

US EPA ARCHIVE DOCUMENT

Program Evaluation Report

San Diego Area Stormwater Program: Cities of Escondido, National City and Oceanside (NPDES Permit No. CAS0108758)

Executive Summary

Tetra Tech, Inc., with assistance from U.S. EPA Region 9 and the California Regional Water Quality Control Board, San Diego Region (Regional Board), conducted a program evaluation of 3 of the 20 copermittees implementing the San Diego Area Stormwater Program (Program) in February 2003. The purpose of the program evaluation was to determine the copermittees' compliance with the National Pollutant Discharge Elimination System (NPDES) permit (CAS0108758 and Board Order No. 2001-01) and to evaluate the current implementation status of the permittee's Jurisdictional Urban Runoff Management Program (JURMP) with respect to EPA's stormwater regulations. The program evaluation included an in-field verification of program implementation. The three copermittees evaluated were the cities of Escondido, National City, and Oceanside.

This program evaluation report identifies potential permit violations, program deficiencies, and positive attributes and is not a formal finding of violation. Program deficiencies are areas of concern for successful program implementation. Positive attributes indicate overall progress in implementing the program.

The following potential permit violations and program deficiencies are considered the most significant:

- The City of Escondido's corporation yard lacked adequate practices to prevent stormwater contamination.
- National City's assessment of the effectiveness of its JURMP is inadequate.
- National City lacks a clear understanding of the Standard Urban Stormwater Mitigation Plan (SUSMP) requirements.
- National City does not adequately identify and prioritize construction sites.
- National City needs to formalize its construction inspection process.
- National City's industrial inspection inventory does not include all required industrial facilities.
- The City of Oceanside has continually allowed BMP failure at the Rancho Del Oro Road extension capital improvement project.

- One or more additional dedicated erosion and sediment control inspector(s) are required in the City of Oceanside to prevent future permit violations.

Several elements of the copermittees' program were particularly notable:

- The City of Escondido has an effective monitoring and tracking process using the Azteca geographic information system (GIS) computer program.
- The City of Escondido has developed a Cleanup Deposit program to ensure contractors are compliant with City regulations regarding erosion and sediment control.
- National City has conducted more than 400 inspections, primarily at commercial facilities.
- The National City inspector carries photographs of "good" BMPs to use as outreach to facilities during inspections.
- The City of Oceanside will soon require developers to consider stormwater management at small sites by requiring that a Runoff Assessment Report be completed.
- The City of Oceanside has an outstanding interdepartmental stormwater education program.
- The Oceanside Fire Department incorporates runoff control practices into its regular firefighting activities.
- The City of Oceanside's industrial/commercial inspectors are well trained, and the inspection process is well developed.
- The City of Oceanside has set a goal to visit and evaluate 700 commercial facilities during the permit term.

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1.0 Introduction

1.1 Program Evaluation Purpose

The purpose of the program evaluation was to determine the copermittees' compliance with the National Pollutant Discharge Elimination System (NPDES) permit (CAS0108758 and Board Order No. 2001-01) and to evaluate the current implementation status of the copermittees' Jurisdictional Urban Runoff Management Program (JURMP) with respect to EPA's stormwater regulations. Secondary goals included the following:

- Review the overall effectiveness of the Program.
- Identify and document positive elements of the Program that could benefit other Phase I and Phase II municipalities.
- Acquire data to assist in reissuance of the permit.

40 CFR 122.41(i) provides the authority to conduct the program evaluation.

1.2 Permit History

The NPDES stormwater permit was issued on February 21, 2001, and is scheduled to expire on February 21, 2006. The current permit, the second issued to the copermittees, requires each copermittee to develop and implement a JURMP.

1.3 Logistics and Program Evaluation Preparation

Before initiating the on-site program evaluation, Tetra Tech, Inc., reviewed the following Program materials:

- NPDES Permit No. CAS0108758
- City of Escondido Jurisdictional Urban Runoff Management Program, February 2002
- City of National City Jurisdictional Urban Runoff Management Program, updated 2003
- City of Oceanside Jurisdictional Urban Runoff Management Program, February 2003
- 2002 Annual Reports for each of the copermittees
- Regional Board correspondence with each copermittee
- Permittees' Web sites

On February 25–27, 2003, Tetra Tech, Inc., with assistance from the Regional Board, conducted the program evaluation. The evaluation schedule was as follows:

Tuesday, February 25	Wednesday, February 26	Thursday, February 27
<ul style="list-style-type: none"> • Program evaluation kickoff meeting • Municipal Maintenance Activities • Industrial and Commercial Components (office) • Illicit Discharge Component 	<ul style="list-style-type: none"> • Industrial and Commercial Components (field) • Land Use Planning and Standard Urban Stormwater Mitigation Plans (office) 	<ul style="list-style-type: none"> • Construction (office and field visits) • Residential, Education and Public Participation Components • Program Effectiveness

Upon completion of the evaluation, an exit interview was held with each copermitee to discuss the preliminary findings. During the exit interview, the attendees were informed that the findings were to be considered preliminary pending further review by EPA and the Regional Board. The exit interview with National City was held at City Hall on February 28; the exit interviews for Escondido and Oceanside were conducted by conference call on March 6.

1.4 Program Areas Evaluated

The following program areas were evaluated:

- Program management, including the copermitees' Assessment of JURMP Effectiveness.
- Municipal Component.
- Industrial Component.
- Commercial Component.
- Residential Component.
- Land Use Planning for New Development and Redevelopment Component, including Standard Urban Stormwater Mitigation Plans (SUSMPs).
- Construction Component.
- Illicit Discharge Detection and Elimination Component.
- Education and Public Participation Components.

