



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street
San Francisco, CA 94105-3901

JUL 01 2014

Sent Via Certified Mail
No. 7008 1830 0002 6279 7268
Return Receipt Requested

Mr. Joe DeFrancesco, Director
Public Works
City of Orange
300 East Chapman Avenue
Orange, CA 92866

Re: City of Orange Municipal Separate Storm Sewer System (MS4) Compliance
Audit Report

Dear Mr. DeFrancesco:

Enclosed please find the final audit report for the City of Orange Storm Water Management Program (Program). On August 27, 2013, EPA Region 9 (EPA) and PG Environmental, LLC, an EPA contractor, conducted an audit of the City's Program. The purpose of the audit was to assess the City's compliance with the requirements contained within the *National Pollutant Discharge Elimination System (NPDES) Areawide Urban Storm Water Runoff Permit* (NPDES Permit No. CAS618030).

EPA's audit focused on evaluation of the City's compliance with the Illicit Discharges/Illicit Connections (ID/IC), and New Development program requirements of the Permit. EPA identified recommendation for improvement. Specifically, the City should:

- Expand its database of ID/IC's to include information on corrective actions taken by the responsible party and the enforcement response taken by the City to eliminate the illegal discharge or connection as required by Section II.B.3 of the Permit; and
- Consider applying for Orange County Transportation Authority (OCTA) grant funds for trash reduction related projects.

Please respond to the audit report with any updates or program enhancements or clarifying comments by Friday, July 18, 2014. Following receipt of the City's response, EPA will post the report along with the City's response on our website. If you have any questions, please call me

at (415) 972-3873, or refer staff to Greg Gholson at (415) 947-4209 or via email at gholson.greg@epa.gov.

Sincerely,

A handwritten signature in blue ink that reads "Kathleen H. Johnson". The signature is fluid and cursive, with the first name being the most prominent.

Kathleen H. Johnson, Director
Enforcement Division

Enclosures:

City of Orange MS4 Audit Report (w/attachments)

Cc via email with enclosures:

Michelle Beckwith, Santa Ana RWQCB



U.S. Environmental Protection Agency
Region 9
Enforcement Division
75 Hawthorne Street
San Francisco, CA 94105-3901

**MUNICIPAL SEPARATE STORM
SEWER SYSTEM (MS4)
COMPLIANCE INSPECTION**

**CITY OF ORANGE
CALIFORNIA**

INSPECTION REPORT

**Inspection Date:
August 27, 2013**

**Report Date:
June 27, 2014**

CONTENTS

SECTION 1.0 EXECUTIVE SUMMARY2

SECTION 2.0 CITY OF ORANGE STORMWATER PROGRAM3

 2.1 PROGRAM AREAS EVALUATED3

SECTION 3.0 EVALUATION FINDINGS.....4

 3.1 ILLICIT DISCHARGES/ILLICIT CONNECTIONS PROGRAM4

 3.2 NEW DEVELOPMENT PROGRAM7

APPENDIX A: ADDITIONAL INSPECTION REPORT MATERIALS

APPENDIX B: CATALOG OF REFERENCE MATERIALS

Section 1.0 Executive Summary

On August 26-27, 2013, the U.S. Environmental Protection Agency (EPA) and staff from PG Environmental, LLC, an EPA contractor, conducted an inspection of the City of Orange, California's Municipal Separate Storm Sewer System (MS4) Program.

EPA reviewed documents, interviewed staff and conducted field activities to review the City's MS4 Program. The inspection focused on the City's (1) Illicit Discharges/Illicit Connections (ID/IC); Litter, Debris and Trash Control, and (2) New Development program elements. At the conclusion of the inspection, EPA discussed preliminary observations with City representatives.

In this report, where applicable, EPA has identified recommendations for program improvement. Specifically, the City should:

- Expand its database of ID/IC's to include information on corrective actions taken by the responsible party and the enforcement response taken by the City to eliminate the illegal discharge or connection as required by Section II.B.3 of the Permit; and
- Consider applying for Orange County Transportation Authority (OCTA) grant funds for trash reduction related projects.

Section 2.0 City of Orange Stormwater Program

On August 26-27, 2013, a representative of the U.S. EPA, Greg Gholson, and an EPA contractor, PG Environmental, LLC, conducted an inspection of the City's MS4 Program. EPA also evaluated the City of Santa Ana and County of Orange MS4 Programs on August 28-29 and August 27-28, 2013, respectively.

