

Program Evaluation Report

San Bernardino Area Stormwater Program: City of Fontana (NPDES Permit No. CAS 618036)

Executive Summary

Tetra Tech, Inc., with assistance from the California Regional Water Quality Control Board, Santa Ana Region (Regional Board), conducted a program evaluation of the City of Fontana Stormwater Program in October 2004. The purpose of the program evaluation was to determine the City's compliance with its National Pollutant Discharge Elimination System (NPDES) permit (CAS 618036 and Board Order R8-2002-0012) and to evaluate the current implementation status of the City's Urban Runoff Program (Program). The program evaluation included an in-field verification of program implementation.

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 overall progress in implementing the Program.

The following deficiencies are considered the most significant:

- The City has not developed a City-specific stormwater management plan (SWMP).
- The City should develop written procedures for reviewing WQMPs.
- The City should develop a database to track post-construction BMPs.
- The City should develop SWPPPs for the two corporation yards and other municipal facilities with a potential to adversely affect stormwater.

Several elements of the City's programs were particularly notable:

- The City has established an effective system to guarantee that plans are routed to and reviewed by the proper departments.
- The City has developed specific criteria for prioritizing construction sites.

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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 618036 and Board Order R8-2002-0012) and to evaluate the current implementation status of the City's Urban Runoff Program (Program) 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 April 26, 2002, and is scheduled to expire on April 27, 2007. The City of Fontana is one of 16 cities, along with the County of San Bernardino and the San Bernardino County Flood Control District, who jointly submitted an NPDES application for the area-wide stormwater permit program. The current permit, the third issued to the co-permittees, requires each co-permittee to implement an Urban Runoff Program, including the best management practices (BMPs) identified in the area-wide Drainage Area Management Plan (DAMP).

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 618036
- Santa Ana Region DAMP
- Santa Ana Region Enforcement/Compliance Strategy (December 20, 2001)
- Santa Ana Region Municipal Facilities Strategy (June 1997)
- Appendix C, Supplement A (New Development Guidelines), of the DAMP
- Model Water Quality Management Plan (WQMP) (April 30, 2004)
- 2002 annual report
- City Web site

On October 13–15, 2004, Tetra Tech, Inc., with assistance from the Regional Board, conducted the program evaluation. The evaluation schedule was as follows:

Tuesday, October 13	Wednesday, October 14	Thursday, October 15
<ul style="list-style-type: none"> • Program evaluation kickoff meeting • Program Management • Construction and New Development (office) 	<ul style="list-style-type: none"> • Construction (field) • Municipal Facilities and Activities (field and office) • Illicit Connections and Illegal Discharges (office) 	<ul style="list-style-type: none"> • Industrial and Commercial (office and field) • Education and Outreach • Program Effectiveness • Reporting • 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 (including the City’s assessment of program effectiveness)
- Municipal Facilities and Activities
- Industrial and Commercial Inspections
- Construction
- New Development
- Illicit Connections and Illegal Discharges
- Education and Outreach
- Reporting

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 the 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.

1.6 Program Areas Recommended for Evaluation

The evaluation team recommends the following additional assessments:

- An in-depth evaluation of the new development planning program implemented by the City, including an evaluation of the WQMP review and approval process after additional WQMPs have been approved.
- An evaluation of the co-permittees that are implementing programs developed in compliance with Board Order R8-2002-0012 but were not included in this round of evaluations.

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.

The most significant 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 Evaluation of Program Management and Effectiveness

Deficiencies:

- *The City has not developed a City-specific stormwater management plan (SWMP).*

Although not specifically required in the permit, each permittee should develop an SWMP specific to that permittee. All permittees have adopted the area-wide SWMP; however, each permittee should build on this area-wide SWMP to develop a plan that addresses the unique legal and organizational structure in that permittee's jurisdiction. The SWMP should also serve as a comprehensive implementation management strategy for each permittee to allow the permittee to prioritize the implementation of its program based on the pollutants of concern and the sources of those pollutants specific to its jurisdiction. BMPs and activities in the plan should include specific performance standards, or measurable goals, against which implementation of the programs can be assessed.

