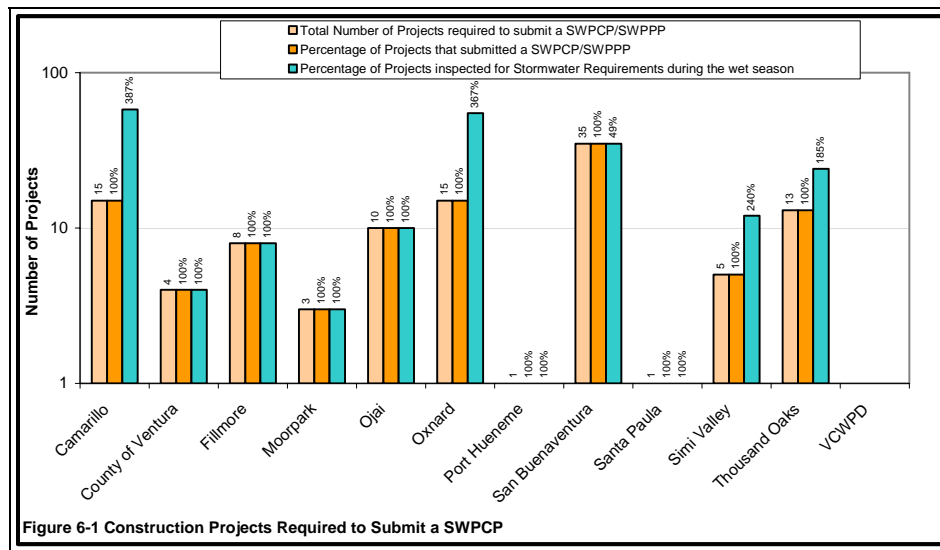
- Sediments generated on the project site shall be retained using structural drainage controls
- No construction-related materials, wastes, spills or residues shall be discharged from the project site to streets, drainage facilities or adjacent properties by wind or runoff;
- Non-stormwater runoff from equipment and vehicle washing and any other activity shall be contained at the project site;
- Erosion from slopes and channels will be eliminated by implementing BMPs, including but not limited to, limiting grading during the wet season, inspecting graded areas during rain events, planting and maintaining vegetation on slopes and covering erosion susceptible slopes.

## SECTION 6.0 PROGRAM FOR CONSTRUCTION SITES

Additionally, as is mandatory for all construction related activity disturbing one or more acres, Co-permittees require proof of filing an NOI and Storm Water Pollution Prevention Plans (SWPPPs) for projects subject to the General Construction Permit. In these cases, a SWPPP may be accepted as the SWPCP for a project if the SWPPP meets the requirements of the Co-permittee.

The Co-permittees have also incorporated SWPPP provisions in their own construction projects resulting in soil disturbance of one acre or more, located in hillside areas, or directly discharging to an ESA. The Co-permittees include provisions delineating contractor responsibilities for SWPCP preparation, implementation and for performance of the work and ancillary activities in accordance with the SWPCP approved by the Co-permittee for the project.

**Figure 6-1** indicates the number of construction projects required to submit a SWPCP/SWPPP and the number of projects that submitted a SWPCP/SWPPP.



Additionally, **Figure 6-1** reflects the number of grading permits issued during this reporting period and does not necessarily reflect the number of active construction projects. The Co-permittees have consistently required projects to submit SWPCPs (and SWPPPs when required) with all Co-permittees exceeding the 90% performance criteria established in the SMP. In some jurisdictions, SWPCPs were required and submitted for nearly all projects including those not exceeding Permit thresholds. This conservative approach underlines the importance the Co-permittees place on ensuring implementation of stormwater controls at construction sites.

Furthermore, **Figure 6-1** details the number of inspections conducted at construction sites with a SWPCP during the wet season. Most of the Co-permittees met or exceeded the 90% performance criterion established in the SMP. A review of **Figure 6-1** also indicates some Co-permittees inspected more construction sites than were required to submit a SWPCP during this reporting period. This is due to Co-permittees performing inspections at sites already issued a grading permit the previous year, the site still being active and thus requiring further monitoring.

### 6.1.2 General Construction Permit

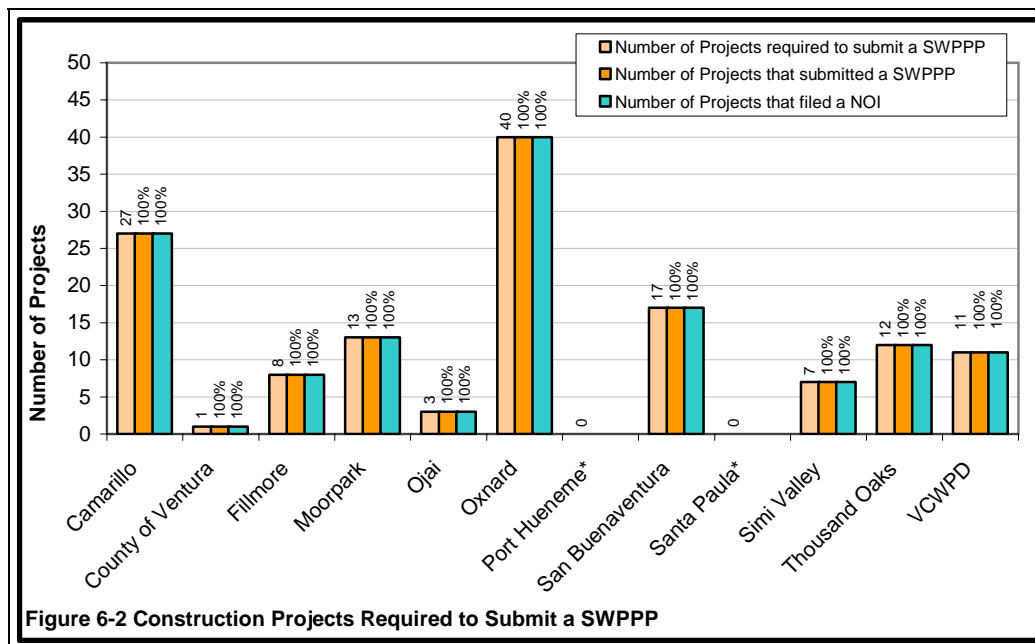
As mentioned above, the Co-permittees require all construction projects subject to the General Construction Permit to submit proof of filing a Notice of Intent (NOI) prior to issuing a grading permit. Proof of filing a NOI may include a copy of the completed NOI form and a copy of the check sent to the State Water Resources Control Board (SWRCB) or a copy of the letter from the SWRCB with the Waste Discharge Identification Number (WDID) for the project.

## SECTION 6.0 PROGRAM FOR CONSTRUCTION SITES

In addition, the Co-permittees file NOIs with the SWRCB and pay the appropriate fees whenever Co-permittee construction projects qualify for coverage under the General Construction Permit. The NOIs and appropriate fees are filed prior to the commencement of any construction activity covered by the General Construction Permit. A copy of the NOI is kept with the project files and in the SWPPP for the project.

Projects subject to the requirements of the General Construction Permit currently include those involving clearing, grading, or excavation resulting in soil disturbances of at least one acre. Co-permittee emergency work and routine Co-permittee maintenance projects do not require preparation of a SWPCP/SWPPP, but are instead performed in accordance with the Program for Public Agency Activities.

**Figure 6-2** presents the number of construction projects that prepared a SWPPP. Most of the Co-permittees met or exceeded the 90% performance criterion for verifying the filing of a NOI established in the SMP.



\* No projects that required an NOI this permit year.

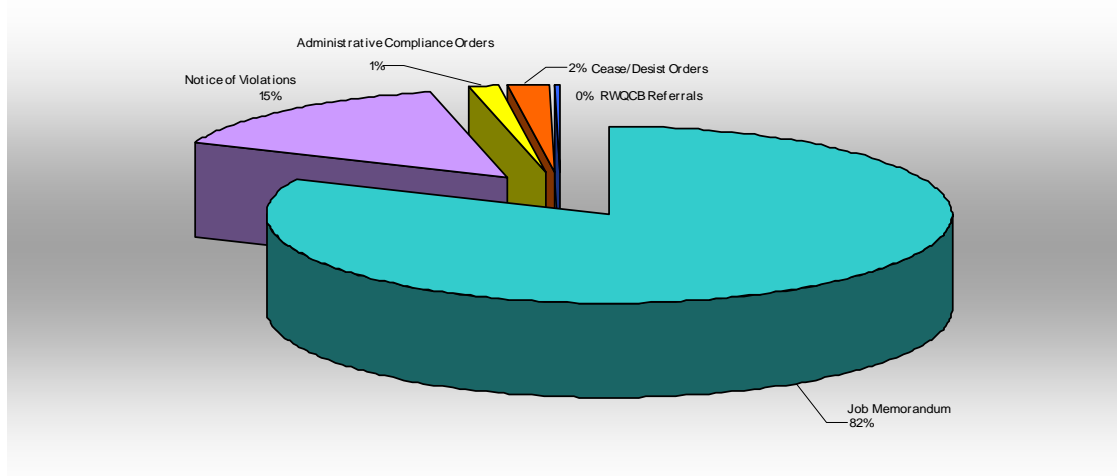
### 6.1.3 Construction Site Inspection Program

The Co-permittees inspect all construction sites with SWPPPs a minimum of once during the wet season to determine if the SWPPP is adequately implemented. During this site inspection, a checklist is completed to document inspection results. If it is determined the SWPPP is not adequately implemented or when there is evidence of a reasonable potential for sediment, construction materials, wastes, or non-stormwater runoff to be discharged from the project site, the Co-permittees will conduct a follow-up inspection within two weeks.

When a construction site fails to comply with the SWPCP/SWPPP, a Co-permittee implements the appropriate notification and enforcement procedures. There are five general levels of notification and enforcement for most stormwater related problems for construction projects. These are: Verbal Notification, Job Memorandum, Notice of Violation, Administrative Compliance Order, Stop Work Order, and RWQCB referrals. The decision to use any level of compliance control is based upon the severity of the violation(s).

## SECTION 6.0 PROGRAM FOR CONSTRUCTION SITES

**Figure 6-3** indicates the number and types of enforcement actions taken by the Co-permittees countywide. Note a single construction project can be issued multiple violations, ranging from written notices to RWQCB referrals. While job memorandums increased over the last reporting period, reducing the percentage of the other more serious enforcement actions, there was an increase in total enforcement actions from 498 reported last year to 807 this year.



**Figure 6-3 Construction Site Stormwater Violations**

### 6.1.4 Construction Community Outreach

The Co-permittees discuss stormwater quality requirements and concerns with developers and contractors during pre-construction meetings and inspections. During these meetings, the Co-permittees emphasize compliance with stormwater quality requirements and proper implementation of the project's SWPCP. The Co-permittees continue to stress the developer's responsibility for all discharges from the project site, including discharges from streets and storm drains until final acceptance of the project. The Co-permittees point out this responsibility includes discharges resulting from activities at owner occupied facilities (e.g., landscaping, block wall construction, etc.) conducted by new homeowners and/or individuals or companies hired by the new owner.

In addition, the Co-permittees have made educational material available to the construction community via the Program's website ([www.vcstormwater.org](http://www.vcstormwater.org)). Co-permittees have posted guidance on SWPCP requirements, a checklist for SWPCP preparation, the SWPCP form, a SWPPP template with attachments, guidance on BMPs, and presentations on stormwater regulations and General Construction Permit compliance.

During the reporting period, the Co-permittees made over 4900 contacts to construction community representatives through meetings, community outreach efforts, public communication efforts, print media, and other outreach methods. This effort is consistent with last year's effort. These numbers are reflected in **Figure 6-4**, which shows the percentage of outreach methods used countywide.

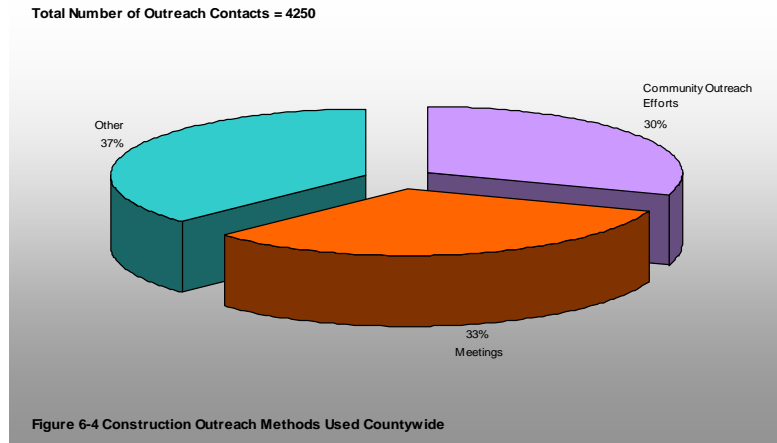
In addition, the City of Oxnard hosted a NPDES Wet Weather Compliance Training Seminar, informing attendees how to comply with the General Construction Permit requirements and stormwater regulations. This





## SECTION 6.0 PROGRAM FOR CONSTRUCTION SITES

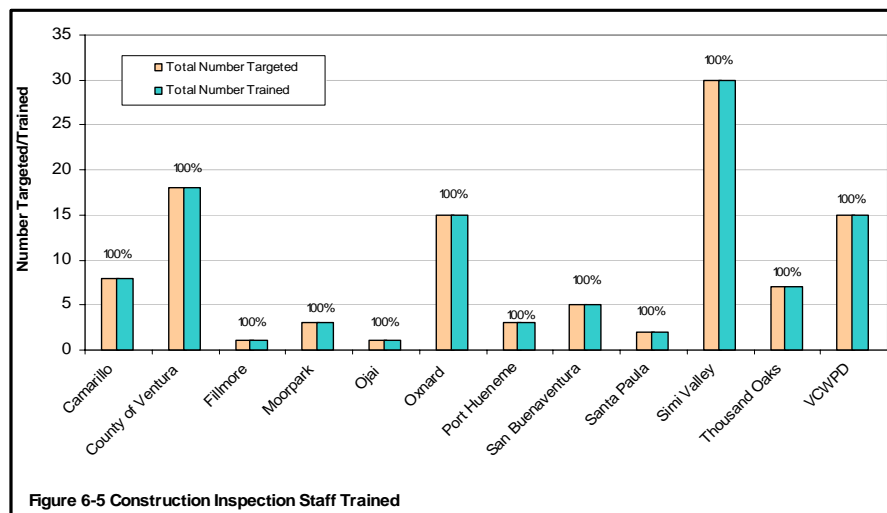
comprehensive Wet Weather seminar was designed to motivate and educate land developers, superintendents, subcontractors, engineers, consultants, public work inspectors, and anyone who has the potential to generate or prevent stormwater pollution. This year's training seminar was a huge success with over 70 attendees. The success of the seminar and the immediate noticeable changes at the construction sites have strengthened the city's belief that education is the key for achieving stormwater compliance.



