

US EPA ARCHIVE DOCUMENT

Program Evaluation Report

San Mateo Area Stormwater Program (NPDES Permit No. CAS0029921)

Executive Summary

Tetra Tech, Inc., with assistance from U.S. EPA Region 9 and the California Regional Water Quality Control Board, San Francisco Bay Region (Regional Board), conducted a program evaluation of the San Mateo Area Stormwater Program (Program) in August 2002. The purpose of the evaluation was to determine the copermittees' compliance with a National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Discharge Permit and to review the overall effectiveness of the Program with respect to EPA's stormwater regulations. The evaluation team reviewed the copermittees' compliance with the NPDES permit requirements and the San Mateo Countywide Stormwater Pollution Prevention Program (STOPPP) Stormwater Management Plan (SWMP) and conducted an in-field verification of program implementation. The program evaluation focused on six copermittees—the County of San Mateo and the cities of South San Francisco, Foster City, Pacifica, Redwood City, and San Mateo.

This program evaluation report identifies 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 are indications of overall progress in implementing the program.

The following program deficiencies are considered the most significant:

- The copermittees have not developed individual stormwater management plans, resulting in a lack of specific direction on how the copermittees will implement the performance standards in each community.
- The performance standards for new development only address the plan review process, and lack specificity including requirements describing sizing criteria for post-construction BMPs.
- The cities of South San Francisco, Foster City, Pacifica, Redwood City, and San Mateo do not have clear standards, BMPs or guidance for municipal maintenance activities.
- All of the copermittees evaluated do not have stormwater pollution prevention plans or their equivalent for their corporation yards.
- Redwood City does not have a mechanism in place to track and document construction inspections.
- Inspections, tracking, and enforcement of erosion and sediment control at construction sites in the City of San Mateo are inadequate.

- The City of South San Francisco is not currently tracking inspections and permits issued for industrial/commercial or construction sources.
- San Mateo County industrial inspectors are not allocated additional time for stormwater inspections.

Several elements of the copermittees' programs are particularly notable:

- Local elected officials from the City/County Association of Governments (C/CAG) of San Mateo County coordinate STOPPP activities.
- STOPPP has developed a set of performance standards that define the NPDES permit implementation requirements for each copermittee.
- Redwood City's public outreach program targets water quality problems in specific areas.
- The City of South San Francisco significantly exceeds the performance standard for catch basin inspection and cleaning.
- San Mateo County has developed a BMP manual for a variety of municipal maintenance activities.
- San Mateo County requires new projects to minimize runoff.

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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 NPDES permit (CAS0029921, Board Order No. 99-059) and to evaluate the current implementation status of the STOPPP SWMP with respect to EPA's stormwater regulations. Secondary goals were the following:

- Review the overall effectiveness of the copermittee programs.
- Identify and document positive elements of the copermittees programs 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.

This evaluation reviewed the practices and permit compliance status of six copermittees—the cities of Foster City, Pacifica, Redwood City, San Mateo, and South San Francisco and the County of San Mateo.

1.2 Permit History

The NPDES stormwater permit was issued on July 21, 1999, and is scheduled to expire on July 21, 2004. This current permit, the second issued to the copermittees, requires each copermittee to comply with the STOPPP SWMP. The SWMP includes performance standards for municipal maintenance, industrial/commercial discharge control, illicit discharge control, public information and participation, and new development and construction controls. These performance standards detail the best management practices (BMPs) to be implemented by each discharger.

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. CAS0029921
- STOPPP Stormwater Management Plan July 1998–June 2003
- STOPPP Annual Report Fiscal Year 2000/01
- Copermittees' Web sites
- File correspondence with the copermittees and the permitting authority

On August 19–22, 2002, Tetra Tech, Inc., with assistance from the Regional Board, EPA Region 9, and EPA Headquarters, conducted the program evaluation. The evaluation schedule was as follows:

Monday, August 19			
Morning	Evaluation Kickoff Introduction and overview STOPPP coordination Watershed and monitoring, reporting		
Afternoon	South San Francisco New development and construction controls	City of San Mateo New development and construction controls	Redwood City New development and construction controls
Tuesday, August 20			
Morning	South San Francisco Industrial/commercial and illicit discharge controls	City of San Mateo Industrial/commercial and illicit discharge controls	Redwood City Municipal government maintenance activities
Afternoon	South San Francisco Municipal government maintenance activities; public information and participation	City of San Mateo Municipal government maintenance activities; public information and participation	Redwood City Industrial/commercial and illicit discharge controls (primarily conducted by County); public information and participation
Wednesday, August 21			
Morning	County of San Mateo New development and construction controls	Foster City New development and construction controls	Pacifica New development and construction controls
Afternoon	County of San Mateo Municipal government maintenance activities; public information and participation	Foster City Industrial/commercial and illicit discharge controls; municipal government maintenance activities; public information and participation	Pacifica Industrial/commercial and illicit discharge controls; municipal government maintenance activities; public information and participation
Thursday, August 22			
Morning	County of San Mateo Industrial/commercial and illicit discharge controls		
Afternoon	Outbrief (all copermittees together)		

Upon completion of the evaluation, an exit interview was held with the copermittees to discuss the preliminary findings. During the exit interview, the parties were informed that the findings were to be considered preliminary pending further review by EPA and the Regional Board.