1.5 Program Areas Not Evaluated

The following areas were not evaluated in detail as part of the program evaluation:

- Wet-weather monitoring program and monitoring program details (e.g., sample location, types, frequency, parameters).
- Other NPDES permits issued to the copermitees (e.g., industrial or construction NPDES stormwater permits).
- Inspection reports, plan review reports, and other relevant files. The program evaluation team did not conduct a detailed file review to verify that all elements of the Program were being implemented as described. Instead, observations by the evaluation team and statements from the copermitees' representatives were used to assess overall compliance with permit requirements. A detailed file review of specific program areas could be included in a subsequent evaluation.

1.6 Program Areas Recommended for Evaluation

The evaluation team recommends the following additional assessments:

- An evaluation of the other copermittees not evaluated.
- A review of the program effectiveness/evaluation components of each copermittee's JURMP in coordination with the countywide effort under way.
- Further evaluation of the SUSMP implementation and tracking programs of each city.
- Further evaluation of how the cities establish and maintain the prioritization list for high-priority industrial sites.
- A future evaluation of the City of Oceanside's team approach to construction inspections.

2.0 Program Evaluation Results

This program evaluation report identifies potential permit violations, program deficiencies, and positive attributes and is not a formal finding of violation. Program deficiencies are areas of concern for successful program implementation. Positive attributes indicate a copermittee's overall progress in implementing the Program. The evaluation team identified only positive attributes that were innovative (beyond minimum requirements). Some areas were found to be simply adequate; that is, not particularly deficient or innovative.

The evaluation team did not evaluate all components of each permittee's Program. Therefore, the copermittees should not consider the enclosed list of program deficiencies a comprehensive evaluation of individual program elements.

The most significant potential permit violations, program deficiencies, and positive attributes identified during the evaluation are noted in the Executive Summary and are identified with text boxes in the following subsections.

2.1 City of Escondido

2.1.1 Evaluation of Program Management and Effectiveness

Positive Attribute:

- *The City of Escondido has an effective monitoring and tracking process using the Azteca geographic information system (GIS) computer program.*

The City has developed a monitoring and tracking process that uses the Azteca GIS program to monitor regular municipal maintenance activities, dry weather monitoring activities, pretreatment inspections, service responses, and work orders activities. The City is using the Azteca program to incorporate information from the industrial and construction components of the stormwater program, with the goal of making the Azteca program available to field staff. For example, field staff could use the Azteca program to access maintenance history, inspection records, and locations of catch

basins while in the field. Field inspectors could also enter inspection data directly into the system.

Deficiency Noted:

- *The City lacks indirect and direct measures of program effectiveness.*
City staff lack adequate awareness of indirect and direct measures of program effectiveness. Chapters 11.1 and 11.2 of the City's JURMP describe the use of such measures to assess program effectiveness. The staff demonstrated limited familiarity with measurable targets for the components of the City's stormwater program. Staff should be familiar with the assessment measurements for each component of that program. A countywide initiative is under way to develop revised program effectiveness measures. The City should evaluate whether these countywide measures are appropriate or whether additional measures are warranted.

The measurable goals should be linked to programmatic, social, or environmental indicators such as those listed in the 1996 Center for Watershed Protection report *Environmental Indicators to Assess Stormwater Control Programs and Practices*. For example, the City of Phoenix monitors social indicators like the public's knowledge of stormwater issues as a measure of success. The Sacramento Stormwater Management Program uses a variety of special studies, evaluation of performance measures, subwatershed studies, statistical analysis, modeling, and/or environmental indicators to assess the effectiveness of its program. Specifically, the Sacramento Program has identified performance or effectiveness measures for each program element best management practice (BMP) and subelement task. For example, Sacramento County tracks the number of warnings, corrective actions, penalties, and stop work orders issued as a performance measure and uses the number of illegal non-stormwater discharges reported as an effectiveness measure. The City of Sacramento has set minimum performance standards for each BMP, such as a standard to visit 20 classrooms each year to conduct stormwater presentations.

2.1.2 Evaluation of Land Use Planning for New Development and Redevelopment
Adequate.

2.1.3 Evaluation of Construction Program
Positive Attribute:

- *The City has developed a Cleanup Deposit program to ensure contractors are compliant with City regulations regarding erosion and sediment control.*

The City has developed a program to ensure contractors are compliant with erosion and sediment controls on construction sites. Prior to groundbreaking activities, the contractor must submit a cleanup deposit to the city. The amount submitted is dependent on the size of project, whether the project requires a grading permit, and other factors. For example, a project that requires no grading permit must submit a \$2,000.00 cleanup deposit. Conversely, a project requiring a grading permit must deposit 10 percent of the grading cost through a bond or deposit certification. The city has created a CD-ROM that is given to the contractor during the initial phases of

project planning. The CD-ROM contains calculations to determine the appropriate deposit amount. The purpose for the cleanup deposit is to ensure that contractors are maintaining erosion and sediment controls on-site. For example, if a contractor is not maintaining adequate BMPs for erosion and sediment control, the City may use the deposited money for cleanup actions.

Deficiencies Noted:

- *The construction field engineer inspectors lack adequate inspection forms and inspection procedures.*

The construction field engineer inspector's daily inspection log lacks specific information to assist in determining compliance, including the evaluation of on-site erosion and sediment control BMPs and BMPs to address construction waste, equipment and material storage, and maintenance. In addition, the daily inspection logs should note necessary maintenance or changes to BMPs, whether any enforcement action has been taken, and the whether the site is covered under the statewide General Construction Permit.