### 6.1.5 Stormwater Quality Staff Training

The Co-permittees targeted employees involved with construction engineering and inspection for training regarding the requirements of the Program for Construction Sites. Training methods varied amongst the Co-permittees and ranged from informal meetings, to formal classroom training or self-guided training. The Co-permittees also trained staff on the prevention, detection and investigation of illicit discharges and illegal connections (ID/IC) associated with construction activities. See **Chapter 8** for more information regarding ID/IC training.

During this reporting period, the Co-permittees trained 200 construction inspection staff in stormwater management, construction inspections, SWPCPs, SWPPPs, illicit discharge response, and non-stormwater discharges. **Figure 6-5** depicts the number of staff trained in the program areas for each Co-permittee. All of the Co-permittees exceeded the performance criterion established in the SMP and trained more than the required 90% of the targeted employees.



## **SECTION 6.0 PROGRAM FOR CONSTRUCTION SITES**

### *6.1.6 Joint Construction Site Inspections*

Starting in the 2003-04 reporting period, VCWPD in coordination with the RWQCB targeted several state permitted construction sites for a joint inspection program. With recent regulatory changes that require construction sites of one acre or more to obtain a State General Construction Permit, more and more construction projects are now subject to regulation. The Co-permittees recognize the potential for problems with these construction sites being subjected to different inspection agencies and the possible likelihood of developers, contractors and local homeowners receiving different direction and feedback on how to best implement stormwater pollution prevention measures at their sites. In order to avoid this situation and ensure continued countywide consistency with respect to BMP selection and implementation, VCWPD staff, with RWQCB inspectors, visited several state permitted construction sites. These inspections provided both VCWPD and the RWQCB an opportunity to discuss at length their style, method and primary concerns at construction sites.

The results of these joint inspections were discussed in detail at the Construction Subcommittee meetings where the Co-permittees were able to evaluate the best way to not only ensure a consistent countywide approach but also the best method for streamlining the regulatory process for the construction community. These discussions are on-going with the dual goals of protecting stormwater quality in Ventura County and implementing an inspection program that is efficient and responsive to the construction community.

## SECTION 6.0 PROGRAM FOR CONSTRUCTION SITES

<b>Table 6-1 Permit Required Activities Construction Site Program</b>	
<b>Required Activity</b>	<b>Performance Criteria</b>
SWPCP Preparation, Certification & Implementation	<p>Co-permittees will require 90% of construction projects meet the permit requirements, and submit a SWPCP prior to issuing a grading permit.</p> <p>For construction projects that prepare a SWPCP under this program, require implementation of the SWPCP during the entire course of construction.</p>
Incorporating Best Management Practices (BMPs)	<p>For construction sites requiring a SWPCP, Co-permittees will require the inclusion of the statement specified in the Permit from the project architect, or engineer of record, or authorized qualified designee and the certification specified in the Permit from the landowner.</p> <p>For Co-permittee construction projects requiring a SWPCP, Co-permittees will include the statement specified in the Permit from the project architect, or engineer of record, or authorized qualified designee and the Co-permittees certification specified in the Permit from an elected official, ranking management official or the manager of the construction activity.</p>
Notice of Intent Requirement	<p>For construction projects subject to the General Construction Permit, Co-permittees will require proof a NOI has been filed prior to issuance of a grading permit for 90% of all such projects.</p>
Construction Site Inspection Program	<p>Develop and implement a checklist for inspecting stormwater quality control measures at construction sites by January 27, 2001.</p> <p>For construction projects that requiring a SWPCP, inspect sites a minimum of once during the wet season for stormwater quality requirements and complete a stormwater quality control site inspection checklist.</p> <p>For sites having not adequately implemented the SWPCP or where there is evidence of or a reasonable potential for sediment, construction materials or wastes, or non-stormwater runoff to be discharged from the project site, a written notice (Job Memorandum, Notice of Violation, Administrative Compliance Order, Cease and Desist Order) shall be prepared and delivered to the owner or person responsible for implementing the SWPCP.</p> <p>For sites having not adequately implemented the SWPCP, conduct a follow-up inspection within two weeks to ensure compliance and complete a stormwater quality control site inspection checklist.</p> <p>For sites having not achieved compliance after the follow-up inspection and are covered by the General Construction Permit, Co-permittees will notify the RWQCB.</p>
Construction Community Outreach	<p>During meetings and inspections with developers, contractors, construction workers and others involved in construction projects and activities, discuss stormwater quality controls as appropriate.</p> <p>Notify developers of their responsibility for all discharges from the project site, including discharges from streets and storm drains, until final acceptance of the project by the Co-permittee.</p> <p>Notify developers their responsibility includes discharges resulting from activities at owner occupied facilities.</p> <p>Co-permittees will develop a "New Owner" brochure and upon request provide these to developers, Home Owner Associations (HOAs), and residents to assist them with their efforts to prevent discharges from owner occupied portions of the project site.</p>
Stormwater Quality Staff Training	<p>Co-permittees will train 90% of targeted employees by January 27, 2001 and annually thereafter.</p>

## SECTION 7.0 PROGRAM FOR PUBLIC AGENCY ACTIVITIES

### 7.1 Introduction

The Co-permittees own and operate public facilities, and build and maintain much of the infrastructure of the urban and suburban environment throughout their jurisdictions. Many existing and enhanced public agency activities can therefore contribute to the control of urban stormwater pollution.

With the adoption of the second term permit, the Co-permittees were required to begin to formally re-evaluate and revise the municipal activities program. This re-evaluation was accomplished through the development and implementation of the Model Municipal Activities Program outlined in the SMP. The objective of this model program is to provide the Co-permittees with:

- A program framework for reducing the adverse impacts that municipal activities may have on water quality;
- An iterative process by which they can effectively monitor and respond to problems as they are discovered; and
- Methodologies to meet permit requirements.

### 7.2 Baseline BMPs

All Co-permittees routinely conduct preventive maintenance activities widely recognized as effective BMPs for pollutant control. These activities include solid waste collection/recycling, drainage facility maintenance, catch basin stenciling and emergency spill response.

An annual evaluation of these activities is conducted through the Public Infrastructure Subcommittee's tours of Co-permittee Corporate Yards and/or facilities, and where appropriate, improvements or new practices implemented to further reduce the amount of pollutants discharged into the storm drain system. An important component of this evaluation process is the documentation and collection of data related to these activities in the Co-permittees' Corporate Yard SWPCP.

#### 7.2.1 *Solid Waste Collection/Recycling*

The Co-permittees each have solid waste collection programs for public, residential, commercial and industrial areas. The Co-permittees conduct public education outreach through a variety of methods including community newsletters, radio and television public service announcements, brochures and utility bill inserts. (For more information on solid waste collection/recycling programs see **Section 3**).

#### 7.2.2 *Drainage Facility Maintenance – Catch Basin/Inlet Cleaning*

The Co-permittees routinely inspect the drainage system within their jurisdictions, and clean out accumulated debris on an as-needed basis. Removal of accumulated debris and sediment is carried out either manually or by mechanical methods. By removing this amount of material from the catch basin inlets and storm drain system, the Co-permittees make a significant contribution in preventing the passage of these materials in downstream receiving waters.

During the reporting period, the Co-permittees tallied the collection of over 14,000 tons of solid debris from drainage facility maintenance activities compared to 59,971 tons of material removed last year.

#### 7.2.3 *Drainage Facility Maintenance – Stencil Program*

The goal of the stenciling program is to label and subsequently maintain those labels on storm drain catch basins located throughout Ventura County. During the reporting period, the Co-permittees counted re-stenciling 224 catch basins. It should be noted Co-permittees only re-stencil catch basins when the label is no longer legible or has become detached. (For more information on the stencil program see **Section 3**).

## SECTION 7.0 PROGRAM FOR PUBLIC AGENCY ACTIVITIES

### 7.2.4 Emergency Spill Response

All Co-permittees have the authority to control releases to the storm drain system through their individual Water Quality Ordinances and each Co-permittee has designated appropriate staff for enforcing their ordinance.

Emergency responses to water pollution incidents are routinely undertaken by Co-permittee designated staff, as well as, various fire and other municipal departments. Depending upon the type and cause of the incident, Co-permittee staff may pursue a variety of administrative or criminal enforcement actions as they are outlined with their Water Quality ordinances.



Although each Co-permittee is responsible for responding to water pollution complaints and incidents within their jurisdiction, very often neighboring Co-permittees will coordinate their efforts with either very large events and/or overlapping spills. The Co-permittees focus on responding quickly and efficiently to emergency spills with priority on mitigating the spills that have a potential to adversely impact the environment.

### 7.3 Program Implementation

A significant portion of the Co-permittees' activities includes the operation and maintenance of municipal infrastructure. These activities have the potential to impact stormwater quality and as such the Co-permittees have implemented a Program for Public Agency Activities. This program addresses the implementation of BMPs to control pollutant discharges to the maximum extent practicable (MEP).

In order to address the Co-permittees' potential impacts on stormwater, the following activities have been targeted:

- Activities at Co-permittee Corporation Yards
- Drainage System Operation and Maintenance Activities
- Roadway Operation and Maintenance Activities
- Pesticide, Herbicide and Fertilizer Application and Use
- Training of Municipal Staff

#### 7.3.1 Corporation Yards

The Co-permittees utilize corporation yards to support operation and maintenance activities within their jurisdiction. Corporation yards are operated and maintained by the Co-permittees for the following activities or facilities:

- Vehicle and equipment storage, parking or maintenance
- Vehicle and equipment fueling and fueling facilities
- Wash racks for cleaning vehicles and equipment
- Sign painting activities
- Material storage areas
- Workshops, garages
- Employee support facilities, such as offices, locker rooms and meeting rooms

## SECTION 7.0 PROGRAM FOR PUBLIC AGENCY ACTIVITIES

**Table 7-1 Co-permittee Corporation Yards**

Co-permittee	Corporation Yard Name	Location	SWPCP Developed & Implemented	SWPCP available on site
Camarillo	Camarillo Corporate Yard	283 South Glenn Drive	Yes	Yes
County of Ventura	El Rio Corporate Yard	682 El Rio Drive	Yes	Yes
	Moorpark Yard	7150 Walnut Cyn. Road	Yes	Yes
	Saticoy Public Works Corporate Yard	11251-A Riverbank Drive Saticoy, CA	Yes	Yes
Fillmore	Fillmore Public Works Yard	711 Sespe Avenue	Yes	Yes
Moorpark	Public Works/Parks Yard	675 Moorpark Avenue	Yes	Yes
Ojai	Ojai Corporate Yard	Signal Street	Yes	Yes
Oxnard	Oxnard Corporate Yard	1060 Pacific Avenue	Yes	Yes
	Regional Recycling Center	111 S. Del Norte Blvd.	Yes	Yes
	Oxnard Water Treatment Yard	251 S. Hayes Avenue	Yes	Yes
Port Hueneme	Municipal Service Center	700B E. Port Hueneme Road	Yes	Yes
	Service Yard Annex	746 Industrial Avenue	Yes	Yes
San Buenaventura	SanJon Corporate Yard	336 SanJon Road	Yes	Yes
Santa Paula	Corporation Street Yard	903 Corporation Street	Yes	Yes
	Palm Avenue Yard	180 South Palm Avenue	Yes	Yes
Simi Valley	Simi Public Service Center	500 W. Los Angeles Avenue	Yes	Yes
Thousand Oaks	Municipal Service Center	1993 Rancho Conejo Blvd.	Yes	Yes
VCWPD	El Rio Corporate Yard	682 El Rio Drive	Yes	Yes
	Moorpark Yard	7150 Walnut Cyn. Road	Yes	Yes
	Saticoy Public Works Corporate Yard	11251-B Riverbank Drive Saticoy, CA	Yes	Yes

### 7.3.2 Storm Water Pollution Control Plan Development

The Permit required the Co-permittee to develop and implement a SWPCP at designated corporation yards by July 27, 2002. As the Principal Co-permittee, VCWPD developed a SWPCP template to be used as a guide by the Co-permittees in the development of their plans for each of the Co-permittee designated corporate yard facilities (listed in **Table 7-1 Co-permittee Corporation Yards**).

As shown in **Table 7-1 Co-permittee Corporation Yards**, all of the Co-permittees have modified and implemented the model SWPCP to suit their specific site's activities



Example of Wash Rack Area

## SECTION 7.0 PROGRAM FOR PUBLIC AGENCY ACTIVITIES

at their corporate yards. The Co-permittees keep a copy of the SWPCP at the facility site and review it annually to see that information is current and accurate. BMPs that have been implemented are annually assessed to determine if they are working as planned, and any required changes are noted in the SWPCP.

As specified in the SWPCPs, hazardous and toxic waste storage areas are prohibited as of January 27, 2001 from discharging untreated stormwater runoff to the storm drain system. Fueling areas, vehicle maintenance and repair areas and temporary street maintenance material and waste areas are prohibited by July 27, 2001. All vehicle and equipment wash areas are to be self-contained, self-contained and covered, or equipped with a clarifier and properly connected to the sanitary sewer. These specific site BMP requirements and associated deadlines were discussed and reviewed frequently by the Co-permittees during Public Infrastructure Subcommittee meetings. All of the Co-permittees have met the performance criteria established in the SMP, and have implemented appropriate BMPs to their hazardous and toxic waste storage areas, fueling areas, vehicle maintenance and repair areas, street maintenance material and waste areas.