1.4 Program Areas Evaluated

The following program areas were evaluated:

- Program management
- Municipal maintenance activities
- Industrial and commercial discharge controls
- Illicit discharge controls
- Public information and participation

- New development and construction controls

1.5 Program Areas Not Evaluated

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

- Activities of the City/County Association of Governments (C/CAG) of San Mateo and the other 15 copermittees.
- STOPPP Monitoring Program data and analysis.
- Legal authority. (The Regional Board had reviewed the legal authority when the permit was initially issued.)
- 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 copermittees' 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 that the following additional program areas be further evaluated:

- An evaluation of the copermittees that were not evaluated.
- A comprehensive evaluation of the new development or post-construction runoff programs implemented by each copermittee. The Regional Board is drafting revised new development requirements for the MS4 permit, therefore a future evaluation should focus on the copermittees implementation of these new standards.

2.0 Program Evaluation Results

This program evaluation report identifies 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 are indications of 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 copermittee'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 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 STOPPP

2.1.1 Evaluation of Program Management

Positive Attributes:

- *A countywide Technical Advisory Committee (TAC) and various program-specific subcommittees help provide program direction, consistency, and guidance to copermitees within STOPPP.*

The technical advisory committee and various subcommittees in STOPPP have been instrumental in the continued success and growth of the program. The management structure provides invaluable assistance to all the copermitees in the program by developing standard forms, reports, outreach materials, performance standards, and other information. These save all the copermitees time and money while ensuring program-wide consistency. The subcommittee structure also allows all copermitees to share their implementation experiences.

- *Local elected officials from the City/County Association of Governments (C/CAG) of San Mateo County coordinate STOPPP activities.*

C/CAG is composed of local elected city/county representatives from each municipality and a member of the County Board of Supervisors. An NPDES Subcommittee, appointed by the C/CAG chair, provides administrative and policy-making assistance to STOPPP. This approach ensures that the governing bodies throughout the County are directly informed and involved in TAC and subcommittee activities. In addition, this approach is intended to improve buy-in and cooperation throughout the permit term as new officials are elected and need to be educated and informed about the program.

- *STOPPP's general program is funded through a fee that is levied along with property tax bills within the County.*

STOPPP is financed by two separate countywide parcel fees levied against residential land uses, commercial/retail/manufacturing/industrial land uses, and miscellaneous land uses. Single-family residential land uses are charged a flat fee per year per parcel, which established the base rate. Commercial/retail/manufacturing/industrial land uses are charged based on the parcel size. Miscellaneous, condominiums, agriculture, and vacant parcels are charged at one-half the base rate. A connection between land use/zoning and imperviousness is assumed in this fee structure; for example, residential land has less impervious area than industrial/commercial. Fees are collected on the property tax rolls through the Flood Control District.

Program Deficiency:

- *The copermittees have not developed individual stormwater management plans, resulting in a lack of specific direction on how the copermittees will implement the performance standards in each community.*

Each of the copermittees is required to follow the performance standards, however, the copermittees have not developed individual plans describing exactly how they will implement the performance standards and who within the copermittees organization is responsible for each performance standard. The copermittees are focused on implementing individual performance standards, yet do not have a plan for how the performance standards, when implemented by the various programs in each copermittee, will ultimately achieve water quality goals. Also, the performance standards developed for all copermittees do not provide the detailed direction and guidance that copermittees need to implement these cross-departmental programs. The permittees should develop individual stormwater management plans, based on STOPPP's overall guidance and performance standards, which describe how the program will be implemented in each municipality. As examples, the municipalities could review the Jurisdictional Urban Runoff Management Programs (JURMPs) developed by each municipality in San Diego County or the stormwater plan developed by the City of Sacramento.

2.1.2 Evaluation of Performance StandardsPositive Attribute:

- *STOPPP has developed a set of performance standards that define the NPDES permit implementation requirements for each copermittee.*

The performance standards developed by STOPPP, in general, describe what each municipality is responsible for achieving. The performance standards are essentially the BMPs that STOPPP expects each copermittee to implement. In some cases, however, the performance standards also set specific targets or goals to be achieved (this is not done in all cases, however, with two specific areas noted below). For example, copermittees that have stormwater pump stations must “inspect wet wells or forebays once per month in the dry season, and once per week in the wet season, for oil spills or other noticeable discharges.”

Program Deficiencies:

- *The performance standards for illicit discharge controls are primarily reactive and do not require the investigation of dry weather discharges.*

The illicit discharge performance standards rely on municipal and county staff to identify evidence of illicit discharges “while conducting other routine work.” The performance standard does not require regularly scheduled screening for illicit discharges or dry weather flows. Regular and consistent dry weather outfall screening is an effective method to proactively identify chronic or ongoing illicit discharges. A dry weather visual screening plan and schedule ensure that outfalls are observed regularly and discharges do not go undetected. For example, under San

Diego's municipal stormwater program, the copermittees have a regular, scheduled program to screen dry weather flows from outfalls for illegal discharges. Results of dry weather screening are then used to identify illicit discharges and prioritize areas for further investigation. This illicit discharge detection program also includes regular field screening observations, field testing focusing on eight constituents, and laboratory analytical monitoring of at least 25 percent of the sites with flowing or ponded water, focusing on a wide variety of constituents.