- *The City is not taking adequate steps to evaluate program effectiveness comprehensively.*

The City is not taking adequate steps to evaluate program effectiveness comprehensively and to go beyond the collection of water quality monitoring data. The current annual reports summarize past activities but do not provide detailed analysis evaluating those activities. The City should 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 permittees 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 municipal separate storm system (MS4) program effectiveness and how MS4s can document such effectiveness. The presentation materials are available at

<http://www.casqa.org/meetings/presentations.htm>. 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

- *The annual report does not provide sufficient information to assess the compliance of individual permittees.*

Part IV of the Monitoring and Reporting Program of the NPDES permit requires the permittees to submit an annual progress report by November 15 of each year. At a minimum, the annual progress report is required to include the following:

- a. A review of the status of program implementation and compliance (or noncompliance) with the schedules contained in this Order.
- b. An assessment of the effectiveness of control measures established under the illicit discharge elimination program and the ROWD. The effectiveness may be measured in terms of how successful the program has been in eliminating illicit/illegal discharges and in reducing pollutant loads in storm water discharges.
- c. An assessment of any storm water management program modifications made to comply with Clean Water Act requirements to reduce the discharge of pollutants to the maximum extent practicable.
- d. An analysis and discussion of the monitoring results and any impacts on the receiving waters. Also, recommendations for corrective actions during the upcoming year of management program implementation and monitoring.
- e. An analysis of the effectiveness of the overall storm water management program and identification of proposed programs which will result in the attainment of the water quality standards, and a time schedule to implement the new programs.
- f. An assessment of the public education program (including industrial facilities and construction sites) and educational activities proposed for the upcoming year.

- g. A progress report on the prosecution of illegal dischargers and reduction or elimination of illegal discharges.
- h. An assessment of the permittees' compliance status with the Receiving Water Limitations, Section IV of the Order, including any proposed modifications to the ROWD and MSWMP if the Receiving Water Limitations are not fully achieved.

The current annual report provides a concise summary of general activities the permittees have undertaken to comply with the permit. The report also provides summary statistics in tables or graphs for each permittee for specific activities such as construction inspections, street sweeping, and storm drain cleaning. However, the report does not provide sufficient information to assess the compliance of individual permittees. For example, the annual permit requirement for storm drain inlets inspected is 100 percent, and although 9 of the 18 permittees did not meet that requirement, the annual report does not explain why.

The City should work with the other permittees to build on the existing reporting format and develop an annual report that clearly describes the following for each program area:

- What the permittees were required to do (e.g., a summary or copy of the permit requirement, their SWMP commitment, or both).
- What the permittees accomplished to meet that requirement (similar to the tables, graphs, and text in the current annual report).
- An explanation or analysis of why the permittees did not meet particular permit requirements and what changes or additional BMPs are needed.

The City should also develop a brief (5- to 10-page) summary of activities specific to that permittee as an attachment to the report. This summary should be consistently formatted and refer to information in the main body of the report. The summary should provide more information on how the City has implemented the program in the past year and may include additional information not found in the main body of the annual report.

Positive Attribute:

- *The City of Fontana has taken a leadership role in the area-wide management committee and subcommittees and has contributed a significant amount of time. The San Bernardino Management Committee meets 11 times a year. During the past year, the City of Fontana has participated in these meetings. In addition, the City participates in many of the subcommittees, including the education subcommittee, which is chaired by Dan Chadwick of Fontana.*

2.2 Evaluation of New Development and Redevelopment Program

Deficiencies Noted:

- *The City should develop written procedures for reviewing WQMPs.*

Currently, the City reviews WQMPs by walking through the model WQMP guidance. The City should take this review one step further by creating a checklist to document that the WQMP has fulfilled all the requirements. Because there are so many requirements, this step will ensure that no requirements are missed. In addition, this step can be used to help train future staff in the review of WQMPs. Although the City requires that an engineer certify the calculations, the City should consider also requiring that an engineer verify the accuracy of the calculations.

The City's CEQA checklist has been revised to address the requirements of provision XII.A.5 of the permit. However, to ensure that WQMPs are developed for required project categories, the City should update the "Hydrology and Water Quality" section of its CEQA checklist to include a question or questions on WQMPs. At a minimum, the CEQA checklist should ask whether the project will require development of a WQMP.