Inspectors also lack written procedures for conducting consistent inspections. The development of formalized inspection procedures would provide inspectors with consistent guidance on adequate BMP installation and maintenance, record-keeping, and enforcement procedures.

- *Construction field engineer inspectors lack specific knowledge of and procedures for the City's enforcement processes.*

Provision F.2.h of the permit requires the permittee to enforce local ordinances, permits, and the Order for construction sites. Field engineer inspectors lack specific knowledge regarding the enforcement procedures, potential penalties, and their specific enforcement authorities as outlined in Section 7.8 of the JURMP. Interviews with field staff demonstrated that inspectors have the authority to issue stop work orders and correction notices but lack enforcement consistency among construction sites.

- *Private construction inspectors do not ensure adequate erosion and sediment control BMP implementation and maintenance.*

Private construction inspectors do not adequately inspect construction sites for proper erosion and sediment control implementation and maintenance. For example, evaluations at the Keystone Escondido 31, LLC, development revealed improperly implemented gravel bag structures allowing sediment-laden water to discharge directly to a storm drain inlet. The field inspectors had failed to notice the inadequately maintained BMP.

2.1.4 Evaluation of Existing Development: Municipal Program

Potential Permit Violations:

- *The City's corporation yard lacked adequate practices to prevent stormwater contamination.*

The evaluation team conducted a site visit to the City's corporation yard at 475 North Spruce Street. The corporation yard lacks basic stormwater practices to ensure control of contaminated runoff. Evaluation of the yard revealed the following stormwater issues:

- Vehicles and equipment stored outside the fleet maintenance shop showed signs of leaks. Drip pans were not provided for stored vehicles.
- Large spills of oil and miscellaneous fluids were found in the heavy vehicle parking area. According to staff, the spills are not cleaned up on a regular basis.
- On-site spill kits were not plentiful, visible, or accessible to staff. The corporation yard had one spill kit stored in the back of the fleet maintenance shop. The corporation yard staff were encouraged to increase the number of spill kits on-site. Additionally, the spill kits should be located in high-spill-potential areas, such as the fueling area. The spill kits should also be labeled and highly visible to staff.
- Sediment controls had not been inspected and maintained to ensure effectiveness. A fiber roll near the Escondido Creek fence line had been undermined by the scouring affects of runoff. In addition, a baffle system made of fiber rolls at the culvert inlet leading to Riedly Creek was found to be flooded. The fiber roll barriers could not withstand the amount of water and sediment coming from the site. Stormwater discharging from the outfall to Riedly Creek was laden with sediment.

Deficiency Noted:

- *Municipal maintenance field staff lack adequate guidance for BMP implementation during routine maintenance activities.*
Municipal maintenance field staff lack the BMP guidance for high-, medium-, and low-priority municipal areas required by provision F.3.a(4) of the permit. Although supervisory staff retain a designated set of BMPs for municipal areas, copies are not available for maintenance crews. A formalized set of BMPs for field staff would benefit routine municipal maintenance activities.

2.1.5 Evaluation of Existing Development: Industrial and Commercial Programs

Positive attribute:

- *The City's pretreatment inspectors conduct thorough industrial and commercial inspections.*
Pretreatment inspectors use a stormwater/pretreatment checklist that addresses evaluations of industrial stormwater facilities; sanitary sewer systems; and municipal, commercial, and residential areas. This four-page document thoroughly assessed facility BMPs as well as proper facility documentation for compliance under City ordinances, City permits, and the municipal separate storm sewer system (MS4)

permit. Additionally, the pretreatment inspectors have been trained to identify stormwater controls in the field. Finally, the pretreatment inspectors are equipped with inspection vans that contain sample bottles, education materials for facility owners, and spill control materials.

Deficiencies Noted:

- Industrial inspectors lack knowledge of and formalized procedures for the City's enforcement processes.*
Part F.3.b(7) of the permit requires the permittee to enforce local ordinances and the Order for Industrial facilities. Inspectors observed lack specific knowledge regarding the enforcement procedures, potential penalties, and their specific enforcement authorities as outlined in Section 3.7 of the JURMP. Interviews with field staff demonstrated that inspectors have the authority to issue correction notices but lack enforcement procedures. Industrial inspector training should include enforcement procedure awareness.
- The City's industrial program lacks the identification of facilities covered under the statewide General Industrial Permit.*
The City's prioritized list of industrial facilities does not specifically identify for inspectors the industrial facilities subject to the statewide General Industrial Permit. Table 3-11 of the JURMP lists industrial facilities and their associated prioritization. However, the table lacks the identification of permitted industrial facilities. The City was encouraged to contact the Regional Board to obtain a list of permitted industrial facilities and to become familiar with the general permit requirements to ensure that all required inspections of industrial facilities are conducted.