- *The performance standards for new development only address the plan review process, and lack specificity including requirements describing sizing criteria for post-construction BMPs.*

The performance standards for new development discuss changes to legal authority, general plan policies, and environmental review, but only require developers and owner/builders to "control stormwater quality impacts of their projects by using appropriate best management practices." The performance standards do not describe what is "appropriate" or designate the sizing criteria necessary in order to meet post-construction runoff control standards. The Regional Board is currently developing new standards to address this issue, which will be required in San Mateo through either a permit modification or a permit reissuance.

2.1.3 Evaluation of Reporting Mechanisms

Program Deficiencies:

- *Countywide data collection is oriented primarily toward reporting compliance with performance standards.*

Excessive staff resources are expended collecting and reporting data that are used solely to demonstrate compliance with the applicable performance standards. A more balanced approach between compliance assurance and program evaluation would provide additional staff hours that could be used for program improvement. For example, the 2000/01 annual report contains a copy of every inspection report and monthly form produced by each municipality, resulting in a report that is almost 10 inches thick. A thoughtful analysis of these data that summarizes activities, identifies trends, and suggests areas for program improvements and changes would be more useful to both the copermittees and the Regional Board.

- *The reporting form for new development and construction does not adequately convey the number or types of activities each copermittee is conducting.*

Unlike the sections of the annual report that illustrate, with tables, the number of industrial inspections or the number of municipal maintenance activities, the new development and construction controls reporting section consists of a series of yes/no questions for each permittee. The annual report should include the number of construction site erosion and sediment control plans the permittee reviewed, the number of erosion and sediment control inspections, and the number and type of enforcement actions taken. At a minimum, the copermittees should demonstrate in the annual report that they have met the performance standard to inspect sites within 14

days following a major storm event. As the annual reports are currently written, compliance with this performance standard could not be readily determined.

- *The Annual Report does not provide information needed to determine compliance with performance standards.*

Some of the performance standards require the copermittees to conduct a specific number of activities per year, yet the annual report does not provide the information needed to evaluate whether all of these performance standards are achieved. For example, the industrial and commercial discharge control standards require copermittees to inspect retail gasoline outlets, vehicle service facilities, and businesses with Hazardous Material Business Plans at least once over the five year permit term. However, the annual report only includes the number of facilities inspected over the past year, and does not indicate the total number of facilities that are required to be inspected, and how many facilities the copermittee has left to inspect.

The annual report section on material removed from the MS4 is an example of where compliance can be determined. The performance standard is to inspect and clean as necessary storm drainage facilities, including inlets, at least once a year on average. The copermittees demonstrate compliance with this standard by reporting the number of inlets in the municipality, the number of inlets inspected, and the number of inlets cleaned.

2.1.4 Evaluation of Special Studies

Positive Attribute:

- *STOPPP's Imperviousness and Channel Modification Study provides copermittees with useful information regarding the most appropriate locations for new development (imperviousness) to best protect less impaired streams.*

This type of analysis allows local planners to better place new developments and justifies the necessity of certain site design techniques that previously might not have been required (e.g., clustering, more narrow street widths). It provides a valuable tool to aid planners in reducing the source of pollution as opposed to just treating the pollutant runoff.

2.2 San Mateo County

2.2.1 Evaluation of Program Management

Adequate.

2.2.2 Evaluation of Municipal Maintenance Activities

Positive Attributes:

- *The County has developed a BMP manual for a variety of municipal maintenance activities.*

The County's Department of Public Works has developed a BMP manual for municipal maintenance standards (*Endangered Species and Watershed Protection Program, Volume 1, Maintenance Standards*, February 2001). This manual, which addresses road and park maintenance activities expected to take place during the winter, was developed to meet both the NPDES permit requirements and the Endangered Species Act Section 4(d) Rule for Steelhead and Salmon. The County is encouraged to complete future volumes of this manual addressing engineering design, construction management and inspection, and facility maintenance.

- *The County significantly exceeds the performance standard for catch basin inspection and cleaning.*

The performance standard for storm drain facilities requires the copermitees to "inspect, and clean as necessary, storm drainage facilities (inlets, culverts, V-ditches, and pump stations) at least once a year on average." According to the FY 2000/01 annual report, the County had 1,136 inlets, which were inspected 4,419 times and cleaned 2,682 times. This represents an average inspection frequency of approximately once every quarter rather than the performance standard of once per year.

Deficiency Noted:

- *The County's corporation yard does not have a stormwater pollution prevention plan or its equivalent.*

Although not specifically required to develop an SWPPP, the corporation yard could benefit from a plan that describes the activities, potential pollutant sources, BMPs, training, and responsibilities for the yard. The plan also should specifically incorporate the set of 48 specific corporation yard performance standards listed in the SWMP. For example, during the yard evaluation, it was not clear which storm drain inlets drained to the recycler system and which drained to the storm drain.