- *The City should develop a database to track post-construction BMPs.*

The City plans to develop a database to track post-construction BMPs. This database should track structural source control and treatment BMPs identified in project plans complying with project-specific WQMPs. Information such as location, type of BMP, responsible party, and operation and maintenance (O&M) inspection and maintenance frequency should be collected to assist the City in ensuring that post-construction BMPs are adequately maintained. As the City noted, such a database can also be used as a tool to help educate other developers about BMP implementation and effectiveness.

- *The City lacks a formal mechanism to assign responsibility for maintaining nonresidential post-construction BMPs.*

The City has no mechanism to assign responsibility for maintaining nonresidential post-construction BMPs. The development of a formal maintenance agreement would facilitate the assignment of responsibility for routine maintenance of post-construction BMPs. The City should also ensure that when transfer of ownership takes place, BMP maintenance responsibilities are also transferred to the new owner.

Positive Attribute:

- *The City has established an effective system to guarantee that plans are routed to and reviewed by the proper departments.*

The City has developed and distributed to the planners a matrix indicating which types of plans should be routed to and reviewed by the Environmental Control Department. For each type of project, the matrix indicates whether any or all of the following are required: a WQMP, a state General NPDES Permit and WDID number, an erosion control plan, environmental control approval (before business licensing), a

wastewater discharge permit, and pretreatment equipment. The matrix also shows whether plans should be routed to Environmental Control for review.

2.3 Evaluation of Construction Program

Deficiencies Noted:

- *The City should ensure that inspection dates, inspectors present, and inspection results are maintained in a database.*
 During the evaluation, the City demonstrated a database that included information on multiple inspections at construction sites. However, the database submitted by the City in the 2003 annual report included only one inspection per site. The permit requires that high-priority sites be inspected at least once a month, medium-priority sites at least twice during the wet season and once during the dry season, and low-priority sites at least once during the wet season and once during the dry season (provision VIII.3). The City should ensure that the database submitted to the Regional Board, as required in provision VIII.3.c, includes the dates of all inspections, inspectors present, and inspection results for each construction site. The inspection results should include the nature of each violation (not simply “noncompliance”) so that subsequent inspectors and the Regional Board know the type and severity of the violation.

- *The City should conduct more thorough construction site inspections.*
 During one inspection at a residential development, the inspector only drove through the active construction areas and did not get out of the car for a closer look. Although the inspector was able to observe some housekeeping problems, the inspector is encouraged to spend more time in the field, verifying that all BMPs in the stormwater pollution prevention plan (SWPPP) are installed and properly maintained.

Positive Attribute:

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| <ul style="list-style-type: none"> • <i>The City has developed specific criteria for prioritizing construction sites.</i>
 The City has very few construction projects that fall under the high-priority threshold required in the permit (sites over 50 acres or sites over 5 acres that are tributary to sediment- or turbidity-impaired waterbodies). The City has more specifically defined a high-priority construction site as <ul style="list-style-type: none"> ○ Any active construction site over 50 acres. ○ A master plan of development that has one or more active tracts that total more than 50 acres. ○ Any development adjacent to a channel. ○ Any development that has a direct, underground connection to a channel. ○ Any development or developer with a recurring record of noncompliance. ○ Any hillside development. ○ Any development upstream or adjacent to a natural water body (e.g., lake, reservoir) |
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- *The City is using an effective checklist and has effective enforcement procedures.*
The City has developed a checklist for use during construction site inspections. The checklist is produced in triplicate, allowing the inspector to leave a copy with the superintendent. The City also has effective enforcement procedures. Unlike the area-wide program, which calls for verbal notice as the first step, the City issues a written Notice of Correction during the inspection if any deficiencies are found. This form is also produced in triplicate, allowing the inspector to give a copy to the superintendent at the time of the inspection.

2.4 Evaluation of Municipal Facilities and Activities Program

Deficiency Noted:

- *The City should develop SWPPPs for the two corporation yards and other municipal facilities with a potential to adversely affect stormwater.*

Facility-specific plans similar to industrial SWPPPs should be developed for the City's two corporation yards and any other City facilities with significant pollutant sources that could adversely affect stormwater quality. The plans should identify pollutants likely to be generated at each site and specify the BMPs that will be implemented to reduce impacts on the MS4 and receiving waters. Employees at these facilities should be taught periodically about pollution prevention and stormwater management.

