

US EPA ARCHIVE DOCUMENT

Program Evaluation Report

City of Petaluma Stormwater Management Program

1.0 Introduction

1.1 Program Evaluation Purpose

The purpose of the program evaluation was to determine the City's compliance with its National Pollutant Discharge Elimination System (NPDES) permit (CAS 000004) and to determine the City's overall success in implementing its Stormwater Program (Program). 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.
- Identify program areas for further review by the Regional Board.

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

1.2 Permit History

The NPDES stormwater Phase II small MS4 general permit was issued on April 30, 2003, and expires on April 30, 2008. The City of Petaluma submitted a complete application for coverage under the general permit on March 10, 2003 and received permit coverage on March 24, 2004.

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. CAS 000004
- 03-04 City of Petaluma Annual Report
- City of Petaluma Stormwater Management Plan (December 2003)
- City Web site

On June 23–24, 2005, Tetra Tech, Inc., with assistance from the Regional Board and US EPA, conducted the program evaluation. The evaluation schedule was as follows:

Thursday, June 23	Friday, June 24
<ul style="list-style-type: none"> • Program evaluation kickoff meeting • Program Management • Municipal Operations (office and field) • Construction (office and field) • Post-Construction 	<ul style="list-style-type: none"> • Public Education and Public Involvement • Illicit Discharge Detection and Elimination • Program evaluation outbrief meeting

Upon completion of the evaluation, an outbrief was held to discuss the preliminary findings. During the outbrief, the attendees 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
- Public Education/Public Involvement
- Illicit Discharge Detection and Elimination
- Construction
- Post-Construction
- Municipal Operations

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., sampling location, types, frequency, parameters).
- Other NPDES permits issued to the City (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 City 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.

2.0 Program Evaluation Results

This program evaluation report identifies program deficiencies and positive attributes. This report is not a formal finding of violation. **Program deficiencies** are areas of concern for successful program implementation. Positive attributes indicate the City's overall progress in implementing the Program. The evaluation team identified only positive attributes that were

innovative and exceptional (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 the City's Program. Therefore, the City should not consider the enclosed list of program deficiencies a *comprehensive* evaluation of individual program elements.

For discussion and tracking purposes, each deficiency is separately numbered.

2.1 Evaluation of Program Management

Positive Attribute:

- *The City has a clear organizational structure with a dedicated program leader for stormwater.*

Activities under each of the minimum control measures, though implemented by different departments and jurisdictions, are overseen by a single department with one individual responsible for assembling the annual report and helping to ensure compliance with each requirement in the SWMP.

Deficiencies Noted:

- *No. 1: The SWMP should be revised to include more quantifiable goals.*
Many of the City's measurable goals are programmatic milestones; for example, for the City's Enforcement Response Plan (ERP), several milestones are presented under "Quantifiable Target/Evaluation Tool," ending with "implementation commenced." The City must evaluate the efficiency and effectiveness of the ERP through measurable goals such as the number of violations that have been investigated and concluded, the time it took for a conclusion to be reached, or other factors that would indicate whether the ERP required revisions or streamlining.
- *No. 2: The City must provide more documentation of program accomplishments in annual reports that can show progress toward reducing pollutants and approaching the maximum extent practicable standard.*
At this time, the annual report only documents that elements of the SWMP have been completed, and there is no discussion that describes what specific activities have occurred that would allow the City to make this conclusion. The City should include a narrative section for each minimum control measure that outlines, for example, how the City's catch basin cleaning program works, how many basins were cleaned, and what changes and improvements to the program are being made for the following year.
- *No. 3: The City should develop a specific plan to evaluate the effectiveness of its stormwater program.*
The City must develop a specific plan to evaluate the effectiveness of its stormwater program. The current annual report summarizes past activities but does not provide detailed analysis evaluating those activities. The City must use the annual report preparation process to analyze not only *what happened* but also *why* it happened and

what needs to change in the future to improve the Program. Ultimately, this evaluation will help the City to improve implementation of the Program and help document water quality improvements.