2.2.3 Evaluation of Industrial and Commercial Discharge Controls

Positive Attribute:

- *The County's industrial and commercial stormwater inspection program is well organized.*

Although the evaluation team did not have time to accompany a County inspector on a site inspection, the evaluation found that the County has designed a well-organized and efficient inspection program. The County is responsible for inspecting industrial and commercial facilities within 15 cities and in unincorporated portions of the County. Facilities are charged an inspection fee for the stormwater inspection, and the County keeps detailed records of past inspections at individual facilities.

Deficiencies Noted:

- *The County does not use the industrial inspection form developed by STOPPP for restaurant inspections.*

During stormwater inspections of food facilities, the County Environmental Health Department uses the “Food Program Official Inspection Report” instead of the “STOPP Standard Stormwater Facility Inspection Report Form.” The Food Program report contains a section on stormwater, but it does not include all the same information contained on the STOPPP form. For consistency and thoroughness, the food inspectors should begin using the standard STOPPP form.

- *County industrial inspectors are not allocated additional time for stormwater inspections.*

The County inspects industrial facilities for compliance with a variety of environmental requirements, including compliance with stormwater requirements in unincorporated portions of the county and in several cities. Within certain jurisdictions, not all County inspectors are required to inspect industrial facilities for compliance with stormwater requirements, as these jurisdictions conduct their own stormwater inspections. However, County inspectors who have the additional stormwater responsibilities are not allotted extra time to complete the inspections and are expected to complete the same number of inspections as their counterparts who do not inspect for stormwater compliance.

2.2.4 Evaluation of Illicit Discharge Controls

Adequate.

2.2.5 Evaluation of Public Information and Participation

Positive Attribute:

- *The County, under contract to STOPPP, sponsors a variety of public education activities including a popular elementary school environmental show.*

STOPPP contracts with the County Environmental Health Department to conduct public information and participation activities for the copermittees. The County has a number of public education programs, including fair sponsorships, oil recycling outreach, a community action grant program, and a public awareness survey.

STOPPP sponsors a unique school assembly program featuring a two-person theatrical team called Zun Zun. Zun Zun presents an interactive, educational show called “Stormdrain to Sea, a Musical Adventure.” It has been performed at 35 school assemblies reaching some 6,680 students in FY 2000/01.

2.2.6 Evaluation of New Development and Construction Controls

Positive Attributes:

- *The County requires erosion and sediment controls for virtually all sites that require a building permit.*

As a standard condition of approval, the County requires applicants to submit an erosion and sediment control plan for review and approval by the Planning Division prior to issuance of a building permit. In addition, the County attaches a one-page brochure on construction pollution prevention BMPs to project plans. The erosion and sediment control plan is required regardless of the amount of disturbed acreage for the project.

- *The County requires new projects to minimize runoff.*

As a standard condition of approval, the County requires applicants to submit a stormwater management plan that includes a site plan and narrative description of the types of permanent stormwater controls to be installed on-site. The standard conditions require that “at a minimum, directly connected impervious surfaces shall be minimized, downspouts shall be directed to landscaped areas and pervious materials shall be used for the access road, if possible.”

Deficiencies Noted:

- *It is unclear whether the County is meeting the performance standard to inspect construction sites within 14 days of a significant rain event.*

The County typically inspects construction sites for erosion and sediment control compliance only during scheduled building inspections. The performance standard requires each municipality to inspect all construction sites with erosion and sediment controls within 14 calendar days following a major storm event during the wet season. Because County inspectors generally visit sites only when a building inspection is scheduled, it appears that the County has not inspected all sites within the required 14 days.

- *The County does not use the construction inspection form developed by STOPPP.*
The County tracks construction inspections on a standard form that indicates the date and erosion and sediment control problems found during the inspection. Inspectors appeared knowledgeable about erosion and sediment control requirements, yet lacked adequate documentation to demonstrate compliance with the construction performance standards. The County should begin to use the “STOPPP Checklist for Construction Requirements” to more specifically identify and track the implementation and maintenance of erosion and sediment controls at construction sites.

2.3 City of South San Francisco

2.3.1 Evaluation of Program Management

Deficiency Noted:

- *The City is not currently tracking inspections and permits issued for industrial/commercial or construction sources.*

The performance standards for industrial/commercial discharge controls and construction controls require inspections at certain frequencies. For example, each permittee must inspect “all construction sites with erosion and/or sediment controls within 14 calendar days following each major storm event” during the wet season. For industrial and commercial inspections, each permittee must inspect and provide educational outreach annually to “all businesses that . . . have filed a Notice of Intent for coverage under the California Industrial Stormwater NPDES General Permit.” A similar performance standard was developed to inspect and provide educational outreach to retail gasoline outlets and vehicle service facilities once during the permit term. The City needs to develop a database or similar tracking mechanism to be able to demonstrate that these performance standards are being met.

2.3.2 Evaluation of Municipal Maintenance Activities

Positive Attribute:

- *The City significantly exceeds the performance standard for catch basin inspection and cleaning.*

The performance standard for storm drain facilities requires the copermittees to “inspect, and clean as necessary, storm drainage facilities (inlets, culverts, V-ditches, and pump stations) at least once a year on average.” According to the FY 2000/01 annual report, out of a total of 1,500 inlets, the City of South San Francisco significantly exceeded the performance standard by inspecting inlets 9,393 times and cleaning them approximately 3,600 times. This represents an average inspection frequency of once every other month rather than once per year.