### 7.3.3 *Drainage System Operation and Maintenance*

As required by the Permit, Co-permittees inspect catch basins and other drainage facilities that are a part of their system. These inspections are scheduled and completed at least once a each year before the wet season (Permit-defined wet season begins October 1). Inspections include the visual observation of each catch basin, and open channels to determine if the facility has accumulated trash, sediment or debris requiring removal for protection of water quality or maintain hydraulic capacity or function of the facility.

Co-permittees routinely clean their drainage facilities. "Routine cleaning" for these facilities, means the removal of accumulations of trash, sediment and debris likely be washed downstream with the next runoff event. Co-permittees also clean their facilities on an as-needed basis.

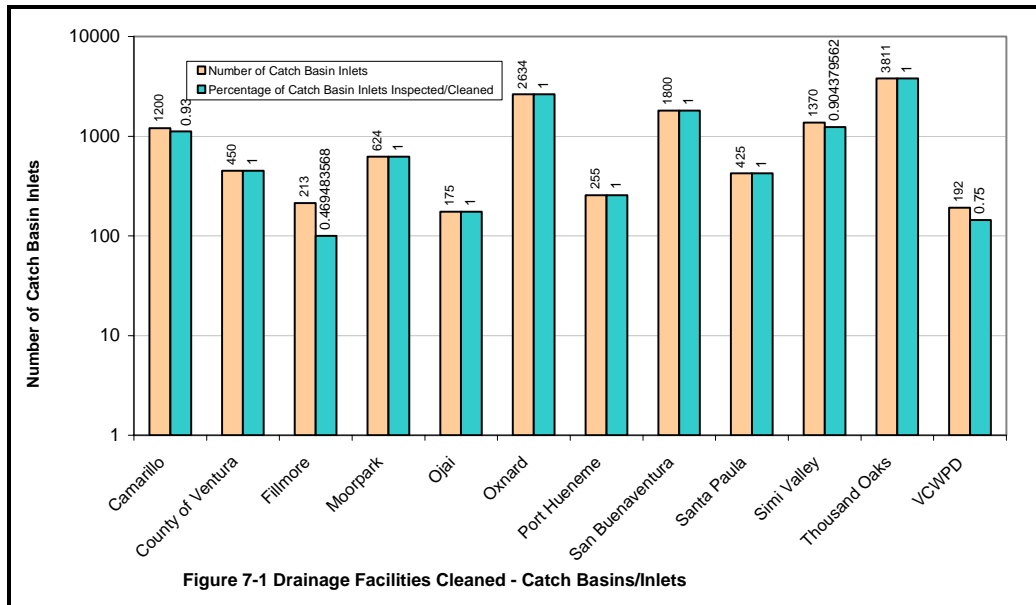
For catch basins, "as-needed cleaning" occurs whenever trash, sediment or debris accumulation in the catch basin is at least 40% of capacity. Because of the design of detention and retention basins includes the accommodation of multi-year accumulations of debris and sediment, "routine cleaning" of these facilities, means the removal of barriers from the inlet/outlet of the facility to restore the operational design and efficiency of the facility.

The debris/sediment is cleaned whenever the basin has filled to target levels established in the facility design or subsequently adopted operation and maintenance protocols for the facility. In addition, debris basins designed to capture debris in flows upstream of urban areas are not considered to be detention or retention basins. Debris basins are inspected and maintained in accordance with applicable local policies and procedures appropriate for these facilities.

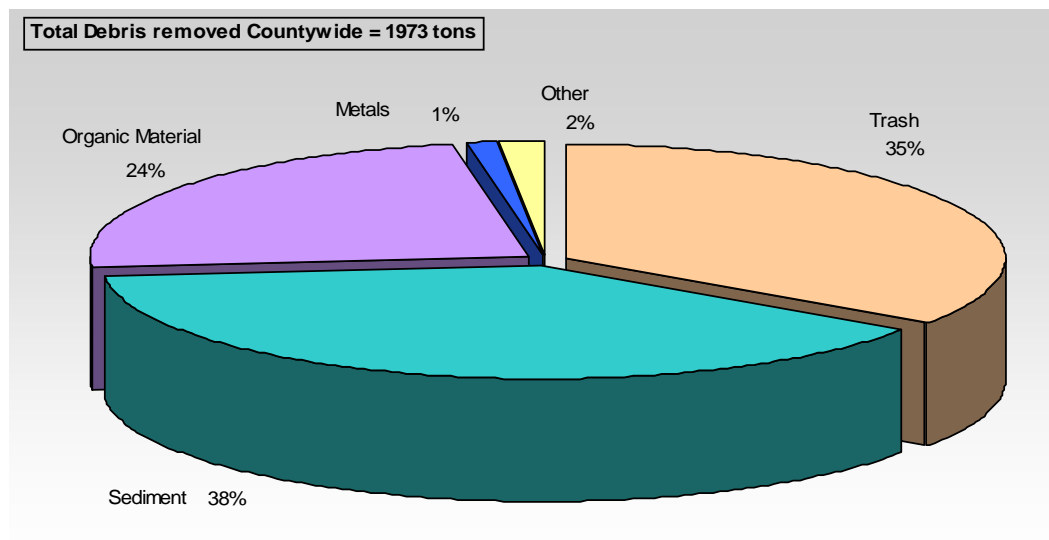
When performing cleaning activities, Co-permittees implement appropriate BMPs to reduce to the MEP materials in the facility and prevent them from being washed downstream.

**Figure 7-1** depicts the number of catch basins/inlets inspected and/or cleaned by Co-permittees this reporting period in relation to the total number of facilities. Most of the Co-permittees achieved the 90% performance criteria established in the SMP.

## SECTION 7.0 PROGRAM FOR PUBLIC AGENCY ACTIVITIES

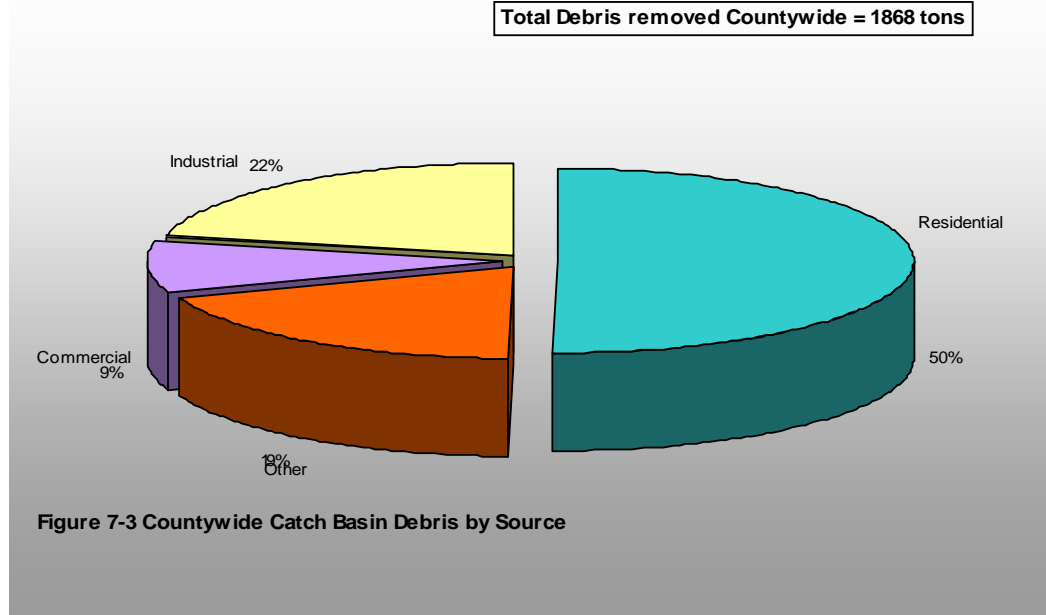


The major type of material removed by the Co-permittees is depicted in **Figure 7-2** and the source of this material is depicted in **Figure 7-3**.

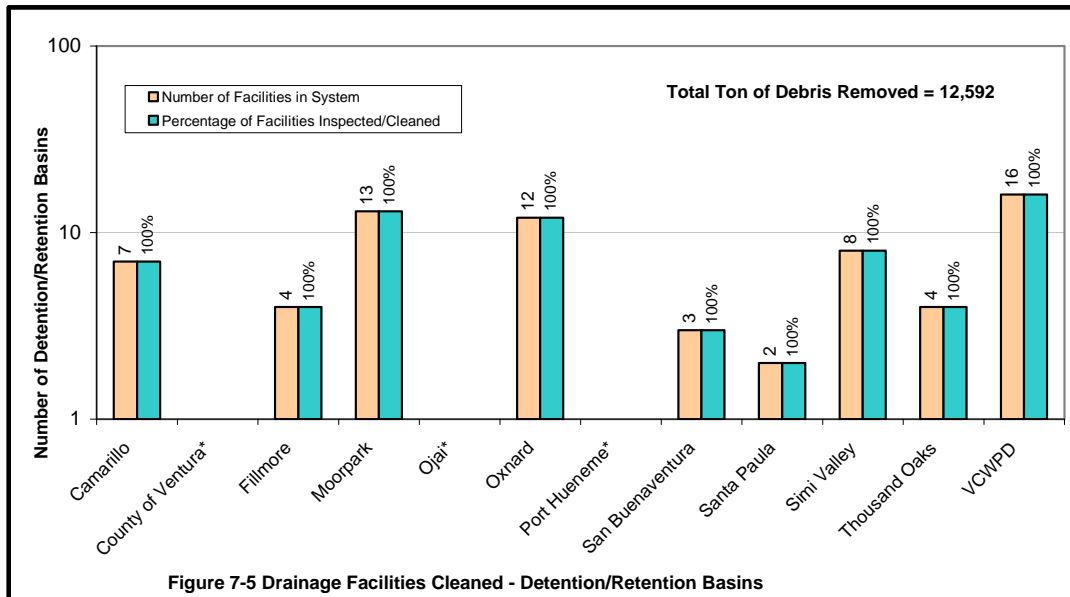




## SECTION 7.0 PROGRAM FOR PUBLIC AGENCY ACTIVITIES



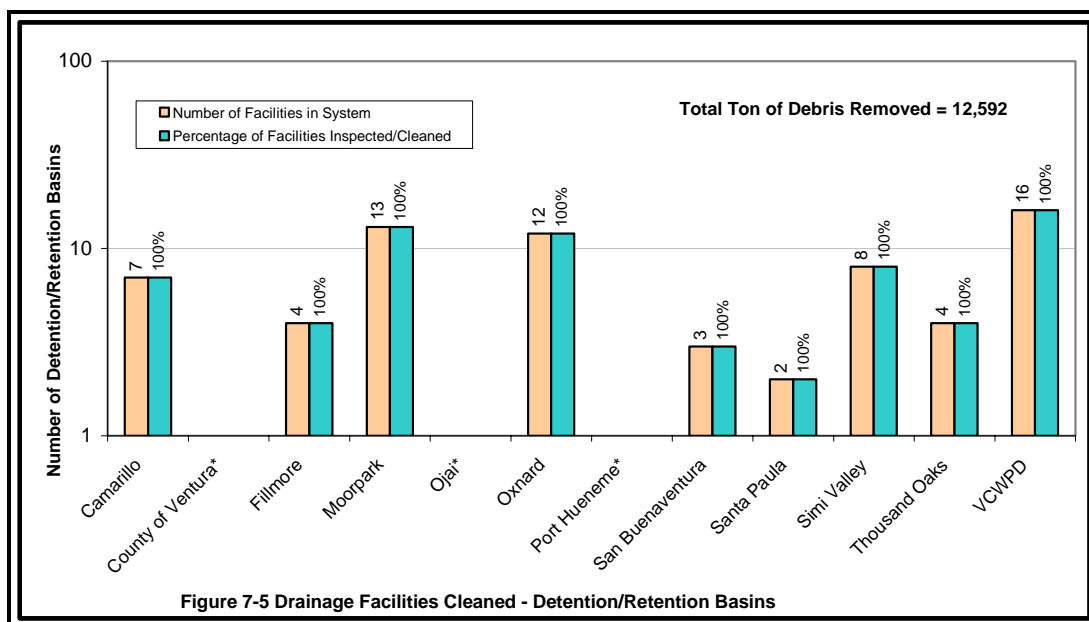
In addition to the debris removed from catch basin inlets, Co-permittees removed approximately 13,933 tons of debris from their channels/ditches, an increase from the 12,100 tons removed last year. Variations in the amount of debris removed are to be expected from year to year as storm patterns, population and landscaping differs from year to year. **Figure 7-4** depicts the number of channels/ditches inspected and/or cleaned by Co-permittees this reporting period in relation to the total number of facilities. All of the Co-permittees achieved the 90% performance criteria established in the SMP.



\* Note that all channels and/or ditches within the City of Moorpark's jurisdiction are maintained by VCWPD.

## SECTION 7.0 PROGRAM FOR PUBLIC AGENCY ACTIVITIES

This reporting period the Co-permittees removed 12,592 tons of debris from their detention/retention basins, well above the 1,043 tons removed last year. This variation in debris removal is due to the differing cleaning and maintenance schedules for each Co-permittee.



\* No facilities within their jurisdiction

Figure 7-5 depicts the number of facilities inspected and/or cleaned by Co-permittees this reporting year in relation to the total number of facilities. All of the Co-permittees achieved the 90% performance criteria established in the SMP.