The City's corporation yard south of Orange Way would benefit from better housekeeping and dust control. The large lot is mostly unpaved and could be a source of excessive dust. In addition, stockpiles of wood chips, dirt, and other loose materials were stored on-site and should be monitored for erosion due to rainfall or wind.

Positive Attribute:

- *The City's corporation yard north of Orange Way includes numerous BMPs to address stormwater concerns.*
The City's corporation yard north of Orange Way was designed with most activities conducted and materials stored inside the buildings or under cover. The vehicle wash rack is covered and enclosed, and spill kits are available near the fueling island. In addition, the stormwater inlets have been clearly identified with a thermoplastic stencil.

2.5 Evaluation of Industrial and Commercial Inspection Program

Deficiencies Noted:

- *The City should develop written procedures describing how facilities are prioritized as high, medium, and low.*
Although the City has prioritized all the facilities, it should document its decision-making process. This will ensure that facilities are prioritized consistently, in

addition to providing direction for new staff that might be prioritizing sites in the future.

- *The City should distribute outreach materials to industries during inspections.*
Although the City has several BMP fact sheets geared to industries, the inspector did not distribute these to the facility inspected during the evaluation. These education materials would help ensure that the facility manager knows how to implement BMPs, in addition to providing a tool for the manager to use to educate employees.
- *The City should coordinate better with other departments to ensure that Standard Industrial Classification (SIC) codes are accurate.*
The Environmental Department has found that many of the SIC codes designated when business licenses are granted are inaccurate. To help mitigate this problem, the City should develop a process to coordinate more effectively with the Business Department.

Positive Attributes:

- *The City has developed an effective checklist for use during inspections.*
The City has developed a checklist for use during industrial and commercial inspections. The checklist is produced in triplicate, enabling the inspector to give the facility a copy for its records. This ensures that the facility is aware of any deficiencies found during the inspection. A separate checklist for restaurants, also in triplicate, is used during restaurant inspections.
- *The City is beginning to implement an innovative on-line training program.*
The City is in the final stages of preparing an on-line training program for staff. The training program consists of several modules of PowerPoint slides. Each module is followed by a quiz with 10 multiple-choice questions. One module covers general aspects of stormwater issues, which would be appropriate for all staff. More specific modules are targeted to field workers and inspectors. The stormwater coordinator receives a list of who has participated in the training and their scores. In addition, the program tracks for each employee the length of time spent in viewing the modules and whether any slides were skipped.

2.6 Evaluation of Public Education and Outreach Program

Deficiency Noted:

- *The City should try to determine the demographics of residents who participate in City events where many of the educational materials are distributed.*
The City has tracked the number of people participating in City events, but the City is encouraged to track demographic information as well. This information will enable the City to assess how effective its events are in reaching targeted audiences and whether additional means of outreach are necessary.

Positive Attributes:

- *The City is heavily involved with the area-wide education subcommittee and is helping to implement many educational activities.*

The City has conducted school education programs for fourth through fifth graders at schools in Fontana. The City also distributes materials developed by the area-wide education subcommittee, in addition to those developed by the City, at City events. Many of these materials are in color and are multilingual. The City has also developed a trivia game to educate participants in environmental topics at these events.

- *The County-wide program has developed a series of bilingual pollution prevention fact sheets to help educate the public about specific stormwater practices.*

The permittees have developed bilingual fact sheets on a series of topics ranging from auto maintenance to home repair and remodeling. These colorful fact sheets include simple illustrations, clear language, and specific actions the reader can take to protect water quality. The fact sheets are printed in English on one side and Spanish on the other.

2.7 Evaluation of Illicit Connection and Illegal Discharge Program

Deficiency Noted:

- *The City should continue to finalize its mapped inventory of storm drains, inlets, and catch basins.*

The City has developed a draft inventory map of storm drains, inlets, and catch basins. Once the maps have been finalized, the City should ensure that all field workers have convenient access to these maps. In addition, the City should update these maps periodically to incorporate areas of new development. The City should also consider adding to the maps/database, an inventory of storm drains that have been stenciled and that need to be stenciled.