Deficiencies Noted:

- *The City’s corporation yard does not have a stormwater pollution prevention plan or its equivalent.*

Although not specifically required to develop an SWPPP, the corporation yard could benefit from a plan that describes the activities, potential pollutant sources, BMPs, training, and responsibilities for the yard. The plan also should specifically incorporate the set of 48 specific corporation yard performance standards.

- *The City does not have clear standards, BMPs or guidance, for municipal maintenance activities.*

For municipal maintenance, the City relies on the performance standards for guidance; however, the staff interviewed did not appear to be very familiar with the standards. Written BMPs should be developed for both routine and emergency activities. The City should refer to the manual developed by the County of San Mateo, *Endangered Species and Watershed Protection Program*, Volume 1, *Maintenance Standards* (February 2001) for an example of a municipal maintenance BMP guidance or another available example is the BMP handbooks developed by the County of Sacramento's Department of Transportation.

2.3.3 Evaluation of Industrial and Commercial Discharge Controls

Positive Attributes:

- *The City issues permits to restaurants covering both their wastewater and stormwater discharges.*

Under its wastewater discharge permit authority, the City includes stormwater requirements in the permit conditions. These conditions require the permittee (the restaurant) to “service grease traps/interceptors no less than once per three months” and ensure that they do not “clean equipment, floor mats or mop buckets outdoors or hose down outside areas anywhere water may flow to a street, gutter, storm drain or creek.”

- *Pretreatment inspectors are also used to conduct industrial/commercial and construction inspections.*

The City uses pretreatment inspectors to conduct industrial/commercial and construction inspections. This practice allows the inspectors to combine inspection responsibilities, where appropriate. The pretreatment inspectors are also well trained in water quality protection.

2.3.4 Evaluation of Illicit Discharge Controls

Adequate.

2.3.5 Evaluation of Public Information and Participation

Adequate.

2.3.6 Evaluation of New Development and Construction Controls

Deficiency Noted:

- *The City does not track the location and maintenance of structural stormwater treatment controls.*

The City does not have a system in place to track the location and maintenance of structural stormwater treatment controls. Without any tracking system, the City is not able to evaluate whether the controls are in need of maintenance and who is responsible for that maintenance.

2.4 City of Foster City

2.4.1 Evaluation of Program Management

Adequate

2.4.2 Evaluation of Municipal Maintenance Activities

Positive Attributes:

- *The City has substantially improved their catch basin inspection/cleaning and street sweeping programs.*

According to the 2000/01 Annual report, Foster City inspected only 44 of 1,275 inlets. Since that report, the City has purchased a clamshell machine to more effectively clean out those catch basins that are filled with water a majority of the time. Subsequently in 2001/02, all of the catch basins were inspected and, if necessary, cleaned. In addition, the City sweeps all streets twice a month, exceeding the performance standard.

- *The City ensures that all of its vehicles are properly maintained through the use of a smart key system.*

A special key must be used to get fuel within the City system. If a car has not been properly maintained within the last 1,500 miles, the driver cannot obtain gas for the vehicle. This ensures that cars are maintained and serves as a pollution prevention technique as well.

Deficiencies Noted:

- *The City's corporation yard lacks appropriate BMPs to prevent stormwater contamination.*

Although the City's corporation yard is generally clean and well managed, several deficiencies were noted. The storage location for landscaping materials and gravel and a fueling station are very close to a stormwater inlet. Neither of these areas is covered, and the inlet does not have any type of treatment or filtering BMP.

- *The City's corporation yard does not have a stormwater pollution prevention plan or its equivalent.*

Although not specifically required to develop an SWPPP, the corporation yard could benefit from a plan that describes the activities, potential pollutant sources, BMPs, training, and responsibilities for the yard. The plan also should specifically incorporate the set of 48 specific corporation yard performance standards listed in the SWMP.

- *The City does not have guidance on BMPs for municipal maintenance activities.*

The City does not have written BMPs or guidance documenting how routine maintenance activities should be performed to prevent water quality degradation. Written BMPs should be developed for both routine and emergency activities. The

City should refer to the manual developed by the County of San Mateo, *Endangered Species and Watershed Protection Program, Volume 1, Maintenance Standards* (February 2001) for an example of a municipal maintenance BMP guidance.

2.4.3 Evaluation of Industrial and Commercial Discharge Controls

The City of San Mateo conducts all industrial/commercial stormwater inspections in Foster City. Please see section 2.7.3 for more information.

2.4.4 Evaluation of Illicit Discharge Controls

Positive Attributes:

- *A spill kit is maintained in each City vehicle.*
These kits are used when City staff encounters spills or illicit discharges while in the field or if a City vehicle discharges a hazardous material (e.g., hydraulic fluid).
- *The City has a well-managed program for investigating and tracking spills and illicit discharges.*
The City maintains a database that logs all spills, illicit discharges, and public complaints regarding water quality issues in Foster City's lagoon. The database tracks activities and enforcement taken as a result. This system will soon be connected to the existing GIS in the City.