### 7.3.4 Roadway Operation and Maintenance

Co-permittees have classified curbed streets within their jurisdiction and have implemented a sweeping program for these streets. The identified streets are swept by the Co-permittees, at a minimum, in accordance with the following classifications:

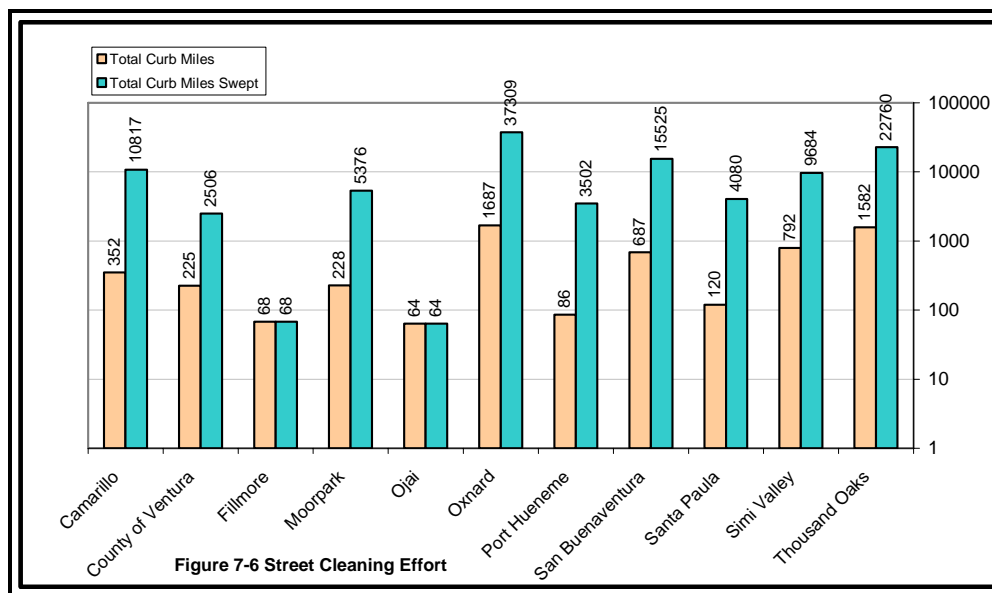
- High traffic downtown areas: sweep at least four times per month
- Moderate traffic collector streets and residential areas: sweep at least six times per year
- Other continuously bermed public streets: sweep at least one time per year prior to wet season

For the purpose of streets in the “other” category, “prior to the wet season” means sweeping the street at least once during the three-month period (July, August, September) immediately prior to the wet season (Permit-defined wet season begins October 1). “Continuously bermed” means a street in the permitted area where a berm exists on both sides of the street without breaks.

To increase the efficiency of the street sweeping, Co-permittees have made an effort to encourage voluntary relocation of street-parked vehicles on scheduled sweeping days. This has been achieved by placing temporary “no stopping” and “no parking” signs, posting permanent street sweeping signs and/or distributing street sweeping schedules to residents and businesses.

## SECTION 7.0 PROGRAM FOR PUBLIC AGENCY ACTIVITIES

**Figure 7-6** indicates the street cleaning effort in total miles cleaned. Co-permittees have made excellent progress in their street cleaning efforts, with all of the Co-permittees exceeding the performance criteria established in the SMP.



\* Note: Total miles swept included sections swept more than once.

Street maintenance activities have the potential to discharge pollutants to the storm drain system if appropriate protective measures are not implemented. Therefore, Co-permittees require roadway maintenance staff, roadway maintenance contractors and others to implement BMPs to control discharge of pollutants to the storm drain system as a result of roadway maintenance activities. At a minimum, Co-permittees have included the following BMPs:

- Prohibit saw-cutting during a storm event of 0.25 inches or greater;
- Prohibit the discharge of untreated runoff from temporary or permanent street maintenance material and waste storage areas from entering the storm drain system.

Some Co-permittees contract their street maintenance work and most issue street cut or similar permits. Co-permittees have addressed work under these contracts or permits by including contract provisions and/or permit conditions requiring street maintenance or repair work comply with the minimum requirements shown above and other BMPs required for protection of water quality. In the event roadway maintenance work must be conducted immediately in order to protect lives or property, Co-permittees make every effort to conduct emergency work in a manner protective of water quality.

### 7.3.5 Pesticide, Herbicide and Fertilizer Application and Use

The Permit requires the Co-permittees to develop and adopt a standardized protocol for the routine and non-routine application of pesticides, herbicides (including pre-emergents) and fertilizers by July 27, 2001. As the Principal Co-permittee, VCWPD developed the protocol, which was reviewed in the Public Infrastructure Subcommittee. Subsequently, the Management Committee approved and adopted the protocol prior to the permit deadline.

The standardized protocol includes the following minimum requirements to control the discharge of pollutants to stormwater due to pesticide, herbicide and fertilizer application:

- Prohibit the application of pesticides, herbicides and fertilizers during rain events;

## SECTION 7.0 PROGRAM FOR PUBLIC AGENCY ACTIVITIES

- Prohibit the application of pesticide, herbicides and fertilizers within one day of a rain event forecasted to be greater than 0.25 inches except for application of pre-emergents;
- Prohibit the application of pesticides, herbicides and fertilizers after a rain event where water is leaching or running from the application area; and
- Prohibit the application of pesticides, herbicides and fertilizers when water is running off-site from the application site.

In addition, Co-permittees require all staff applying pesticides to be either certified by the California Department of Food and Agriculture, or under the direct on-site supervision of a certified pesticide applicator, as defined in the standardized protocol. Co-permittees have also restricted the purchase and use of pesticides and herbicides to certified staff.

Co-permittees that contract out for pesticide applications have included contract provisions requiring the contract applicator meet all requirements of this program, including compliance with the standardized protocol, the prohibitions and requirements for certification and supervision of pesticide applicators.

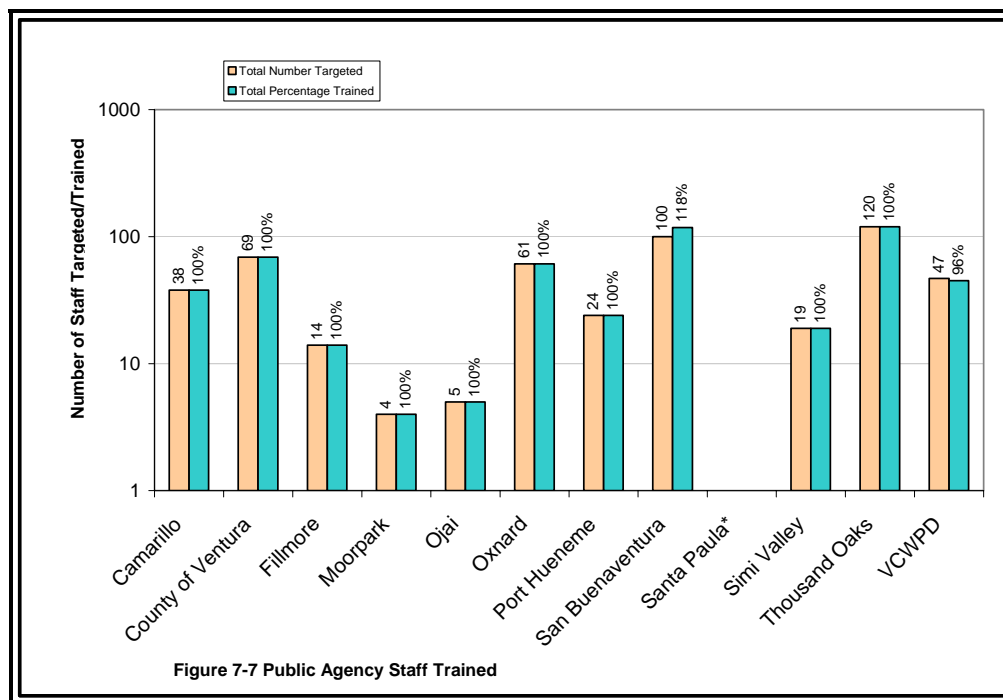
### 7.3.6 Stormwater Quality Staff Training

Each Co-permittee targets staff based on the type of stormwater quality and pollution issues they typically encounter during the performance of their regular maintenance activities. Targeted staff included those who perform activities in the following areas: stormwater maintenance, drainage and flood control systems, streets and roads, parks and public landscaping and corporation yards.

Training methods vary amongst Co-permittees and range from informal meetings, to formal classroom training or self-guided training. The Co-permittees also train staff on the prevention, detection and investigation of illicit discharges and illegal connections (ID/IC). (See **Section 8** for more information regarding ID/IC training).

During the reporting period, the Co-permittees trained 834 municipal staff in stormwater management, SWPCPs, illicit discharge, response and non-stormwater discharges. **Figure 7-7** depicts the number of staff trained in the program area for each Co-permittee. All Co-permittees met or exceeded the performance criterion established in the SMP and trained a minimum of 90% of targeted employees.

## SECTION 7.0 PROGRAM FOR PUBLIC AGENCY ACTIVITIES



\* No targeted staff this Permit Year

### 7.3.7 Aquatic Pesticide NPDES Permit

In March 2001, the Ninth Circuit Court of Appeals determined that discharges of pollutants from the use of aquatic pesticides to waters of the United States may require coverage under an NPDES permit (General Permit No. CAG990003). Coverage under this General Permit is for public entities that discharge pollutants to water bodies associated with the application of aquatic pesticides for resource or pest management. This permit is required regardless if the public entity is already covered by a municipal NPDES permit.

During the 2004-05 reporting period, VCWPD contracted with Larry Walker Associates (LWA) for the implementation of an Aquatic Pesticide Application Plan (APAP) to fulfill the requirements of this permit.

## 7.4 Five Year Permit Summary of Program Accomplishments

### 7.4.1 Corporate Yard SWPCP Inspection Form

In compliance with permit requirements, the Co-permittees developed and implemented Storm Water Pollution Control Plans (SWPCPs) at their corporate yards. Once implemented, the permit requires annual inspections of the corporate yards to evaluate the implementation and effectiveness of the SWPCP. In order to facilitate this process, the Public Infrastructure Subcommittee began discussions on what components of the SWPCP should be evaluated and how best to conduct inspections. As a product of these discussions, the Subcommittee developed a model inspection form Co-permittees could implement at their yards.

During the 2003-03 reporting period, the Co-permittees discussed their efforts using the model inspection form. The Co-permittees plan to continue to address SWPCP implementation and annual inspections at the Public Infrastructure Subcommittee and utilize the lessons learned for improvement and inclusion in future inspection activities.

## **SECTION 7.0 PROGRAM FOR PUBLIC AGENCY ACTIVITIES**

### *7.4.2 Alternative Weed Management*

The requirements for a General Permit for aquatic pesticide applications prompted many of the Co-permittees to review and evaluate their current maintenance activities requiring weed management. Several Co-permittees attended one of the several seminars hosted by the Ventura County Environmental and Energy Resources Department (EERD) on Integrated Pest Management (IPM) approach to weed management. These seminars provided the Co-permittees with alternative less-toxic approaches to weed control. Some Co-permittees found they could incorporate these strategies with only minor modifications to their maintenance activities.

With increasing regulations on the use of pesticides and the growing awareness of environmental impacts from pesticide use, the Co-permittees will continue to explore alternatives and implement effective BMPs.

## SECTION 8.0 PROGRAM FOR ILLICIT DISCHARGES/CONNECTIONS

### 8.1 Program Focus

Illicit discharges/illegal connections can be sources of contamination within municipal storm drain systems. An illicit discharge is any intentional discharge to a municipal storm drain not composed entirely of stormwater and not covered by a NPDES permit. An illicit discharge refers to the disposal of non-stormwater materials such as paint or waste oil into the storm drain or the discharge of waste streams containing pollutants to the storm drain system. The Permit requires the identification and elimination of illicit discharges and illegal connections to the municipal separate stormwater sewer system (MS4).



Example of an Illegal Connection

An illegal connection to the storm drain system is an undocumented and/or un-permitted physical connection from a facility to the storm drain system. The permit requires the Co-permittees to undertake programs to identify and eliminate such illegal connections. Categories of non-stormwater discharges not prohibited (exempted or conditionally exempted) under the Permit (and detailed in the SMP) are listed in **Table 8.1**.

**Table 8.1 Discharges Not Identified as a Source of Pollutants**

<b>Non-stormwater Discharges</b>
Water line Flushing
Discharges from potable water sources
Foundation drains
Air conditioning condensate
Water from crawl space pumps
Reclaimed and potable irrigation water
De-chlorinated swimming pool discharges
Individual residential car washing
Sidewalk washing
Discharges or flows from emergency fire fighting activities

The term “illicit discharges” used in this program includes several categories as follows:

- Incidental spills or disposal of wastes or non-stormwater. These may be intentional, unintentional or accidental and would typically enter the storm drain system directly through drain inlets, catch basins or manholes;
- Discharges of sanitary sewage due to overflows or leaks; usually incidental but may be continuous;
- Continuous or intermittent discharges of prohibited non-stormwater other than through an illegal connection. These typically occur as surface runoff from outside the public right-of-way (e.g., area washdown from an industrial site); and
- Continuous or intermittent non-stormwater discharges through an illegal connection.

To meet the goals and objectives of this program, the Co-permittees have developed a comprehensive illicit discharge/illegal connection program, which includes the following components:

- Illicit discharge elimination
- Illegal connection elimination

## SECTION 8.0 PROGRAM FOR ILLICIT DISCHARGES/CONNECTIONS

- Public Reporting
- Education and Outreach
- Illicit Discharges/Illegal Connections Staff Training

### 8.1.1 *Illicit Discharge Elimination*

The goal of this component is to detect and eliminate illicit discharges from entering the storm drain system to reduce pollutants from such discharge to the MEP. The baseline objectives include:

- Incidental spills/overflows reported by the public, other agencies or observed by a Co-permittee field staff during the course of their normal daily activities will be investigated, contained and cleaned up;
- Prohibited non-stormwater discharges reported by the public, other agencies, or observed by Co-permittee field staff (such as surface runoff associated with cleaning activities from a commercial use) will be eliminated through voluntary termination or enforcement; and
- Suspected non-stormwater discharges reported by the public, other agencies, or observed by Co-permittee field staff whose origin is unknown, will be investigated to determine the nature and source of discharge and eliminated through voluntary termination or enforcement action (when possible).

Co-permittees have prioritized problem areas (where geographical and/or activity-related) for inspection, cleanup and enforcement using the methods defined in the program.

### 8.1.2 *Illegal Connection Elimination*

The goal of this component is to detect and eliminate illegal connections to reduce pollutants discharged through such connections to the MEP. The baseline objectives include:

- Inspect the storm drain system to identify illegal connections during scheduled infrastructure maintenance by personnel
- Connections to the storm drain system that are suspected or observed to be a source of an illicit discharge will be investigated to determine the origin and nature of the discharge.