2.1.6 Evaluation of Residential, Public Education and Participation Programs

Positive Attribute:

- The City of Escondido actively participates in regional copermittee coordination.*
The City has been involved with regional workshops addressing the automotive industry, agricultural/landscape industry, mobile trade industry, and restaurant industry. The City has also been involved with region-wide poster campaigns for restaurants and automotive industries addressing stormwater pollution prevention practices. In addition, the City has participated in the regional development of door hangers, "Only Rain in the Drain" brochures, collaboration on special events (e.g., Earth Day, water awareness), and theater slide ads. Regional copermittee coordination will enhance the city's consistency with other copermittees, increase information sharing, and increase opportunities for resource sharing

2.1.7 Evaluation of Illicit Discharge Detection and Elimination Program

Deficiencies Noted:

- The City illicit discharge inspectors lack specific knowledge and formalized procedures for inspections and enforcement.*
The illicit discharge inspectors lack formalized procedures for inspections. Inspections for the illicit discharges depend mainly on the individual experience and relevant training of each inspector. Illicit discharge inspectors also lack specific knowledge regarding the enforcement procedures outlined in Section 8.5 of the City's JURMP. The City should provide training and develop formal procedures for identifying and eliminating illicit discharges.
- City staff responding to hotline calls lack adequate procedures and call logs.*
The City staff that respond to hotline calls lack formalized procedures for responding to service and emergency calls. Additionally, City staff are not equipped with a formalized set of questions and answers for use in responding to calls. City staff would benefit from a response questionnaire to appropriately respond and direct hotline stormwater calls.

2.2 City of National City

2.2.1 Evaluation of Program Management and Effectiveness

Deficiencies Noted:

- The City's assessment of the effectiveness of its JURMP is inadequate.*

Permit provision F.7 requires each copermittee to “develop a long-term strategy for assessing the effectiveness of its individual Jurisdictional URMP.” Each annual report is required to include “an assessment of the effectiveness of its Jurisdictional URMP using the direct and indirect assessment measurements and methods developed in its long-term assessment strategy.” Section 11.4 of the City's JURMP states that the city will “utilize the following forms to document direct and indirect measurements used to assess specific BMPs” however these assessment forms were not filled out in the 2002 Annual Report. A countywide initiative is under way to develop revised program effectiveness measures. The City should evaluate whether these countywide measures are appropriate or additional measures are warranted. The City is encouraged to develop specific performance standards or goals for various activities against which the activities performance can be measured.

The measurable goals should be linked to programmatic, social, or environmental indicators such as those listed in the 1996 Center for Watershed Protection report *Environmental Indicators to Assess Stormwater Control Programs and Practices*. For example, the City of Phoenix monitors social indicators like the public's knowledge of stormwater issues as a measure of success. The Sacramento Stormwater Management Program uses a variety of special studies, evaluation of performance measures, subwatershed studies, statistical analysis, modeling, and/or environmental indicators to assess the effectiveness of its program. Specifically, the Sacramento

Program has identified performance or effectiveness measures for each program element best management practice (BMP) and subelement task. For example, Sacramento County tracks the number of warnings, corrective actions, penalties, and stop work orders issued as a performance measure and uses the number of illegal non-stormwater discharges reported as an effectiveness measure. The City of Sacramento has set minimum performance standards for each BMP, such as a standard to visit 20 classrooms each year to conduct stormwater presentations.

- *To be useful for the City, the JURMP needs to be more specific.*
The City cites the JURMP as “the blueprint for the implementation of the stormwater program ... for the City of National City.” However, the JURMP does not provide the City with the specific guidance needed to fully implement the program. For example, the Introduction section does not contain an explanation of City government organization and the responsibilities of each City department. Also, the enforcement mechanisms portion of the JURMP does not specifically describe how city staff will use these enforcement mechanisms, what City legal authority will be used, or when these enforcement mechanisms should be used. Additional detail should be added to the JURMP so it is useful for all City departments responsible for implementing the JURMP.
- *The City’s stormwater program does not clearly identify impaired waters.*
Various requirements in the permit are tied to whether the area is tributary to a Clean Water Act section 303(d) water body. For example, the construction prioritization permit provision (F.2.e) requires that a construction site of 5 acres or more be designated a high-priority construction site if it is tributary to a 303(d) impaired water body listed for sediment. In addition, the municipal, industrial, commercial, and residential portions of the permit have similar provisions dependent on activities tributary to a 303(d) impaired water body. The JURMP does not identify 303(d) impaired water bodies, and during the evaluation the City did not know if there are any 303(d) water bodies within the City limits. Because of the various permit requirements tied to impaired water bodies, such waters should be clearly identified and known by all relevant City staff.

2.2.2 Evaluation of Land Use Planning for New Development and Redevelopment Potential Permit Violation:

- *City lacks a clear understanding of the SUSMP requirements.*

Permit provision F.1.b.(2) requires each copermitee to “ensure that all new development and significant redevelopment projects falling under the priority project categories... meet SUSMP requirements.” This provision applied beginning in December 2002, or 180 days after approval of the model SUSMP. Although the City adopted a SUSMP ordinance on November 19, 2002, Department of Engineering/Public Works staff questioned during the evaluation were not aware of the specific design standards required for SUSMP projects. National City is a largely built-out city with few SUSMP-applicable projects; however, the City still needs to develop clear, specific guidance for the Engineering and Planning Department

explaining the SUSMP review process and conduct training for affected staff on how SUSMP requirements are incorporated into the plan review process.

2.2.3 Evaluation of Construction Program

Potential Permit Violations:

- *The City does not adequately identify and prioritize construction sites.*

Permit provision F.2.d requires the City to “annually develop and update, prior to the rainy season, a watershed based inventory of all construction sites within its jurisdiction regardless of site size or ownership.” In addition, construction sites are to be prioritized based on threat to water quality. The City published a list of high-, medium-, and low-priority construction sites in the 2003 JURMP, but the City does not have a process for continually updating this list as new projects are added or old projects are completed. The City needs to develop a dynamic list that is periodically updated to reflect the latest information on active construction in the City.