For additional information on program effectiveness, the City should review the presentations from the November 14, 2003, meeting of the California Storm Water Quality Association. That meeting focused on MS4 program effectiveness and how MS4s can document such effectiveness. The presentation materials are available at <http://www.casqa.org/meetings/presentations.html>. An additional resource is *A Framework for Assessing the Effectiveness of Jurisdictional Urban Runoff Management Programs* developed by the San Diego Municipal Storm Water co-permittees. A copy of the report is available at http://www.projectcleanwater.org/pdf/copermittees/assessment_framework_final.pdf

2.2 Evaluation of Public Education and Outreach/Public Involvement and Participation

General Comment:

The City has yet to fully implement its public outreach and public participation minimum control measures due to slow coordination with other local Phase II communities.

Positive Attribute:

- *The City conducted a baseline survey of residents to gauge stormwater knowledge and identify target audiences.*
The City now has data from which it can gauge the success of future education efforts pertaining to stormwater and watershed knowledge. The City can use these data along with demographic information to develop targeted messages that are likely to have the most impact.

Deficiencies Noted:

- *No. 4: The City should take the initiative to begin developing its public education and outreach and public involvement/participation programs.*
The City has been working with neighboring jurisdictions to develop a regional message, but at this time little progress has been made and few activities have been conducted to meet the requirements of the minimum control measures. In the absence of regional progress, the City should develop its own materials and activities to ensure compliance with the SWMP. For assistance in developing the outreach material targeted to specific audiences, the City should refer to the EPA guidance document “Getting In Step: A Guide for Conducting Watershed Outreach Campaigns” available at <http://www.epa.gov/owow/watershed/outreach/documents>.
- *No. 5: The City should follow through on opportunities for public participation (e.g., the school monitoring program for Derman Reach) and explore other options such as partnering with local schools, environmental stewardship groups, or businesses to provide opportunities for public participation in stormwater-related activities.*

The City has several local, active environmental stewardship groups that could provide assistance in disseminating a stormwater educational message and organizing events for public participation.

2.3 Evaluation of Illicit Discharge Detection and Elimination (IDDE)

Deficiencies Noted:

- *No. 6: The City needs to develop a more detailed protocol for tracking illicit discharge and illegal dumping complaints.*
At this time, calls from the public are tracked via a generic phone record. The tracking system should identify the location, time, date and nature of the incident, who responded, what clean-up and remediation actions were taken, when the illicit discharge was resolved, and what follow-up or enforcement actions were taken.
- *No. 7: The City should consider incorporating stormwater inspections into local pretreatment inspections.*
Because the City owns the sewer utility and City staff performs pretreatment inspections at local businesses, it is feasible that additional inspection items pertaining to stormwater management in outdoor storage and work areas can be added to the inspectors' protocols. The City could also consider using these experienced pretreatment inspectors for priority stormwater business inspections (e.g., many cities assign a high priority to restaurants and automotive facilities because problems are frequently found at these businesses).

2.4 Evaluation of Construction Site Runoff Control

Positive Attribute:

- *The City requests a copy of the Notice of Intent for coverage under the State's Construction General Permit and the SWPPP before grading permits are issued.*
This requirement helps to ensure that construction site operators are complying with the State's Construction General Permit and that erosion and sediment controls have been planned for in advance.

Deficiencies Noted:

- *No. 8: The City should provide better documentation of construction site inspections by using a standardized checklist for each inspection and tracking the number of inspections and follow-up or enforcement actions taken.*
These data will assist the City in demonstrating program efficacy and will allow for long-term tracking of progress in maintaining compliance at the City's construction sites.
- *No. 9: The City should provide training for the development community regarding expectations for erosion and sediment controls at construction sites.*
The training should include details about the City's ordinances prohibiting illicit discharges, the State's requirements for coverage under the Construction General Permit, and the City's minimum BMP requirements and standards.