Once the illegal connection has been investigated, Co-permittees perform one of the following:

If the discharge is determined to consist only of exempted non-stormwater, the connection will be allowed to remain and will no longer be considered an illegal connection. Co-permittees may elect to issue a permit for the connection or allow the connection to remain if information on the connection is documented; or the discharge will be permitted through a separate NPDES permit; or the connection will be terminated through voluntary action or enforcement proceedings.

### 8.1.3 *Public Reporting*

The goal of this component is to promote, publicize and facilitate public reporting illicit discharges and illegal connections. The baseline objective is:

- Implement a program to receive calls from the public regarding potential illicit discharges and illegal connections, communicate and coordinate a response, perform all necessary follow up to the complaint, and maintain documentation.

### 8.1.4 *Education and Outreach*

The goal of this component is to educate targeted audiences, the industrial/commercial business community and the land development/construction community on stormwater quality management,



## SECTION 8.0 PROGRAM FOR ILLICIT DISCHARGES/CONNECTIONS

and the importance of eliminating or mitigating non-stormwater discharges to local streams and channels. Baseline objectives include:

- Provide educational material on non-stormwater discharges and why they are harmful to streams, and oceans at local community events;
- Target the land development/construction community with educational material and provide workshops on stormwater quality regulations and illicit discharge prevention response; and
- Target the industrial/commercial community with educational material and provide workshops on stormwater quality regulations and illicit discharge prevention and response.

### 8.1.5 *Illicit Discharge/Illegal Connections Staff Training*

The goal of training municipal staff is to raise the level of awareness on illegal connections and illegal discharges. When staff is properly trained on how to identify illicit discharges and/or illegal connections, there is an increased likelihood that non-stormwater discharges and/or connections to the storm drain system will be more accurately identified and reported.

### 8.2.1 Program Implementation

#### 8.2.1 *Source Control*

The Co-permittees have a number of programs facilitating the detection of sources of illicit discharges. These programs include industrial facility site visits, drainage facility inspection, water quality monitoring and the wide distribution of public education materials that provide phone numbers and web addresses to encourage the reporting of spills. Through routine maintenance activities within the municipal storm drain system, Co-permittee field personnel continue to report suspected problems and/or discharges to the system. In addition to inspections, the Co-permittees receive notifications from a variety of sources such as the public and regional and/or local agencies.



This reporting year, the Co-permittees continued to:

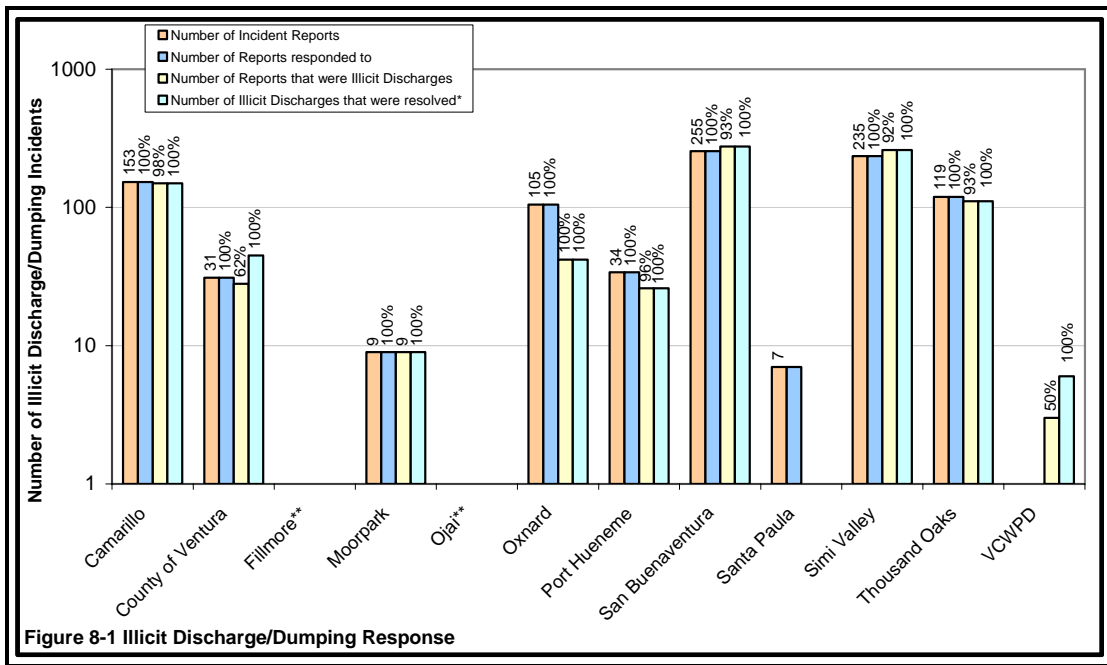
- Investigate the cause, determine the nature and estimate the amount of discharge for each reported illicit discharge/dumping incidents;
- Determine when possible the type of materials and source type for each reported illicit discharge/dumping incidents;
- Determine when possible the probable cause for the illicit discharge/dumping and take appropriate actions to prevent similar discharges from reoccurring;
- Verify that reported illicit discharge/dumping incidents were terminated and/or cleaned;
- Refer illicit discharge/dumping or illegal connections to other agencies when appropriate;
- Identify and eliminate illegal connections' and
- Provide educational materials and contact numbers for reporting illicit discharge/dumping when conducting stormwater inspections;

**Figure 8-1** and **Figure 8-2** show the results of the Co-permittees' efforts. Data presented in Figure 8-1 indicate 15% of the reported incidents were non-illicit discharges. Last year the number of reported incidents of non-illicit discharges was 7%. In order to facilitate accurate reporting of illicit discharges, the Co-permittees will continue their efforts to educate county residents on how to properly identify an illicit discharge and report it to the appropriate agency.

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All of the illicit discharges properly reported were resolved countywide (meaning they were cleaned up; referred to another agency; followed up; and/or educational material was distributed). The number of incidents investigated and addressed by the Co-permittees reporting discharges exceeds the 90% performance criteria established in the SMP. Note: These figures represent incidents Co-permittees responded to as part of the Stormwater Management Program. Incidents addressed by EHD Hazardous Waste Program or local CUPA may not be included in these figures.

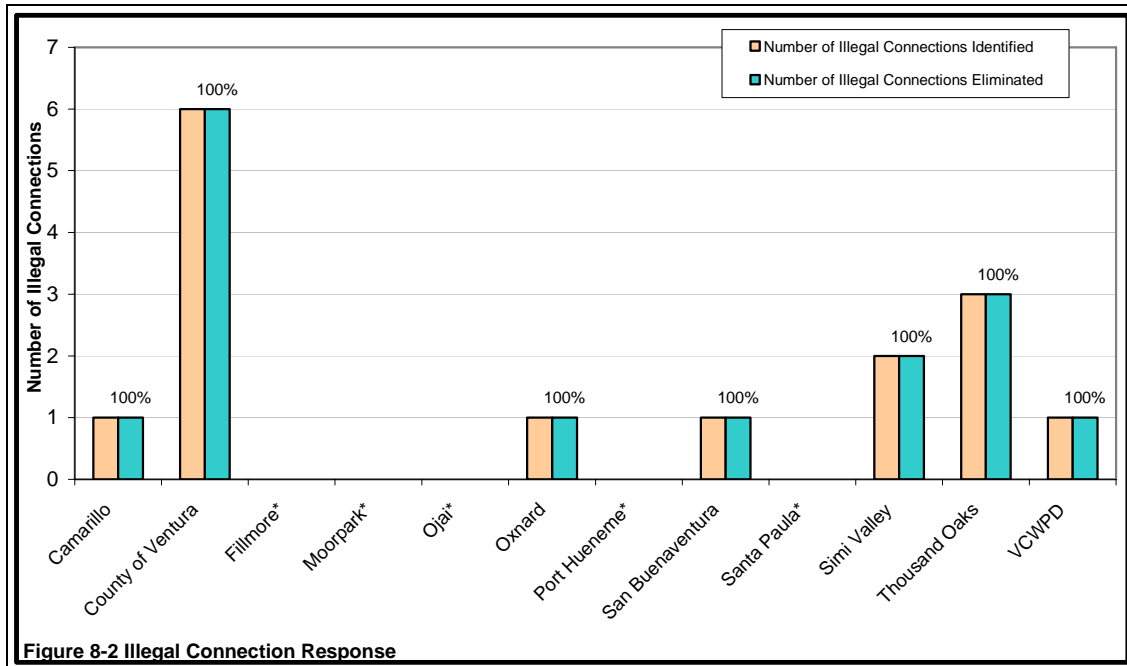
Figure 8-2 indicates the number of illegal connections identified and eliminated. Each Co-permittee detects and eliminates illegal connections within its municipal storm drain system. Any illegal connection identified by the Co-permittees during routine inspections is investigated. Appropriate actions are then taken to approve undocumented connections by permit procedure and/or pursue removal of those connections determined to be illicit connections and therefore not permissible.



\* Resolved includes followed up, education/training provided, cleaned up or referred.

\*\* No illicit Discharges reported this year.

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\* No illegal connections reported this permit year.

If evidence of an illegal discharge is detected and the source does not appear to be evident a source investigation may be conducted to determine if the discharge is being conveyed through an illegal connection. Depending on the type of illicit connection detected, the Co-permittees may eliminate the connection by means of appropriate legal procedures. Follow-up compliance is conducted to ensure any required abatement activities have been successfully and adequately implemented.

Owners of existing drains without appropriate permits (including encroachment permits) are notified to comply. For those drains where the owner is unresponsive or cannot be identified, each Co-permittee is responsible for deciding whether to formally accept the connection as part of their public drainage system or cap it off.

### 8.2.2 Source Determination

As part of their investigation of reported illicit discharges/dumping incidents, the Co-permittees attempt to determine the material's source. This investigation generally entails inspection of the surface drainage system in the vicinity of suspected illicit discharges. This may include accessible areas in the public right-of-way adjacent to residences and businesses, catch basins, open channels near known points of discharge, and upstream manholes.

If the source can be determined, Co-permittees take one or all of the following actions (when appropriate):

- Voluntary cleanup/termination;
- Initiate enforcement procedures;
- Take steps to prevent similar discharges from reoccurring.

When the source cannot be determined, the appropriate department or contractor will be notified to contain and clean up the material. Because these situations and material can vary, procedures vary as well. The following are steps that in general are taken by Co-permittees to determine source:

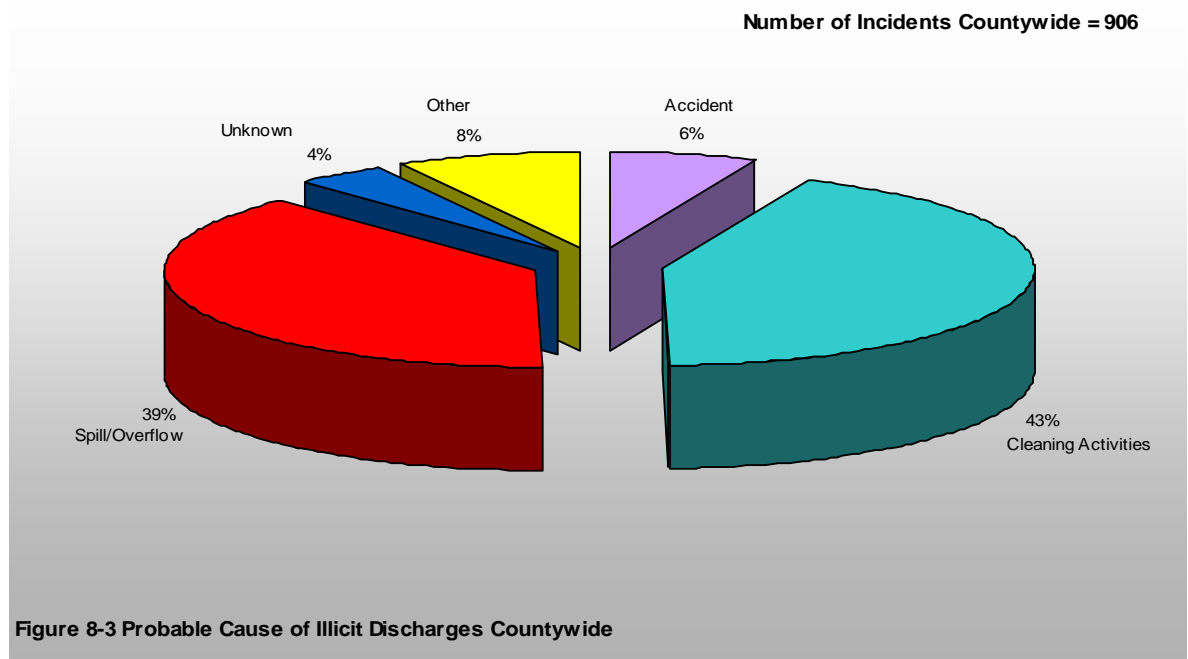
- Verify location of the spill/discharge;

## SECTION 8.0 PROGRAM FOR ILLICIT DISCHARGES/CONNECTIONS

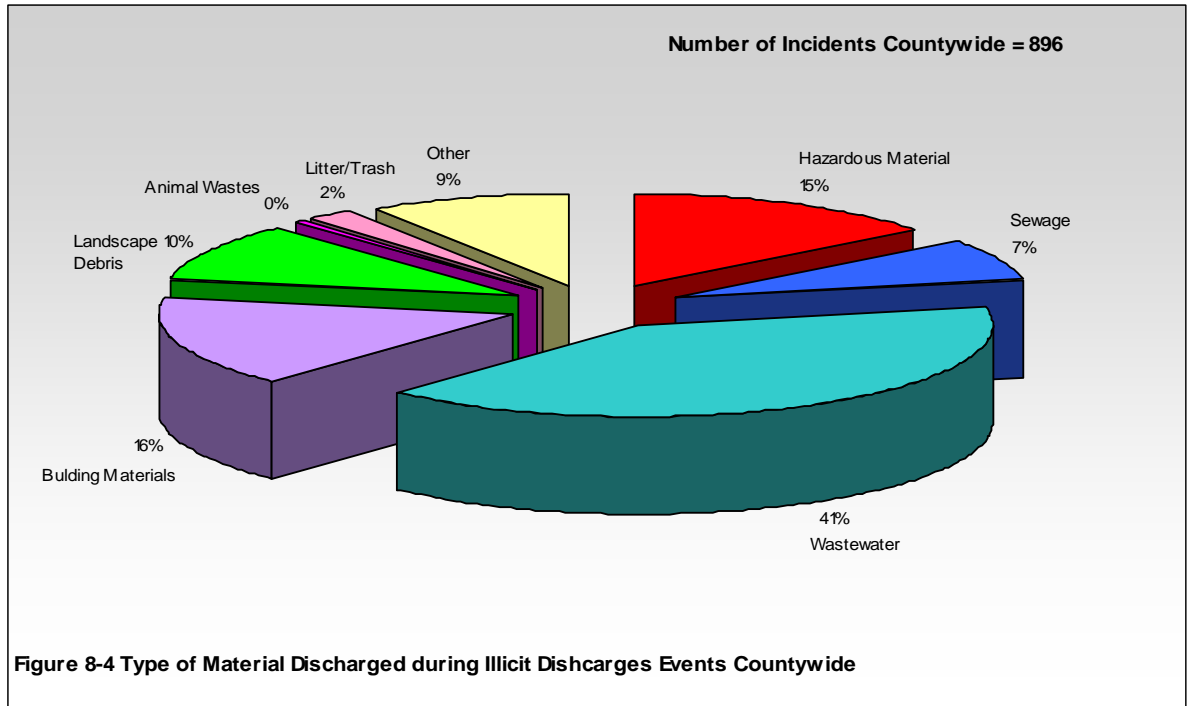
- Investigate the cause (look for origin);
- Determine the nature and estimate the amount of illicit discharge/dumped material;
- Containment and cleanup;
- When appropriate, refer documented non-stormwater discharges/dumping or illegal connections to the proper agency for investigation; and
- If appropriate, notify the RWQCB and/other proper agencies.