- *The City needs to formalize its construction inspection process.*

The permit requires copermittees to inspect high-priority construction sites weekly and medium-/low-priority construction sites twice during the wet season (provision F.2.g). The City inspector does not use an inspection form, and whether the City adequately tracks the number, time, and location of construction inspections is unknown. The City should develop a standard construction inspection form with the typical BMPs anticipated at each site for the inspector to verify. In addition, the City should develop a tracking system to demonstrate that high-, medium-, and low-priority construction sites are being inspected at the required frequency. Failure to do so could result in a potential permit violation.

Deficiency Noted:

- *Standard conditions for erosion and sediment control need to be updated.*
The City’s erosion control notes applied as standards conditions to most construction projects had not been updated for more than 5 years. These notes should be updated to reflect the 2001 MS4 permit requirements and the most recent statewide General Construction Permit. At a minimum, these standard conditions or other City requirements should reflect the construction and grading project requirements in permit provision F.2.c. The City is encouraged to review the standard conditions applied to erosion control projects by the City and County of San Diego and other municipalities.
- *City construction inspectors would benefit from additional training on proper erosion and sediment control practices.*
Although the City construction inspector was knowledgeable about erosion and sediment control practices generally, during the evaluation the inspector missed some implementation problems on construction sites including inadequate slope stabilization and inadequate BMP maintenance. The City is encouraged to provide additional training opportunities to field staff to ensure that they have the tools and

education necessary to ensure construction sites employ proper erosion and sediment control practices.

2.2.4 Evaluation of Existing Development: Municipal Program

Positive Attribute:

- *The City has addressed stormwater BMP concerns at the Public Works yard.* Following inspections by the Regional Board, the City implemented a series of stormwater BMPs at the City's Public Works Yard at 2100 Hoover Street. The evaluation team visited the yard immediately after a storm event and found stormwater BMPs—perimeter stockpile controls, secondary containment, and filters/straw wattles for yard discharges to Paradise Creek—in place and well maintained.

Deficiency Noted:

- *The Public Works yard needs a stormwater pollution prevention plan (SWPPP) for the east side.*
In response to inspections conducted by the Regional Board, the City has implemented BMPs and developed an SWPPP for the west side of the yard, where most of the material storage is located. Although stormwater BMPs have also been installed on the east side of the yard, where most of the vehicles, maintenance, offices, and other activities are present, a written SWPPP has not been developed for that side of the yard. The Public Works Yard SWPPP should cover both sides of the yard and all activities and pollutant sources on the yard.
- *The City is not adequately tracking the amount of waste removed from the MS4.* The City currently conducts activities such as catch basin cleaning and street sweeping, but is not directly tracking the amount of waste removed from the MS4. The City also does not track the amount of waste collected by street sweepers. This information would assist the City in documenting the effectiveness of its program.

2.2.5 Evaluation of Existing Development: Industrial and Commercial Programs

Positive Attributes:

- *The City has conducted more than 400 inspections, primarily at commercial facilities.*

The City has inspected more than 400 facilities, primarily at various commercial facilities. The permit requires annual inspections of high-priority industrial sites but allows each copermitttee to inspect high-priority commercial sites as needed. The City is commended for taking the initiative to inspect these commercial sites and address any water quality problems observed.

- *The City inspector carries photographs of "good" BMPs to use as outreach to facilities during inspections.*

To assist with education efforts during site inspections, the City industrial/commercial inspector carries photographs showing examples of "good" stormwater

BMPs. The photographs allow the inspector to visually illustrate the types of practices the facility should use, such as secondary containment, and particularly help where there are language barriers with facility operators.

Potential Permit Violation:

- *The City's industrial inspection inventory does not include all required industrial facilities.*

Permit provisions F.3.b(2) and (3) require the copermittees to develop and update annually a watershed-based inventory of all industrial sites within their jurisdictions and prioritize those sites based on threat to water quality. High-priority sites are required to include, at a minimum, Superfund facilities, facilities tributary to impaired waters or coastal lagoons, and facilities subject to the statewide General Industrial Permit.

The City's high-priority inventory did not include all the required facilities listed in the permit. Also, because of a misunderstanding, the City was dropping facilities off the high-priority industrial list after they were inspected. The City needs to update its inventory to ensure that all industrial facilities in the City are included and that all facilities required to be designated as high priority are classified as such.

Deficiency Noted:

- *City industrial/commercial inspectors would benefit from additional training on proper stormwater control practices.*

Although the City industrial/commercial inspectors were knowledgeable about proper good housekeeping and stormwater practices, the inspectors would benefit from additional training on stormwater inspection techniques and stormwater controls at various industrial and commercial facilities. The City is encouraged to provide these additional training opportunities to field staff to ensure that they have the tools and education necessary to ensure proper stormwater control practices at commercial and industrial sites.

2.2.6 Evaluation of Residential, Public Education and Participation Programs

Deficiencies Noted:

- *The City relies almost exclusively on mailing inserts and its Web site to educate the public and does not use other media or mechanisms to reach target communities.* During the evaluation, the City stated that mailing inserts and the City's Web site are the main practices used to educate the public. The City should develop additional mechanisms to educate the public, such as working with school districts and local volunteer organizations. In addition, the City should use information gained from the dry weather monitoring program and site inspections/complaints to more specifically target public outreach to specific areas and pollutants. At a minimum, the City should actively participate in the countywide stormwater education program.

- *The City does not have a mechanism for public participation in implementation of the JURMP.*

Most of the public participation activities listed in the JURMP have not been conducted “due to budgetary constraints.” The City should consider various low-cost options such as open meetings with the public, scheduled meetings with interested groups such as community associations, and newspaper advertisements or articles to increase the amount of public participation in the program.