2.4.5 Evaluation of Public Information and Participation

Adequate

2.4.6 Evaluation New Development and Construction Controls

Positive Attributes:

- *The City's Standard Conditions for a Use Permit includes requirements for erosion and post-construction controls.*
Each project developed in the City is required to obtain a Use Permit, and Standard and Special Conditions are attached to each permit that outline standard erosion and sediment control and stormwater management requirements. In addition, the conditions require that all landscaping be maintained as originally approved by the City for the duration of the Use Permit. Any changes to that original plan must be approved. This approach helps to minimize erosion on sites after the development is complete and the contractors are no longer involved. In addition, the City requires a performance bond for landscaping projects and withholds 50 percent for 12 months to ensure adequate stabilization.
- *The City requires that all storm drain pipes be viewed with television cameras and cleaned out prior to connection with the City system.*
Although many communities only inspect sanitary sewer lines after construction, Foster City also requires the "TVing" and clean-out of not only sanitary sewers but also storm sewers. The entire length of the storm drain lines all the way to the lagoon

are required to be inspected and cleaned. This requirement helps ensure that all sediment has been removed from the pipes before it can enter the lagoon.

2.5 City of Pacifica

2.5.1 Evaluation of Program Management

Adequate.

2.5.2 Evaluation of Municipal Maintenance Activities

Deficiencies Noted:

- *The City does not have clear standards, BMPs or guidance for municipal maintenance activities.*

Within their process, the veteran crewmembers train new employees on the system, equipment, and cleaning procedures; however, the City does not have written standards, BMPs or guidance documenting appropriate stormwater practices. The City should refer to the manual developed by the County of San Mateo, *Endangered Species and Watershed Protection Program, Volume 1, Maintenance Standards* (February 2001) for an example of a municipal maintenance BMP guidance.

- *The City's corporation yard does not have a stormwater pollution prevention plan or its equivalent.*

Although not specifically required to develop an SWPPP, the corporation yard could benefit from a plan that describes the activities, potential pollutant sources, BMPs, training, and responsibilities for the yard. The plan also should specifically incorporate the set of 48 specific corporation yard performance standards listed in the SWMP.

- *Not all pesticide/herbicide applicators are certified.*
City staff said "most" pesticide applicators are certified and receive annual training. Sheriff Work Furlough participants carrying out community service projects sometimes apply weed control. This practice should not be allowed unless the workers are adequately trained on proper procedures for handling, storage, and application of these registered pesticides.
- *The City does not have a procedure for documenting how much trash is collected.*
The Litter Control performance standards in the SWMP require copermittees to document and maintain monthly records on areas targeted for litter removal and total amount of material removed. The City uses Sheriff Work Furlough participants for litter removal but does not track the amount of trash removed. The City is working to establish a procedure for recording the amount of trash collected but should also develop a prioritization schedule for future activities.

2.5.3 Evaluation of Industrial and Commercial Discharge Controls

The San Mateo County Department of Environmental Health conducts all industrial/commercial stormwater inspections in Pacifica. Please see section 2.2.3 for more information.

2.5.4 Evaluation of Illicit Discharge Program

The San Mateo County Department of Environmental Health conducts illicit discharge investigations in Pacifica. Please see section 2.2.4 for more information.

Deficiency Noted:

- *The City has a problem with infiltration and inflow.*
During the visit with staff at the wastewater treatment plant, there was a discussion of the influx of water discharged to the plant during rain events—up to three to four times the average dry weather flow. The inflow of stormwater from old and weathered clay pipes into wastewater lines is widespread. It is not known if reverse inflow from wastewater lines to stormwater lines is occurring. The City should be evaluating the extent of these contributions and the impacts to the receiving waters.

2.5.5 Evaluation of Public Information and ParticipationPositive Attribute:

- *The City often works with other groups to disseminate information in a cost efficient manner.*
The City participated in several STOPPP public outreach efforts, including the countywide mercury thermometer collection drive at the County Fair booth. The City works with the Watershed Coalition to support creek cleanup efforts and provides trash bags and snacks. The City also sponsored a beach cleanup event on Earth Day.

2.5.6 Evaluation of New Development and Construction ControlsDeficiencies Noted:

- *The City's construction oversight process was not adequate to ensure implementation of BMPs.*
The City does not use the STOPPP checklist to inspect and document erosion and sediment controls at construction sites. Inspectors use a checklist entitled "Building Compliance Inspection Report," which makes no reference to stormwater controls, although there is a comments section that can be used to document findings related to stormwater management requirements. The City should use the construction stormwater inspection checklist developed by STOPPP, and should consider, if necessary, using dedicated stormwater inspectors for erosion and sediment control compliance.

In addition, two construction sites visited did not adequately maintain the on-site erosion and sediment controls.

2.6 City of Redwood City

2.6.1 Evaluation of Program Management

Positive Attribute:

- *The City is proactively addressing jurisdiction issues over management of the City's lagoons.*

More than 20 different homeowners' associations have properties along the lagoons. To protect the water quality of the lagoon, the City contracts with several of the homeowners' associations annually to perform routine maintenance/cleaning of the associations' private storm drain lines for a fee; however, not all homeowners' associations take advantage of the service offered. The City has recently decided to develop a brochure and provide notice to all homeowners' associations in Redwood Shores to encourage maintenance of private storm drainage systems.