**Figure 8-3** indicates the likely cause for illicit discharges countywide. The vast majority of incidents resulted from cleaning activities, which the Co-permittees define as *any activity intended to wash, tidy up or make clean*. In order to reduce the number of illicit discharges and to prevent similar incidents from reoccurring, the Co-permittees have taken a variety of actions. Some Co-permittees provided additional training to field staff (such as Building Inspectors, Engineering Inspectors, maintenance personnel) to look for “potential” discharges. When “potential” discharges are found, Co-permittees provide educational material to the appropriate resident, business owner, etc. In addition, other Co-permittees distribute educational material with all encroachment and building permits. Other Co-permittees publish articles in local magazines regarding pool maintenance, vehicle maintenance and homeowner projects. Some Co-permittees also distribute letters, brochures and informational door hangers directly to homeowners during residential street sweeps in known problem areas.

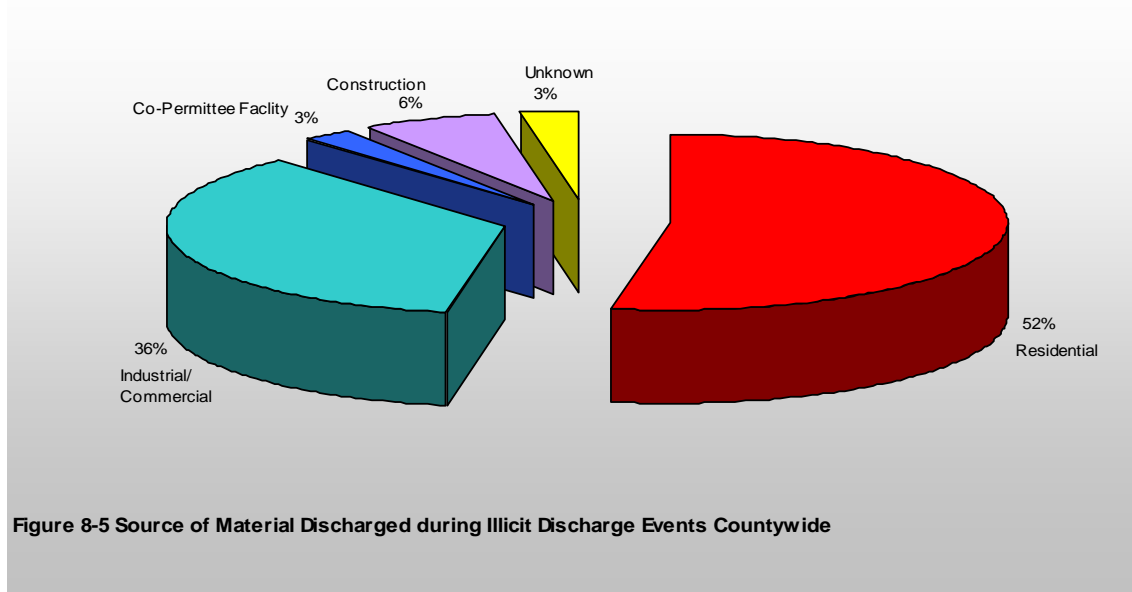
As shown in the following figures, the Co-permittees were able to determine both the type and source of material discharged during illicit discharge/dumping events. **Figure 8-4** shows the type of material discharged, while **Figure 8-5** indicated the source of the material. The categories “wastewater”, “building materials”, and “hazardous material” comprise the majority of material discharged. For more information on categories for material type see **Table 8-2**.



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Major sources of illicit discharge/dumping incidents were attributed to residential (50%) and industrial/commercial (32%). Since these two sources account for 82% of all illicit discharges, the Co-permittees plan to continue targeting business facilities and residents for comprehensive educational outreach. In addition, Co-permittees continue to cross-train all targeted staff on how to identify and report illicit discharges.



### 8.2.3 Enforcement

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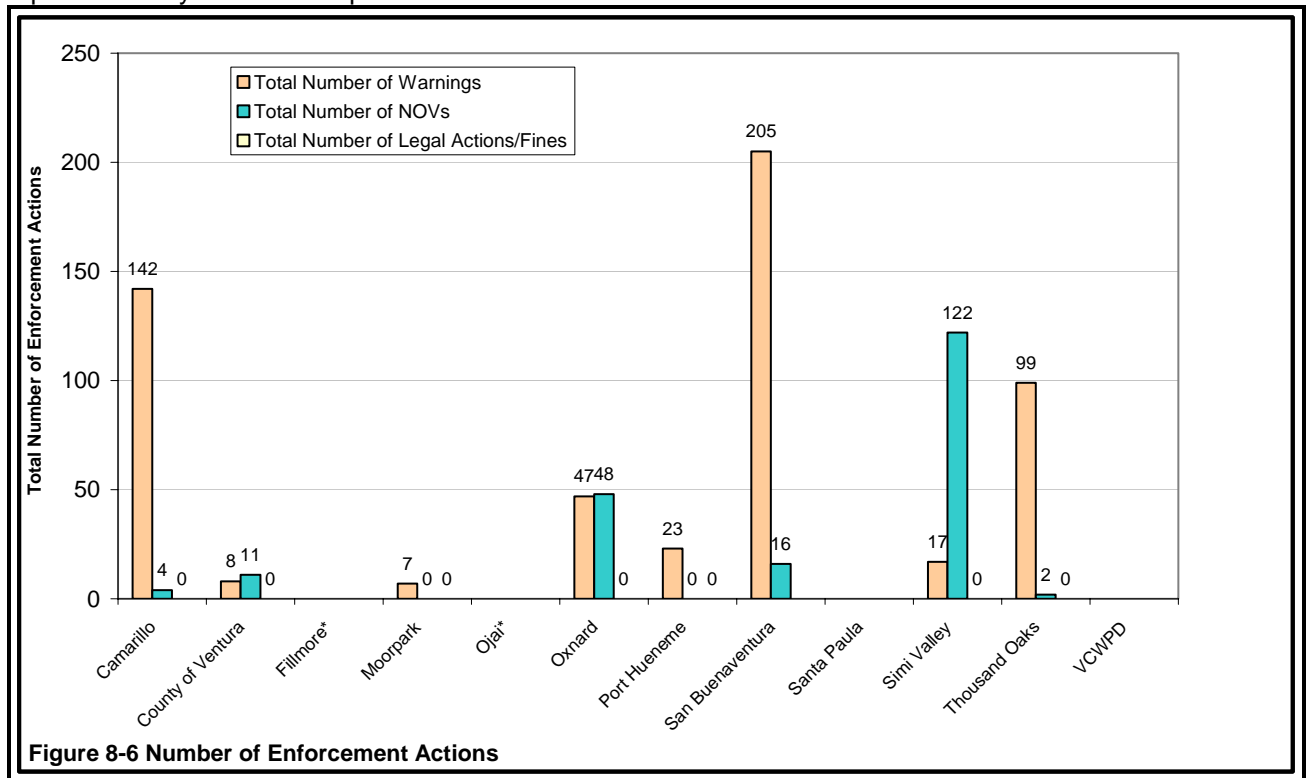
Co-permittees continue to implement enforcement procedures to eliminate illicit discharges and illegal connections. Enforcement procedures consistent with the Co-permittees' legal authority are stipulated in their respective ordinances. While legal authority varies, most enforcement processes follow a common sequence. These typically include:

- Verbal or written warnings for minor violations;
- Formal notice of violation or non-compliance with compliance actions and time frames;
- Cease and desist or similar order to comply; and
- Specific remedies such as civil penalties (e.g., infraction), non-voluntary termination with cost recovery, or referral for criminal penalties or further legal action.

Enforcement activity begins at the appropriate level as determined by the Co-permittees' authorized representative. For incidents more severe or threatening at the outset, enforcement starts at an increased level. Enforcement steps are accelerated if there is evident or clear failure to act or an increase in the severity of the discharge. Enforcement actions for violating any of the provisions of the Co-permittees' ordinances may include any of the following or a combination thereof:

- Criminal Penalties
- Monetary punishment
- Imprisonment
- Civil Penalties

**Figure 8-6 and 8-7** indicate the number and type of enforcement actions taken by the Co-permittees in response to reported illicit discharge/dumping events during this reporting period. The data presented in Figure 8-6 indicates most Co-permittees issued some form of enforcement action when resolving an illicit discharge and/or dumping event. A total of 902 verified illicit discharges were reported countywide and Co-permittees issued enforcement actions on 80% of these incidents.



\* No enforcement action taken.

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As indicated in Figure 8-7, the vast majority of enforcement actions consisted of both verbal and written warnings of violation. Last reporting year, Notice of Violations constituted 21% of all enforcement actions. This year, the Co-permittees improved this level of action by issuing a total of 226 Notice of Violations (29%), and 548 warnings (71%). No monetary fines were collected by the Co-permittees this year. This continued enforcement effort underscores the Co-permittees high level of expectations from its residential and business communities. After eleven years of stormwater educational outreach, the Co-permittees believe that additional tools, such as Notice of Violations (NOVs) and fines are appropriate in certain instances to achieve compliance.

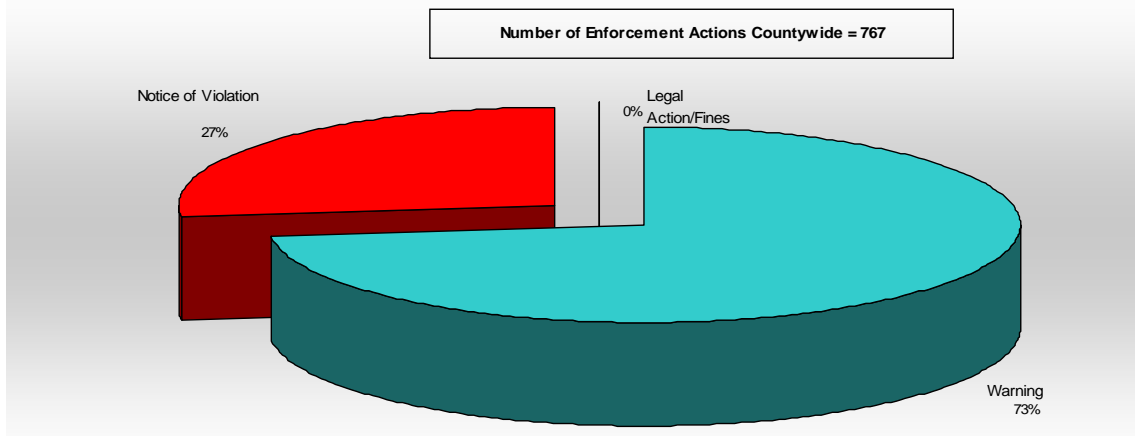


Figure 8-7 Types of Enforcement Actions taken Countywide

In addition, the Co-permittees continue to utilize a database of reported illicit discharge incidents that includes the following information for each event:

- Date of initial inspection
- Type of material discharged
- Source type of discharge
- Probable cause of discharge
- Date of follow-up inspection
- Date of conclusion/clean up/removal/follow up/education
- Enforcement taken action

A printed copy of the Co-permittees' database is attached in Appendix 2. The Co-permittees annually update the database with their activities for the current reporting year and provide a copy as part of the Annual Report.