2.2.7 Evaluation of Illicit Discharge Detection and Elimination Program

Positive Attribute:

- *The City pursued an active illicit discharge to identify and eliminate its source.* During an inspection of an industrial facility, the City observed an active illicit discharge from a facility across the street. The City identified the source of the discharge, a facility dewatering its flooded yard, and educated the facility operator on the City’s stormwater requirements. A follow-up inspection was scheduled to ensure the facility was in compliance.

2.3 City of Oceanside

2.3.1 Evaluation of Program Management and Effectiveness

Deficiencies Noted:

- *The City’s program would benefit from increased departmental accountability and ownership of BMPs.*

Stormwater BMPs have been developed by Water Utilities, and information has been inserted in respective BMP manuals for use by other City departments. Although the City is commended for developing the manuals, the other departments should be more involved in the selection and implementation of BMPs to control stormwater discharges for their specific activities. Water Utilities could work with the individual departments to provide technical assistance and ensure adherence to the NPDES permit requirements. This process is under way with the Parks and Recreation Department, which is developing its own BMPs based on its operational practices.

Additionally, the other City departments did not appear officially accountable for their role in stormwater management; only the Water Utilities Department is officially responsible for stormwater concerns and problems. The City could develop an implementation plan that officially identifies the roles of the other departments in stormwater management in the City. For example, the City of San Diego has established a formal process for ensuring accountability by each department charged with program implementation. To ensure comprehensive implementation, San Diego’s JURMP designates a primary department and supporting department(s) for each program component. Each responsible department is then required to do the following:

- Certify acceptance of the document.

- Establish applicable written policies and procedures.
- Maintain records as required by the permit.
- Provide staff training.
- Report the status of the JURMP implementation to the Stormwater Program.
- Provide annual compliance certification with all permit requirements that apply to the department.

The San Diego JURMP recommends that each department follow a process with nine steps: (1) adopt, (2) distribute, (3) train/develop awareness, (4) practice/implement, (5) assess/review, (6) update, (7) report, (8) inspect, and (9) certify. The JURMP also requires each department to designate a departmental coordinator who ensures implementation and coordinates activities with the Stormwater Program. With only a few exceptions, the on-site evaluation conducted in the City of San Diego in 2002 found this process to be well received and to result in a high level of departmental awareness and accountability.

- *The City should take steps to evaluate program effectiveness.*
The current method of evaluating the Program is to account for activities such as the number of public education events, number of catch basins cleaned, number of outfalls inspected, and other basic performance measures. These activities are tracked, but performance standards or goals against which the activities performance can be measured have not been set. To provide a means to measure program effectiveness, the City should establish additional measurable goals for each program element. A countywide initiative is under way to develop revised program effectiveness measures. The City should evaluate whether these countywide measures are appropriate or additional measures are warranted.

The measurable goals should be linked to programmatic, social, or environmental indicators like those listed in the 1996 Center for Watershed Protection report *Environment Indicators to Assess Stormwater Control Programs and Practices*. The City of Phoenix, for example, monitors social indicators, such as the public's knowledge of stormwater issues, as a measure of success. The Sacramento Stormwater Management Program uses a variety of special studies, evaluation of performance measures, subwatershed studies, statistical analysis, modeling, and/or environmental indicators to assess the effectiveness of its program. Specifically, the Sacramento Program has identified performance or effectiveness measures for each program element BMP and subelement task. For example, Sacramento County tracks the number of warnings, corrective actions, penalties, and stop work orders issued as a performance measure and uses the number of illegal non-stormwater discharges reported as an effectiveness measure. The City of Sacramento has set minimum performance standards for each BMP, such as a standard to visit 20 classrooms each year to conduct stormwater presentations.

2.3.2 Evaluation of Land Use Planning and New Development and Redevelopment

Positive Attribute:

- *The City will soon require developers to consider stormwater management at small sites by requiring that a Runoff Assessment Report be completed.*

The City developed a Runoff Assessment Report (RAR) that requires developers and contractors to consider stormwater impacts at smaller sites that are not covered under the SUSMP requirements (that is, residential developments of up to nine units, commercial or industrial developments that would create or replace impervious area of 2,500 square feet or greater, parking lots with more than five parking spaces, and agricultural activities, including nurseries). The City took this voluntary step as a conservative and equitable approach to implementing the SUSMP requirements, with the goal of encouraging consideration of stormwater management even on small development sites. The RAR requires a project description, identification of receiving waters and beneficial uses of those waters, and a site map with locations of impervious areas, areas where materials might be exposed to stormwater, and other sources of potential pollution; a runoff characterization; and construction and post-construction mitigation measures. The RAR had not yet been implemented at the time of the review.

Deficiencies Noted:

- *The City should develop and document an internal implementation process for reviewing and approving developer plans.*
No formal process for implementing the SUSMP requirements has been developed. The City's consultant has been reviewing and approving SUSMP plans on a pilot basis, but there was little evidence of flow charts or other instructions or decision support systems for new (and existing) staff to follow. Implementation guidance provided in the local SUSMP manual is largely targeted at the development community rather than internal City staff.
- *The City should develop a structural BMP tracking system.*
A database or similar system to track structural stormwater BMPs would allow the City to formalize the process for maintenance requests, streamline the inspection process, and help to evaluate this aspect of the program over the long term.
- *The City should identify and implement a public SUSMP project to serve as an example to other developers.*
Many opportunities appear to exist (e.g., the Rancho Del Oro street extension project, the San Louis Rey wastewater treatment plant, municipal maintenance yards, public buildings) for the City to revise existing site plans or incorporate appropriate post-construction controls into new projects. The City should consider "leading by example" by holding its own capital improvement projects to the same standards to which private construction projects are held. Some City projects are in the early stages of development and could be revised to incorporate some of the SUSMP principles.