Additionally, in conjunction with Foster City and the City of San Mateo, Redwood City developed performance standards for lagoon management that were approved in May 2002. The performance standards include general management objectives, and requirements for lagoon design and improvements, water quality monitoring and source control, plant nuisance management, application of herbicides, litter and debris control, communication and training, and public education and outreach.

2.6.2 Evaluation of Municipal Maintenance Activities

Positive Attribute:

- *The City's pesticide/fertilizer program includes a zero spray policy for weed killer in rights-of-way.*

The municipal right-of-way maintenance crews have a policy of zero spray of weed killer: "If it cannot be pulled, burned, or mulched, then leave it." Collected branches are mulched and spread in parks and rights-of-ways as weed abatement instead of using weed killer. The mulch also helps retain water and minimize erosion.

Deficiency Noted:

- *The City's corporation yard does not have a stormwater pollution prevention plan or its equivalent.*

Although not specifically required to develop an SWPPP, the corporation yard could benefit from a plan that describes the activities, potential pollutant sources, BMPs, training, and responsibilities for the yard. The plan also should specifically incorporate the set of 48 specific corporation yard performance standards listed in the SWMP. The corporation yard visited appeared to be implementing a number of BMPs, including a spill prevention plan, however, these activities were not documented in a separate stormwater plan.

- *The City does not have guidance on BMPs for municipal maintenance activities.*

The City does not have written BMPs or guidance documenting how routine maintenance activities should be performed to prevent water quality degradation. Written BMPs should be developed for both routine and emergency activities. The City should refer to the manual developed by the County of San Mateo, *Endangered Species and Watershed Protection Program*, Volume 1, *Maintenance Standards* (February 2001) for an example of a municipal maintenance BMP guidance.

2.6.3 Evaluation of Industrial and Commercial Discharge Controls

The San Mateo County Department of Environmental Health conducts all industrial and commercial stormwater inspections in Redwood City. Please see section 2.2.3 for more information.

2.6.4 Evaluation of Illicit Discharge Controls

The San Mateo County Department of Environmental Health conducts illicit discharge investigations in Redwood City. Please see section 2.2.4 for more information.

2.6.5 Evaluation of Public Information and Participation

Positive Attribute:

- *The City's public outreach program targets water quality problems in specific areas.*

The City is planning a workshop for fall 2002 to educate residents near the Cordellaros Creek on creek care and the importance of vegetation for preventing bank erosion. In preparation for this effort, City staff conducted a reconnaissance inspection of the creek and took pictures of some of the problems caused by residents who deposit trash or otherwise cause erosion. Letters requiring revegetation were sent to residents of identified problem areas. The letters were followed up by visits from code enforcement staff.

2.6.6 Evaluation of New Development and Construction

Deficiencies Noted:

- *The City does not have a mechanism in place to track and document construction inspections.*

Currently, the City cannot demonstrate compliance with applicable performance standards. The City needs to formalize its inspection tracking system to prioritize inspections, document when inspections have been conducted and when the next visits are planned. City inspectors appear to be conducting a significant number of inspections, however, there is no documentation to validate this. A particular need is the ability to document that inspections occur within 14 days of a storm event.

- *The City lacks the authority to ensure ongoing maintenance of post-construction stormwater controls.*

Although legal authority exists to either issue a stop work notice or a \$1,000 per day administrative fine for violations observed during construction, the City lacks the

ability to fine or otherwise ensure ongoing maintenance of post-construction control measures.

2.7 City of San Mateo

2.7.1 Evaluation of Program Management

Deficiency Noted:

- *The City lacks adequate intra-city coordination.*
San Mateo's stormwater program is administered through a program housed in multiple city departments. The Public Works Department is responsible for reporting to STOPPP; however, no coordinated, comprehensive system of communication is in place to ensure compliance with the various permit components among all of the City departments. This lack of coordination was evident when interviewing staff from different departments (Environmental Programs, Planning and Zoning) about the City's post-development control requirements. The departments did not provide consistent answers as to how this program is implemented.

2.7.2 Evaluation of Municipal Maintenance Activities

Positive Attribute:

- *All city streets are swept twice a month.*
The streets in San Mateo are swept double the monthly average required in the performance standards. In addition, the amount of material collected is weighed and tracked.

Deficiencies Noted:

- *The City's corporation yard lacks appropriate BMPs to prevent stormwater contamination.*
Landscaping materials and gravel and the dewatering area for street sweeping debris are currently draining into a storm drain inlet. Although there is a small sediment-trapping filter device in the inlet, it appeared inadequate to handle the amount of runoff and the level of contamination possible in this area of the yard.

- *The City's corporation yard does not have a stormwater pollution prevention plan or its equivalent.*

Although not specifically required to develop an SWPPP, the corporation yard could benefit from a plan that describes the activities, potential pollutant sources, BMPs, training, and responsibilities for the yard. The plan also should specifically incorporate the set of 48 specific corporation yard performance standards listed in the SWMP.