### 8.2.4 Education and Outreach

Stormwater pollution prevention is most easily and cost effectively achieved through education and awareness. This reporting year, Co-permittees continue to distribute educational material describing illicit discharges, and providing contact numbers for reporting illicit discharges to automotive, food

## SECTION 8.0 PROGRAM FOR ILLICIT DISCHARGES/CONNECTIONS

service and construction sites. Co-permittees develop their educational material with the following goal:

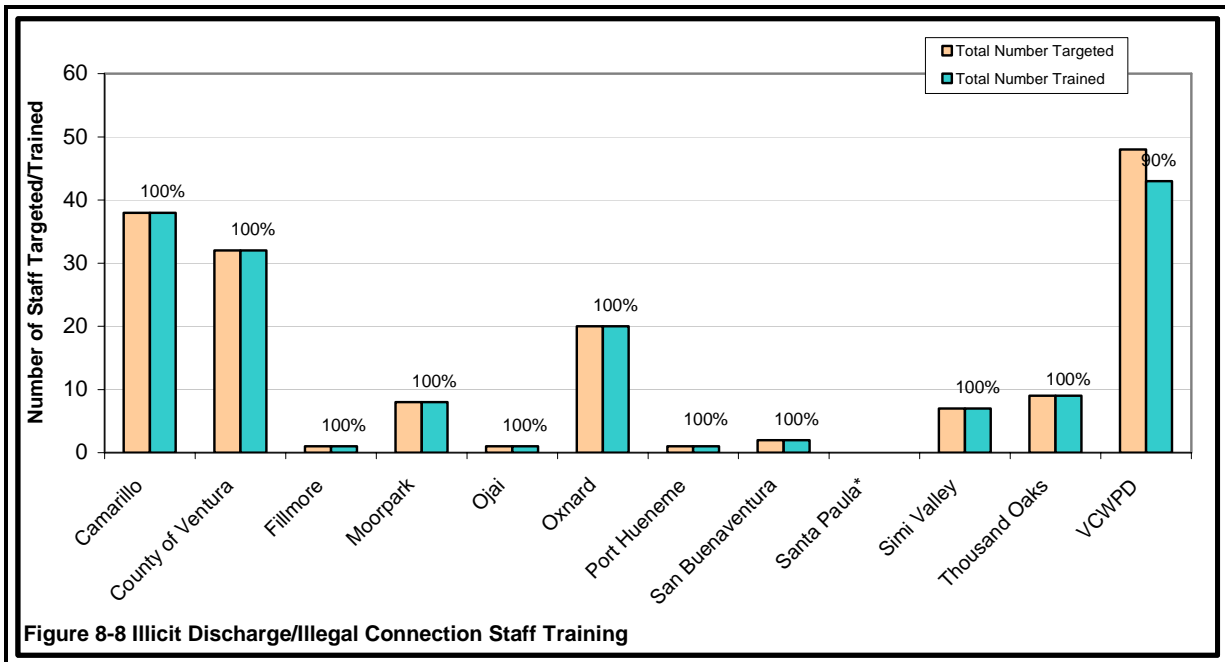
- Instruct special groups on elements of stormwater quality, tools available, where to find assistance/reference materials and where efforts from the public/private sectors are best focused to be most effective.

Details on the number of educational contacts made during this reporting period are included in **Section 4** (Program for Industrial/Commercial Business) and **Section 6** (Program for Construction Sites).

### 8.2.5 Stormwater Quality Staff Training

Each Co-permittee targets staff based on the type of stormwater quality and pollution issues they may encounter. Targeted staff included drainage, roadway, landscape and facilities staff, industrial pretreatment inspectors and code enforcement officers. Training is incorporated with existing business inspection, construction site, and public agency activity programs.

Staff is trained in a manner that provides adequate knowledge for effective illicit discharge identification, investigation, reporting and/or clean up. Training was achieved in a variety of ways, including informal “tailgate” meetings, formal classroom training and/or self-guided training methods. During this reporting period, Co-permittees trained 162 municipal staff on illicit discharge response and non-stormwater discharges. **Figure 8-8** depicts the number of staff trained. All of the eleven Co-permittees exceeded the performance criterion established in the SMP, and trained more than the 90% of targeted employees.



\* No targeted staff this Permit Year

### 8.3 Five Year Permit Summary of Program Accomplishment

The Co-permittees realize the number of categories traditionally used to characterize material type (Hazardous Material, Sewage, Wastewater) resulting from an illicit discharge are limited and often result in many illicit discharges being characterized as “other”. In order to better describe the material



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involved, the Co-permittees discussed at length the typical types of illicit discharges that occur within their jurisdictions and what material is often involved. These discussions were very helpful in clarifying that Co-permittees often have different ideas and opinions on how to describe these events. After much discussion the Co-permittees agreed on four additional categories for material type. To ensure accurate reporting, the Co-permittees agreed to these definitions for each class of “material type” to eliminate any guesswork in describing these events to an absolute minimum.

**Table 8-2** details the categories used by the Co-permittees to describe the material type of an illicit discharge. The definitions of these various categories are solely for facilitating the Co-permittees with their characterization of material type for annual report consistency. The Co-permittees are aware that these definitions are by no means all-inclusive nor necessarily how another agency or person would define these categories. The Co-permittees used a variety of resources as assistance in defining these categories including the Ventura County Environmental Health and websites, the RWQCB website and the Environmental Protection Agency’s glossary of terms and educational outreach materials.

**Table 8-2 Illicit Discharge Material Type**

Material Type & Definitions	
TYPE	DEFINITION
<b>Hazardous Material</b>	By-products of society that can pose a substantial or potential hazard to human health or environment when improperly managed. Posses at least one of the four following characteristics (ignitability, corrosivity, reactivity, or toxicity), or is identified as a listed waste (e.g., oil, used anti-freeze, hydraulic fluid)
<b>Sewage</b>	The waste and wastewater produced by residential and commercial sources and discharged into sewers, includes the sludge produced by Publicly Owned Treatment Works.
<b>Wastewater</b>	The spent or used water from a home, community, farm or industry that contains dissolved or suspended matter.
<b>Building Materials</b>	Any debris associated with construction activities used to construct a building and/or stand-alone facility, such as plaster, dry-wall, nails, wood, etc.
<b>Landscape Debris</b>	Excessive eroded soils, sediment and/or organic materials.
<b>Animal Wastes</b>	Discharge from confinement facilities, kennels, pens, recreational facilities, stables, show facilities and residential yards.
<b>Litter/Trash</b>	Synthetic consumer by-product
<b>Other</b>	Any remaining materials that do not fit into the above mentioned categories.

### 8.3.1 Storm Drain Curb Markers

In addition to marking their storm drain inlets with a pollution prevention message, the City of Camarillo implemented the use of storm drain curb markers with a phone number to report illicit discharges. This combination of two permit-required activities (provide an illicit discharge reporting number to the public and stencil storm drains with a “no dump” message) has proven an effective approach. As a consequence, the city has experienced a significant increase in the number of reports of suspicious substances in the gutter and drain. This resourceful approach has proven a great success for the city in their efforts to improve illicit discharge reporting and the city plans to implement the markers citywide.

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### 8.3.2 *Illicit Discharge Hotline*

The City of San Buenaventura implemented an innovative means to provide city employees and residents with a tool to report illicit discharges. During the 2002-03 reporting period the city developed and distributed a static-cling windshield sticker that displays the city's Illicit Discharge Hotline phone number to all city vehicles along with a flyer describing illicit discharges and encouraging employee participation in this program.

## SECTION 9.0 WATER QUALITY MONITORING

### 9.1 Executive Summary

Pursuant to NPDES Permit No. CAS004002, Order no. 00-108, the Ventura Countywide Stormwater Quality Management Program (Management Program) must submit a Stormwater Monitoring Report annually by October 1<sup>st</sup> summarizing results of water quality monitoring conducted during the monitoring year. Consistent with this requirement the Ventura Countywide Stormwater Quality Management Program has prepared this Report to satisfy the permit requirements and to assess the effectiveness of the overall Stormwater Monitoring Program. The complete report is included as Appendix 3 of this report.

This report provides an investigation of stormwater program effectiveness, characterizes the surface water quality of Ventura County, and summarizes water quality data for monitoring conducted during the 2005/06 season. Analysis of samples collected at various monitoring sites throughout the watershed provides information to assess the impact of stormwater runoff and helps characterize the status of surface water quality for watersheds in Ventura County. The monitoring aids in the identification of pollutant sources and the evaluation of the Stormwater Monitoring Program's effectiveness. Evaluating the Stormwater Monitoring Program's effectiveness allows for changes to be made and continual improvement of the overall Program. This adaptive management strategy improves the quality and effectiveness of the Stormwater Monitoring Program and minimizes the impact of stormwater pollutant discharges throughout the watersheds.

For the 2005/06 monitoring season, several key points have been identified and are highlighted below.

- **This report presents and discusses the water quality monitoring data collected during four wet weather and two dry weather events monitored by the Ventura Countywide Stormwater Monitoring Program (Stormwater Monitoring Program).** The four wet weather events included monitoring at the Stormwater Monitoring Program's Land Use (Event 1), Receiving Water (Event 1), and Mass Emission (all events) sites, collectively representing all three watersheds (Calleguas Creek, Santa Clara River, and Ventura River) in which the Stormwater Monitoring Program conducts its water quality monitoring activities. The two dry weather events included monitoring only at the Mass Emission stations. The Stormwater Monitoring Program conducted a thorough QA/QC evaluation of the environmental and QA/QC results generated from its analysis of water quality samples and found the resultant data set to have achieved a 94.2% success rate in meeting program data quality objectives. Overall, the 2005/06 monitoring season produced a high quality data set in terms of the low percentage of qualified data, and low reporting levels achieved by all laboratories analyzing the Stormwater Monitoring Program's water quality samples.
- **Sampling equipment was permanently installed at the new Ventura River NPDES Mass Emission Monitoring Station (ME-VR2) located at the Ojai Valley Sanitation District's Treatment Plant above the POTW outfall.** The extremely heavy rainfalls and correspondingly high flows observed in the Ventura River Watershed during January and February 2005 resulted in the need to relocate the original ME-VR Mass Emission station (located on Casitas Vista Road at Foster Park) to a new downstream location due to landslide activity and associated safety concerns at the ME-VR site. The new ME-VR2 Mass Emission site – located approximately one mile downstream of the historical ME-VR site – was first monitored using portable sampling equipment in May 2005. In September 2005, Ventura County Watershed Protection District (VCWPD) staff permanently installed a refrigerated sampler, flow meter, and tipping bucket rain gauge at the new ME-VR2 monitoring site. A digital cellular modem providing remote access to information compiled by all monitoring equipment was installed in June 2006. Due to the unique physical characteristics of the Ventura River at the ME-VR2 monitoring site, a new

## SECTION 9.0 WATER QUALITY MONITORING

flow-rating table for this site was developed with assistance from the VCWPD Hydrology Section.

- **VCWPD employed the services of CRG Marine Laboratories, Inc., in order to achieve low detection limits for the majority of the water quality parameters evaluated by the Stormwater Monitoring Program.** As a means of improving the detection capability of various constituents found in the water quality samples collected by the VCWPD, the Stormwater Monitoring Program again employed the services of CRG Marine Laboratories, Inc (CRG). CRG began analyzing the majority of the water quality parameters evaluated by the Stormwater Monitoring Program at the beginning of the 2003/04 monitoring season. CRG is known for their ability to measure analytes at concentrations much lower than most water quality laboratories. During the current monitoring year, CRG was able to achieve detection limits for trace organic compounds (i.e., organics, PCBs, and pesticides) that are 100 – 1000 times lower than laboratories used in the past. This translates into a current achievable detection limit of 0.01 µg/L for an organic compound such as 1,4-Dichlorobenzene, whereas in years past the detection limit for this constituent was 10 µg/L. Additionally, CRG typically achieved detection limits for metals 10 times lower than historic levels for this class of constituent. Additional laboratories used by VCWPD also possess the ability to measure target analytes at very low levels.
- **VCWPD staff evaluated environmental and QA/QC water chemistry data using new 2005/2006 Data Quality Evaluation Plan and Data Quality Evaluation Standard Operating Procedures guidance documents.** The Stormwater Monitoring Program drafted two new guidance documents to help VCWPD staff accurately and consistently evaluate water chemistry data collected by the Stormwater Monitoring Program. The new *2005/2006 Data Quality Evaluation Plan* (DQEP) describes the multiple step process used by VCWPD staff to identify errors, inconsistencies, or other problems potentially associated with Stormwater Monitoring Program data. Furthermore, the DQEP describes the various data quality objectives (DQOs) to which environmental and QA/QC data are compared as part of the Stormwater Monitoring Program's quality assurance/quality control program. The new *Data Quality Evaluation Standard Operating Procedures* document is a set of written instructions describing both technical and administrative operational elements undertaken by the Stormwater Monitoring Program in carrying out its DQEP.
- **VCWPD used its water quality database to store and analyze stormwater quality data.** The Stormwater Monitoring Program invested approximately \$150,000 in the past three years to develop a water quality database to further expedite, standardize, and enhance the Stormwater Monitoring Program's data management and data analysis activities. This monitoring season marks the first time water quality data were received by the Stormwater Monitoring Program as electronic data deliverables (EDDs) due to a recent upgrade of the database that allows it to automatically import electronic data formatted in either Microsoft Excel® or Microsoft Access®. Key database attributes include automatic importation and cursory evaluation of electronically formatted data, semi-automated QA/QC evaluation, automated comparison of the Stormwater Monitoring Program's data to water quality objectives, and a wide array of hard copy and electronic data reporting features. These enhancements to the database allow the Stormwater Monitoring Program to improve its overall data management effort by providing staff with a robust data management tool for the storage, analysis, and reporting of stormwater monitoring data.
- **Acute toxicity of *Ceriodaphnia dubia* (water flea) was observed during one wet weather event at Receiving Water site W-3.** Acute toxicity tests using water flea were performed at all Land Use (A-1, I-2, R-1) and Receiving Water (W-3 and W-4) monitoring sites during the first October 2005 monitoring event (Event 1). A TUa > 1 (which

## SECTION 9.0 WATER QUALITY MONITORING

demonstrates acute toxicity) was observed at the W-3 Receiving Water site. Although toxicity was detected, a subsequent Toxicity Identification Evaluation (TIE) test was unable to identify the toxicant(s) as the toxicity had dissipated in the Receiving Water sample at the time the TIE was performed.