2.3.3 Evaluation of Construction Program

Positive Attributes:

- *The City employs a dedicated erosion and sediment control inspector.*
This inspector has extensive soils experience and has received training in erosion and sediment control. His duties include plan review and administration as well as inspection of the City's high-priority construction sites.
- *The City is developing a well-coordinated team approach to ensure erosion and sediment control compliance on construction sites.*
The City's team approach uses the dedicated erosion and sediment control inspector, field engineering inspectors, code enforcement staff, and building inspectors. Code enforcement staff answer to the erosion and sediment control inspector and promptly issue citations and fines as requested. Field engineers and building inspectors assist in identifying problems and notifying both the erosion and sediment control inspector and Code Enforcement. At the time of the evaluation, the participation of field engineering and building inspectors was just beginning and the effectiveness of their participation warrants future assessment.

Potential Permit Violations:

- *The City has continually allowed BMP failure at the Rancho Del Oro Road extension capital improvement project.*

The Rancho Del Oro Road extension project (viewed at the road's intersection with Oceanside Boulevard) lacked adequate controls to prevent excessive contributions of sediment from reaching the receiving stream. The existing detention basin did not appear to be sized appropriately for the contributing drainage area and was overtopping during the site visit. Discharges of sediment to the receiving stream have been a persistent and ongoing problem. This problem was aggravated when City crews further reduced the size of the detention basin by placing fill in the basin. The continued failure of the BMP has been well documented by Water Utilities and Code Enforcement staff throughout the winter of 2002–2003, and its inadequacy has been communicated to the supervising engineer on multiple occasions. The continued discharge of sediment to the receiving stream did not constitute reducing pollutants to the Maximum Extent Practicable (MEP) and appeared to be a violation of Part A - Prohibitions and provision F.2.c(1) of the NPDES permit.

- *One or more additional dedicated erosion and sediment control inspector(s) are required to prevent future permit violations.*

Permit provision F.2.g requires the permittee to inspect each high-priority construction site at least weekly during the wet season. The City appeared in danger of violating this provision. The single erosion and sediment control inspector is tasked with visiting more than 70 high-priority sites weekly. With follow-up inspections and other activities included, this inspector is significantly overburdened. Additional resources to ensure all high-priority sites are inspected weekly are needed. Moreover, the checklist used for erosion and sediment control inspections is a

cumbersome four pages long and should be redesigned and reorganized to make it more streamlined and user-friendly for use in the field. The checklist should readily identify deficiencies and required remedial actions.

Deficiencies Noted:

- *The erosion and sediment control inspector should have the authority to issue citations when violations are identified.*
Currently, the inspector must identify a violation and report it to Code Enforcement staff. The erosion and sediment control inspector may issue a stop work order (partial or whole-site) without code enforcement but has typically relied on continued communication with the site operator to achieve compliance. The City does not have plans to give the erosion and sediment control inspector enforcement authority.
- *The City should provide additional training for building inspectors, field engineering inspectors, and code enforcement officers regarding proper maintenance of BMPs.*
Building and field engineering inspectors and code enforcement officers should be trained to identify erosion and sediment control violations, especially with respect to the need for BMP maintenance and revision of the SWPPP.
- *A process should be established to perform BMP evaluations for grading sites.*
At several large grading projects visited, BMPs were largely ineffective. For example, lines of gravel bags had been placed immediately up-gradient of temporary desilting basins (thereby directing runoff around the basins), short-circuiting around standpipes was apparent (several basins with standpipes were completely empty while others were full), and soil stabilizers had been applied inadequately. A formal evaluation process for grading sites should be developed to identify BMP deficiencies and train inspectors on proper BMP installation and maintenance.

2.3.4 Evaluation of Existing Development: Municipal Program

Positive Attributes:

- *The city has an outstanding interdepartmental stormwater education program.*
City stormwater staff have worked closely with other departments to educate them about the impact of their activities on stormwater. The Fire Department, Public Works, Code Enforcement, Engineering, and Planning have all received training about good housekeeping and BMPs to prevent pollution from municipal activities. The City's Code Enforcement staff and enforcement process appeared effective and well integrated within the stormwater program. The process includes the designation of two dedicated stormwater code enforcement officers.

- *The Fire Department incorporates runoff control practices into regular firefighting activities.*

The Fire Department uses innovative practices to contain firefighting runoff and prevent contamination of surface waters. All trucks are equipped with containment supplies, and staff are instructed to prevent firefighting runoff from entering the storm

drain system whenever possible. Vactor trucks are used in some cases to safely dispose of captured firefighting runoff. Furthermore, all City crews (fire, municipal, and others) communicate on the same radio frequency. This approach allows the firefighting crews to ask for equipment (e.g., vactor trucks, sand bags, empty drums) and staff resources to capture and remove contaminated firefighting water. The availability of BMPs, staff awareness and training, and the overall willingness to incorporate water protection initiatives into everyday activities is commendable, and Oceanside could serve as a model for other communities.