- *The City does not have guidance on BMPs for municipal maintenance activities.*

Although the City's municipal maintenance field crews appeared experienced and aware of stormwater protection activities, they did not have written BMPs or

guidance documenting how routine maintenance activities should be performed to prevent water quality degradation. Written BMPs should be developed for both routine and emergency activities. The City should refer to the manual developed by the County of San Mateo, *Endangered Species and Watershed Protection Program*, Volume 1, *Maintenance Standards* (February 2001) for an example of a municipal maintenance BMP guidance.

2.7.3 Evaluation of Industrial and Commercial Discharge Controls

Positive Attributes:

- The City's pretreatment inspector performs industrial and commercial stormwater inspections.*

The industrial and commercial stormwater inspections occur in conjunction with pretreatment program inspections, where applicable, allowing inspectors to combine inspection responsibilities. The San Mateo inspector was evaluated during inspections of three different facilities and was well versed in NPDES regulations, appropriate BMPs, and pollution prevention management techniques.
- The City intends to use targeted educational outreach for certain commercial sectors.*

Stormwater program staff are working with the City's business license office to target businesses within specific industry for stormwater education. For example, the City is gathering information about pressure washing businesses in the area and is planning an educational campaign (e.g., training, brochure distribution) to educate them about proper pollution prevention.

Deficiency Noted:

- Improvements are needed in the City's industrial and commercial inspection and enforcement tracking system.*

Currently, documenting compliance with the performance standards is questionable. The City uses a spreadsheet to log the inspections performed for reporting purposes. It was apparent, however, that a tracking tool is necessary to assist the inspector in ensuring that each facility in the City is inspected every 2 years and that timely follow-up is performed at noncompliant facilities. An improved tracking system would assist in reporting, improve the effectiveness and consistency of the inspection program, and ensure better enforcement throughout the entire City.

2.7.4 Evaluation of Illicit Discharge Detection and Elimination Program

Positive Attribute:

- The City uses door hangers to inform residents that someone has discharged a pollutant into the storm drain.*

Although not required by the performance standards, the City uses door hangers developed by STOPPP to inform residents of specific water quality issues in problem areas. This practice demonstrates an effort to stop illicit discharges at the source, rather than just detecting them and eliminating isolated occurrences.

2.7.5 Evaluation of Public Information and Participation Adequate.

2.7.6 Evaluation of New Development and Construction Controls Positive Attribute:

- *The City revokes Saturday work permits on larger projects to enforce erosion and sediment control practices.*

This technique provides an additional option for enforcement and is an innovative way to gain compliance with erosion and sediment control requirements. According to City staff it is less difficult to administer the revocation of a Saturday work permit than it is to use a Stop Work Order and the approach has proven very effective.

Deficiencies Noted:

- *It was not clear whether post-construction controls are being required on “significant” development projects.*

The performance standards require ‘significant’ projects (generally projects adjacent to a “sensitive area” and/or require coverage under the Statewide General Construction permit), to mitigate stormwater impacts. During the evaluation, it was not apparent whether post-construction controls are being required in the City of San Mateo in a consistent manner. Conflicting information was provided that indicated that the City has not formalized the process for requiring post-construction controls on “significant” projects. The City’s Conditions of Approval (October 16, 2000) state that all sites are to incorporate bioswales or “equivalent measures” to ensure pollutants have been reduced to the maximum extent practicable. However, the City has yet to establish specific criteria to define these “equivalent measures.” In addition, despite the Conditions, it appeared that post-construction treatment controls are not being required on redevelopment projects. If the City intends to require developers to mitigate impacts on sites with stormwater pollution potential using post-construction controls, a consistent prioritization and review process will need to be developed, adopted, and used by the City, and all applicable staff members need to be informed of the procedures.

- *Erosion and sediment control plan review protocols for new development and redevelopment are not formalized.*

Although basic erosion and sediment control practices are required on site plans as a part of environmental documents required under the City’s Site Development Code (Chapter 23.40), a standardized procedure has not been developed for their review and approval. In addition, there is currently no approved checklist or other guidance to educate developers about the plan requirements. A draft Submittal Requirements Checklist is under development, but has not been approved. City staff appeared uncertain of erosion and sediment control requirements, standards, and specifications for site plans. Coordination among planners, the City’s engineers, and inspectors has

not been formalized to ensure that adequate plans are developed, approved, and used in the field to maximize the removal of pollutants during construction.

- *Inspection, tracking, and enforcement of erosion and sediment control at construction sites are inadequate.*

Evaluations of multiple development projects identified poorly maintained erosion and sediment control, such as inappropriately installed silt fence, ineffective construction entrances, excessive construction waste piled near streams, and sources of other pollutants stored outside without cover. Although some BMPs had been previously installed at most sites, most of the BMPs needed maintenance. It is important that necessary controls be installed and maintained throughout the life of a project. A database or central file system is not used to track inspections or compliance actions. A formalized enforcement escalation plan has not been developed, and there is little or no enforcement of erosion and sediment control practices. Such a plan would ensure a defensible and consistent approach to future enforcement activities and would ensure consistency in the event of staff turnover. The City's ability to demonstrate compliance with applicable performance standards is questionable.