- **No chronic toxicity of *Strongylocentrotus purpuratus* (Purple Sea Urchin) was observed during wet or dry weather events at Mass Emission stations during the 2005/06 monitoring season.** Chronic toxicity tests using purple sea urchin were conducted during two wet weather events (October and November 2005) and one dry weather event (May 2006) at the three Mass Emission stations. Chronic toxicity (as determined by a TUC > 1.0) was not detected at any Mass Emission site.
- **Elevated pollutant concentrations were observed at all monitoring sites during one or more monitored wet weather storm events, and at Mass Emission sites ME-CC and ME-SCR during one or more dry weather events.** Constituent concentrations above Los Angeles Region Basin Plan and California Toxics Rule water quality objectives were measured at the following monitoring sites:

### Mass Emission Sites

<b>ME-CC</b>	<b>Anion:</b> Chloride (dry) <b>Bacteriological:</b> E. coli (wet and dry), Fecal Coliform (wet and dry) <b>Conventional:</b> Total Dissolved Solids (dry) <b>Metal:</b> Aluminum (wet and dry), Mercury <b>Organic:</b> Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Bis(2-ethylhexyl)phthalate, Chrysene <b>Pesticide:</b> 4,4'-DDD (wet and dry), 4,4'-DDE (wet and dry), 4,4'-DDT (dry)
<b>ME-VR2</b>	<b>Anion:</b> Chloride <b>Bacteriological:</b> E. coli, Fecal Coliform <b>Conventional:</b> Total Dissolved Solids <b>Metal:</b> Aluminum, Mercury <b>Organic:</b> Bis(2-ethylhexyl)phthalate
<b>ME-SCR</b>	<b>Bacteriological:</b> E. coli, Fecal Coliform (wet and dry) <b>Metal:</b> Aluminum (wet and dry), Cadmium, Mercury, Nickel, Selenium (dry) <b>Organic:</b> Bis(2-ethylhexyl)phthalate, Chrysene

### Receiving Water Sites

<b>W-3</b>	<b>Bacteriological:</b> E. coli, Fecal Coliform <b>Conventional:</b> Total Dissolved Solids <b>Metal:</b> Aluminum, Mercury <b>Pesticide:</b> 4,4'-DDD, 4,4'-DDE
<b>W-4</b>	<b>Bacteriological:</b> E. coli, Fecal Coliform <b>Conventional:</b> Total Dissolved Solids <b>Metal:</b> Aluminum <b>Nutrient:</b> Nitrate as N <b>Organic:</b> Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Chrysene, Indeno(1,2,3-cd)pyrene <b>Pesticide:</b> 4,4'-DDD, 4,4'-DDE

## SECTION 9.0 WATER QUALITY MONITORING

Even though receiving water objectives are not directly applicable to constituent concentrations measured and recorded at Land Use monitoring stations, the Stormwater Monitoring Program performed comparisons between Land Use water quality data and Los Angeles Region Basin Plan and California Toxics Rule objectives as a means of identifying potential pollutants of concern. The following constituents were above these objectives:

### Land Use Sites

**A-1**                    **Bacteriological:** E. coli, Fecal Coliform  
**Conventional:** Total Dissolved Solids  
**Nutrient:** Nitrate as N  
**Pesticide:** 4,4'-DDD, 4,4'-DDE

### Bioassessment Monitoring

The following were the main findings for the 2005 benthic macroinvertebrate (BMI) survey of the Ventura River Watershed:

- **The September 2005 BMI survey was preceded by winter storms in December 2004, and January and February 2005 that dropped a combined total of 44.5 inches of rain (23.3 inches above normal) and represented the greatest amount of rain measured during the last five years since BMI sampling began.** These storms produced widespread flooding, erosion, and sedimentation throughout the Ventura River Watershed.
- **Physical habitat conditions at the 14 sampling sites ranged from marginal to optimal.** The best habitat scores were at the locations on the upper main stem of the Ventura River, upper San Antonio Creek, and Matilija Creek. The lowest scores were at locations on the lower Ventura River and Canada Larga Creek.
- **Based on the Southern California Index of Biological Integrity (So CA IBI), the aquatic health of the Ventura River Watershed during 2005 ranged from poor to fair.** One site each on the Ventura River and San Antonio Creek ranked in the poor range and the other twelve sites in the watershed ranked in the fair range. Sites that ranked in the poor range were located in areas of the watershed impacted by either a large human transient population on the Ventura River or located downstream of an erosion control project in the vicinity of grazing and animal stables.

The complete Ventura Countywide Stormwater Monitoring Program 2005/06 Annual Monitoring Report, October 2006 is included as Appendix 3 of this report.

## SECTION 10.0 POLLUTANTS OF CONCERN

### 10.1 Pollutants of Concern Assessment

On an annual basis Co-permittees review the monitoring data generated by the Stormwater Monitoring Program (described in Section 8) as a means to evaluate the effectiveness of the existing Stormwater Management Program and to help direct future efforts and resources to the appropriate problematic water quality issues. During August 2005 the co-permittees conducted a limited review of the Stormwater Monitoring Program's historic data set (1993 – 2004) at Receiving Water sites W-3 and W-4 and Land Use sites I-2 and R-1 to determine whether discernable trends in the concentrations of the constituents contained in the 2003 POC list (see Table 1) could be identified. What follows is a brief summary of the findings of the trend analysis of POCs.

**Table 1: 2003 Pollutant of Concern List**

<b>Rank</b>	<b>Pollutant of Concern</b>
1	Total Nitrogen
2	Total DDT
3	Chlorpyrifos
4	Copper*
5	Total Coliforms
6	Ammonia
7	Zinc*
8	Lead*

\*Includes both total and dissolved fractions.

The trend analysis used statistical summary results to identify POCs with sufficient data to ascertain potential trends in concentrations measured at Receiving Water and Land Use sites. Trend analysis was conducted on POCs when the following criteria were met:

- Pollutant was sampled at least 10 times, and
- Pollutant concentration was detected in at least 65% of the samples

Based on these criteria, the following pollutants were selected for trend analysis:

- Nutrients: Ammonia as N, Nitrate as N, and TKN
- Metals: Copper, Lead, and Zinc (total and dissolved fractions)
- Pesticides: 2,4'-DDD, 2,4'-DDT, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, Total Detectable DDTs, and Chlorpyrifos
- Bacteria: Total Coliform

**Trend Analysis Using Simple Linear Regression Analysis** – The principal statistical method used to address the objectives of this analysis consisted of a simple linear regression (SLR). Unless specified, thresholds for statistical significance were set at a confidence level of 95% ( $p < 0.05$ ) for all analyses.

**Fitness Analysis** – Distribution fitness tests were conducted first (using the statistical software program JMP 5.1) to evaluate how well the data fit a lognormal or normal distribution. The statistical tests used were the Shapiro-Wilk test for normal distribution and the KSL (Kolmogorov-Smirnov-Lilliefors) goodness-of-fit test for lognormal

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distribution, respectively. A reasonable fit to a particular distribution was assumed if the p-value for the test statistic was  $> 0.05$ . A review of the fitness analysis results indicated in nearly every case a lognormal distribution clearly provided a better distribution representation than a normal distribution for the data under consideration. The only exceptions were 2,4'-DDD data at site W-4, ammonia-N data at site W-4, nitrate-N data at site I-2, and total detectable DDT data at site W-4, where either distribution was shown to be acceptable. Based on these results and the distribution pattern for all parameters and sites, lognormal distribution was assumed for all POCs in the statistical analysis.

### 10.1.1 Results by POC

A review of the results reveals eight pollutants having either increasing or decreasing trends that were found to be statistically significant. Furthermore, the low  $R^2$  values for 9 of the 11 significant trends indicate these trends are statistically weak and therefore should be regarded with caution. Dissolved lead and dissolved zinc at monitoring site W-3 show the most significant decreasing trend with  $R^2$  values of 0.851 and 0.792, respectively. However, the observed decrease for these two metals is relatively minor. Using the slope and y-intercept to calculate a rate of change in concentration (as % change/year) for each site-POC pair, it was shown the greatest positive change (increase in concentration) over the period of study occurred for total coliform at the industrial land use site I-2 (24.36%), while the greatest negative change (decrease in concentration) was observed for dissolved lead at site W-3 (53.70%). These percent change/year results should not be extrapolated beyond the period of study in the absence of identifying specific causes for the observed increasing or decreasing trends.

**DDT Pesticides** – Analysis of DDT pesticides monitoring data did not reveal a significant trend in concentration (either increase or decrease) at any of the four monitoring sites analyzed. The lack of a discernible trend can be attributed to the limited time period of data available for the analysis. DDT-related pesticides are legacy pollutants that are persistent in the environment and very slow at degrading. Therefore, it is unlikely a significant concentration change will be observed in the monitoring data collected over relatively brief time periods (R-1 and I-2: 1993-2004; W-3 and W-4: 1997-2004).

**Metals** – The most consistent trend observed was the decrease in dissolved lead at sites I-2, W-3, and W-4. Although no statistically significant trend was observed for dissolved lead at site R-1, a decrease was observed at site R-1 for total lead.

A statistically significant increasing trend in total copper concentrations was found at site I-2, while a decrease in total copper was observed at site W-4.

Statistically significant decreasing trends in dissolved and total zinc concentrations were observed in the receiving water sites W-3 and W-4, respectively.

**Nutrients** – A statistically significant increasing trend in ammonia-N concentrations was observed at site I-2, while a decrease in TKN was found at site W-4. No statistically significant trends were observed for nitrate-N at any of the sites.

**Bacteria** – The only statistically significant trend observed for total coliform was an increase at site I-2.



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### 10.1.2 Results by Site

**Site R-1 (Residential Land Use Monitoring Site)** – The only statistically significant trend observed at site R-1 is a decrease in total lead concentrations. Over the time period analyzed (1993-2004), the total lead concentration at the site exhibited an 18.37% reduction per year. All other POCs evaluated at this site did not exhibit any discernible trends.

**Site I-2 (Industrial Land Use Monitoring Site)** – The trend analysis revealed increasing concentrations of ammonia, total copper, and total coliform, and a decreasing trend in dissolved lead concentrations at this industrial land use monitoring site. The greatest rate of increase in pollutant concentration during the study period (1994-2004) was observed for total coliform bacteria, with a calculated percent change/year of 24.36. Ammonia-N and total copper showed lower rates of change in the increase of their concentrations, while dissolved lead exhibited a 24.36% reduction from 1993-2004.

**Site W-3 (Receiving Water Monitoring Site)** – Statistically significant trends were identified for the dissolved fractions of lead and zinc. Concentrations for both metals appear to be decreasing at the rates of 53.70% (dissolved lead) and 33.30 (dissolved zinc), respectively, over the monitoring period studied (1997-2004).

**Site W-4 (Receiving Water Monitoring Site)** – Statistically significant trends were identified for dissolved lead, total copper, total zinc, and TKN. All four POCs concentrations appear to be decreasing over the monitoring period studied (1997-2004), with dissolved lead showing the greatest reduction at 41.84%/year.

### 10.1.3 List of potential Sources for POCs

Information on the geologic structure and specific land use practices contributing to POC loading in the four sub-watersheds under consideration is limited. To this end, general observations were made in identifying and listing potential sources for the POCs detected at the four monitoring sites.

**Nitrogen Compounds** – Sources of nitrite, nitrate, and ammonia are generally provided by agricultural activities (including nitrogenous-based fertilizers), animal fecal matter, human fecal matter (from homeless encampments), natural environmental concentrations, automobile emissions, and unregulated home use and disposal of fertilizers.

**DDT Pesticides** – Prior to 1972 when its use was banned, DDT was a commonly used pesticide in both commercial agriculture and home gardening. Although it is no longer used or produced in the United States, DDT persists in the environment. DDT, and its break-down products DDE and DDD, are persistent, bioaccumulative, and toxic. Sources of DDT include atmospheric deposition and soil and sediment runoff.

**Total Coliform Bacteria** – Sources of total coliform are human waste (from homeless encampments and diapers), domestic animals, livestock production, and natural occurring sources from wildlife and soil organisms.

**Metals (Copper, Lead, Zinc)** – Sources for metals found in stormwater runoff include industries, commercial businesses, residential activities, and ambient concentrations in

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the soil and water supply. Industries, such as electroplating or metal finishing operations, and commercial businesses, such as vehicle services (fueling, auto repair, and painting), machine shops, printers, and car washes are most likely to contribute metals into runoff without preventative source control measures in place. In residential areas, painting activities are likely sources of metal contribution in drainage and runoff. Brake pad dust from roadways is a likely significant source of copper as well.

### 10.1.4 POC Assessment Summary and Conclusions

Of the 20 individual POC constituents considered in this analysis from each of the four monitoring sites, only 17 pollutants possessed sufficient detected data for statistical analysis at one or more of the sites. Of the 17 pollutants that underwent trend analysis for one or more sites (for a total of 53 individual site-POC trend analyses), data from 11 site-POC pairs were observed to possess either a significant increasing or decreasing trend in pollutant concentration. Three of the 11 significant trends revealed increasing concentrations; these for ammonia, total copper, and total coliform at industrial land use site I-2. The other eight significant trend analyses revealed decreasing POC concentrations for total copper (W-4), dissolved lead (I-2, W-3, W-4), total lead (R-1), dissolved zinc (W-3), total zinc (W-4), and TKN (W-4).

As noted earlier, the low  $R^2$  values associated with all significant trends, except dissolved lead and dissolved zinc at receiving water site W-3, indicate these trends are weak and should be regarded with caution. Furthermore, the two statistically stronger decreasing trends observed at site W-3 possess slopes of small magnitude, meaning the decrease in concentrations of these metals at this site is relatively minor. Using the slope and y-intercept to calculate a rate of change in concentration (as % change/year) for each site-POC pair, it was shown the greatest positive change (increase in concentration) over the period of study occurred for total coliform at the industrial land use site I-2 (24.36%), while the greatest negative change (decrease in concentration) was observed for dissolved lead at site W-3 (53.70%). These percent change/year results should not be extrapolated beyond the period of study in the absence of identifying specific causes for the observed increasing or decreasing trends. Generally speaking, where statistically significant trends in data could be identified, both receiving water sites exhibited decreases in POC concentrations, the industrial land use site I-2 exhibited three increases and one decrease in POC concentrations, and site R-1, representing residential land use, showed a single decreasing trend. With regard to the three identified increasing POC trends (ammonia, total copper, and total coliform at site I-2), the Stormwater Management Program needs to consider how to incorporate this information into its next POC update and what affect it might have on the prioritization of individual POCs.

A review of the current BMP program and the results of the trend analysis generally supports the premise the Stormwater Management Program is adequately addressing its self-identified list of pollutants of concern and potential pollutants (e.g. trash and sediment). The trend analysis indicates the one site that showed potential increases in pollutant concentrations was the industrial land use site I-2, and the pollutants showing concentration increases were ammonia, total copper, and total coliform. The Stormwater Management Program may consider implementing an enhanced pollutant source identification and control effort in this area. In contrast, the most common decreasing trend observed was for dissolved lead at sites I-2, W-3, W-4, indicating some reduction in the loading of this pollutant in three of the four sub-watersheds studied.