2.5 Evaluation of Post-Construction Stormwater Management in New Development and Redevelopment

General Comment:

The City has not fully implemented its post-construction stormwater management minimum control measure yet.

Positive Attribute:

- The City should follow the Regional Board's examples for plan review and approval dealing with stormwater quality issues.*

Plans for a large residential development site that underwent state-level review for post-construction stormwater management were examined during the audit and included good post-construction stormwater BMPs. When the City begins to require post-construction BMPs, it should continue to uphold as high a standard for post-construction BMPs as the state-reviewed plans reflect. In addition to the resources identified in the SWMP, the City should take advantage of numerous Bay Area resources developed by Phase I permittees such as the Contra Costa Clean Water Program's *Stormwater C.3 Guidebook* (<http://www.cccleanwater.org/construction/nd.php>) or the Santa Clara Valley Urban Runoff Pollution Prevention Program's *C.3 Stormwater Handbook* (http://www.scvurppp-w2k.com/permit_c3.htm).

Deficiency Noted:

- No. 10: The City should develop a program for tracking maintenance of post-construction BMPs.*

The City has committed to “develop requirements for the long-term operation and maintenance of BMPs in new development and redevelopment,” yet it did not plan to develop a program to ensure that maintenance is being performed as required. The City should evaluate different options for ensuring that maintenance of post-construction BMPs is being performed, which at a minimum would include developing a spreadsheet or database to track the location, design specifications, and maintenance requirements of each new practice. Additionally, the City should conduct periodic inspections of facilities or require that the property owner submit proof of maintenance to the City.

2.6 Evaluation of Pollution Prevention/Good Housekeeping for Municipal Operations

Positive Attributes:

- The City has developed staff training manuals and standard operating procedures for municipal activities.*

Procedures and BMP guidance for major stormwater-related activities have been documented and are provided to staff as a notebook during training events. These notebooks can be used as a reference for staff.

- *The City has a well-organized catch basin inspection and maintenance program.*
The City’s catch basin crews follow a schedule developed based on anticipated demand for complaint-driven services. For example, during the summer months, the crews are scheduled to perform routine maintenance and repairs. During the winter months—when rain is more prevalent—more of the crew time is allocated to responding to flooding and debris complaints and less routine maintenance is performed. Activities are tracked using a spreadsheet and the schedule for the upcoming year is modified based on results from the previous year. Problem areas are logged in the spreadsheet and are visited more often.
- *The City’s municipal corporation yard had numerous, well-marked spill kits and absorbent materials available near refueling areas.*
One large spill kit, situated next to a fueling island, was equipped with a laminated map on the inside cover showing the locations of storm drain inlets and ditches.

Deficiencies Noted:

- *No. 11: The City should conduct regular site inspections of the municipal corporation yard to identify and resolve poor housekeeping issues and to reinforce stormwater requirements to staff using the site.*
There was an area where used paint cans were stored improperly. A periodic, thorough inspection of the site would identify such housekeeping problems and allow them to be remedied in a timely manner.
- *No. 12: Because of the size and extent of the activities occurring at the municipal corporation yard, the City should consider developing a stormwater pollution prevention plan (SWPPP) or similar document to be implemented at the site.*
Numerous City staff work at or visit the site regularly and all should be trained about stormwater pollution prevention practices, including spill response and control, proper storage of materials, vehicle maintenance and washing practices, and other topics. A SWPPP would describe such practices to be implemented at the site and would prescribe a training program for staff.
- *No. 13: The City should evaluate street sweeping data to locate hot spots requiring more frequent maintenance or targeted education and outreach to residents.*
The City collects data on how much material is collected during sweeping activities. These data can provide important information on pollutant loadings throughout the City, which will allow the City to target maintenance and education efforts to “hot spots” where pollutant generation is higher. Over the long term, these data might show reductions in loadings that resulted from increased stormwater education efforts.