Deficiencies Noted:

- *The City should consider inspecting medium- and low-priority municipal sites periodically.*
Medium- and low-priority sites are not visited unless a complaint is logged. The City should develop a procedure and schedule to visit these sites periodically to identify any major problems before they become a nuisance or a source of pollution.
- *The Jones Street municipal yard lacks adequate controls to prevent stormwater contamination.*
Exposed soil, sand, aggregate, and cold patch piles and scrap metal pumps and valves stored without cover were observed. Runoff from these piles entered an adjacent storm drain, and past discharges of sediment were evident. These deficiencies were rectified during the course of the evaluation. This site could have represented a potential permit violation had the deficiencies not been rectified during the evaluation.
- *Sediment and erosion control BMPs in place at the San Luis Rey WWTP expansion project were in need of maintenance.*
This large construction site required the use of numerous BMPs, including perimeter sediment controls consisting of sand and gravel bags with silt fencing and storm drain inlet protection. Specifically, the BMPs (gravel bags and sediment control fencing) on the southeast corner of the site needed to be extended to prevent sediment-laden runoff from entering the receiving stream; several large sinkholes had appeared behind the concrete embankment for Pilgrim Creek, numerous rills had formed; sediment control fencing either was not well installed or had been knocked down; and sediment had accumulated behind a BMP in the receiving water.

2.3.5 Evaluation of Existing Development: Industrial/Commercial Programs

Positive Attribute:

- *The inspectors are well trained, and the inspection process is well developed.*

The City employs three dedicated stormwater inspectors, two of which have enforcement authority. The inspectors know how to identify violations and potential remedies, have a system in place to track Notices of Violation (NOVs) and required revisits, maintain a thorough and well-organized file system that includes extensive documentation and photographs, and have a clear and reproducible system of continual enforcement escalation. The inspection checklist and NOVs identified the

escalation of applicable fines and penalties. During the visit, the inspectors demonstrated sound stormwater awareness and good rapport with the facility owners/operators.

- *The City has set a goal to visit and evaluate 700 commercial facilities during the permit term.*

The permit requires annual inspections of high-priority industrial sites but allows each copermitee to inspect high-priority commercial sites as needed. The City proposed inspecting 700 commercial facilities to identify potential and actual problems in the commercial sector and to provide guidance to owners and operators of commercial facilities regarding stormwater control. Because of the wide range and large number of businesses in the City, a prioritization scheme for this undertaking will be needed to maximize its effectiveness.

Deficiencies Noted:

- *The City should revise the process for prioritizing industrial facilities for inspections.* Currently, the prioritization scheme the City uses to identify high-priority industrial facilities is based on the minimum categories required in provision F.3.b(3)(b) of the permit and does not take into consideration the potential for contributing to stormwater pollution, the location relative to receiving water bodies and ecologically sensitive areas, and other factors permittees are required to consider under provision F.3.b(3)(a) of the permit. For example, during the evaluation the inspectors visited a light industrial complex that was not on the high-priority list but was located directly alongside Loma Alta Creek. The housekeeping practices of nearly all of the tenants were poor to very poor, and chemicals and waste materials were not protected from rainfall and runoff (e.g., dumpsters and stockpiled materials were not covered and waste materials littered the ground). Runoff from the complex discharged directly into the adjacent creek. Numerous other light industrial parks that were not on the high-priority list also lined Loma Alta Creek. The City acknowledged the need to review and revise the prioritization procedure to include these types of facilities.
- *The City should provide administrative citation authority for the Water Utilities Stormwater Inspector.* At the time of the evaluation, the City had recently hired an additional industrial/commercial inspector placed within the Water Utilities Department. This inspector is to inspect industrial and commercial businesses and investigate illicit discharges identified by either the dry weather screening process or calls to the hotline. However, this inspector does not have administrative citation authority and is to call one of the other two Code Enforcement Officers to initiate a citation. (Administrative citation authority is given to only Code Enforcement staff.) The City should consider granting administration citation authority to the new inspector as well, even though the position is not part of the Code Enforcement Department.

2.3.6 Evaluation of Residential, Public Education and Participation Programs

Positive Attribute:

- *The City provides very strong outreach and participation programs with both the community and other municipal departments.*
The City has developed many good training and outreach materials for distribution to the community, and public participation activities have been well received and well attended. Additionally, stormwater program staff coordinate closely with other City departments to identify specific needs for training and outreach material distribution in the community. The City also participates in the countywide stormwater education program.

Deficiency Noted:

- *The City should develop a long-term outreach strategy.*
The Program is currently structured so that materials and training are developed and delivered in response to a problem and general education is provided routinely throughout the year. It would be helpful for the City to develop an outreach strategy with target audiences identified based on water quality priorities (city-wide and for each watershed). Such an approach would help the City identify long-term goals for the program and would facilitate program evaluation.

2.3.7 Evaluation of Programs for Illicit Discharge Control

Positive Attribute:

- *The process developed by Public Works Department staff to visit the sites, take samples, and document conditions is sound.*
The inventory of outfalls screened during the dry season was extensive and included all outfalls in the City. The staff member in charge of this program has maintained excellent records of site locations, field screening results, laboratory analyses, narrative site conditions, and photos of baseline conditions and problem conditions. The city compiles detailed, easy-to-follow reports of illicit discharge investigations and actions taken as a result of the investigations.

Deficiency Noted:

- *The City should analyze the data collected from field screening to establish baseline conditions and evaluate trends in water quality at outfalls.*
The City could use this evaluation to develop a set of threshold levels that are customized for the City's conditions rather than using generic values provided by the County. The evaluation would also help to define a process for tracking down and eliminating illicit discharges by establishing quantitative water quality "triggers" (as opposed to qualitative triggers such as odor or appearance or countywide water quality triggers) that would initiate a more detailed investigation. The City has generated a considerable amount of data that is currently not being used to assess water quality within its jurisdiction or to determine the most effective use of limited resources.