Discharges from the City's MS4, the Orange County Flood Control District (OCFCD) and twenty-six (26) other municipalities are regulated under *Waste Discharge Requirements for the County of Orange, Orange County Flood Control District and the Incorporated Cities of Orange County within the Santa Ana Region, Areawide Storm Water Permit*, National Pollutant Discharge Elimination System (NPDES) Permit No. CAS618030, Order No. R8-2009-0030 as amended by Order No. R8-2010-0062, (hereinafter, Permit), issued October 29, 2010. The Permit is the fourth NPDES MS4 permit issued to the Copermittees. The Copermittees currently covered under the Permit include Orange County (Principal Permittee and Copermittee), OCFCD and the incorporated cities of Anaheim, Brea, Buena Park, Costa Mesa, Cypress, Fountain Valley, Fullerton, Garden Grove, Huntington Beach, Irvine, Laguna Hills, Laguna Woods, La Habra, La Palma, Lake Forest, Los Alamitos, Newport Beach, Orange, Placentia, Santa Ana, Seal Beach, Stanton, Tustin, Villa Park, Westminster, and Yorba Linda (Copermittees).

The Permit authorizes the Copermittees to discharge or contribute to discharges of storm water from Phase I MS4s into the Watershed Management Areas of the San Gabriel River drainage area, Huntington Harbor and Bolsa Bay drainage area, Santa Ana River drainage area, Newport Bay drainage area, and the Irvine and Newport Coast Areas of Special Biological Significance. These Watersheds are tributaries to the Pacific Ocean.

City Information

According to the 2010 U.S. Census, the City of Orange is approximately 25 square miles with a population of 137,000. The City is located adjacent to the Santa Ana River, approximately 15 mile inland from the Pacific Ocean and about 33 miles southeast of downtown Los Angeles. Discharges from the City's MS4 flow into Santiago Creek (a tributary to the Santa Ana River), and the Lower Santa Ana River.

2.1 Program Areas Evaluated

EPA's inspection entailed an evaluation of the City's compliance with the following two storm water management components of the Permit:

- Illicit Discharges/Illicit Connections (ID/IC); Litter, Debris and Trash Control; and
- New Development (Including Significant Redevelopment).

EPA did not evaluate all components of the City's MS4 Program and this inspection report should not be considered a comprehensive evaluation of all individual program elements.

Section 3.0 Evaluation Findings

This section describes the findings of the EPA evaluation. Within each sub-section, where applicable, EPA has identified recommendations for program improvement.

EPA's inspection recommendations are supported by interviews, observations and photographic evidence gathered during the inspection, as well as documentation that may have been obtained before, during, or after the inspection. This inspection report does not attempt to comprehensively describe all aspects of the City's MS4 Program or fully document all lines of questioning conducted during personnel interviews. Additional inspection report materials, including an inspection schedule, sign-in sheet, and inspection photograph log are included in Appendix A.

Multiple documents were referenced by the EPA Inspection Team during the inspection process and development of this report (e.g., the Permit, MS4 annual reports). A list of these reference materials is included as Appendix B. The documents identified in Appendix B have not been included in the submittal of this inspection report. Copies of the materials are maintained by EPA Region 9 and can be made available upon request.

3.1 Illicit Discharge/Illicit Connections; Litter, Debris and Trash Control

Section VII of the Permit requires the City to (1) prohibit all illicit connections to the MS4 through ordinances, inspections, monitoring programs, and enforcement actions, (2) control the discharge of spills, leaks, or dumping of any material other than storm water or authorized non-storm water into the MS4, (3) have a training program for municipal inspections to carry out program requirements, and (4) implement appropriate controls to reduce or eliminate the discharge of trash and debris to waters of the U.S.

3.1.1 Prohibition of Illicit Connections and Illicit Discharges

Section VII.1 of the Permit requires the City to "prohibit all illicit connections to the MS4 through ordinances, inspections, monitoring programs, and enforcement actions." During EPA's inspection, City staff demonstrated knowledge of these requirements as they were able to answer specific questions related to the City's code of ordinances. EPA also reviewed Chapter 7.01.040 of the City's municipal code and found it addresses the requirement through prohibition of any illicit connection and/or discharge (see Appendix B - B1).

3.1.2 Illicit Connections and Illicit Discharges Elimination

Section VII.1 of the Permit requires the City to conduct inspections for illicit connections and illicit discharges during routine maintenance of all MS4 facilities. If routine inspections or dry weather screening and/or monitoring indicate any illicit connections, they shall be investigated and eliminated or permitted within 120 days of discovery.

City staff explained that it operates a 24-hour hotline and a web-based complaint form on the City's website (cityoforange.org) to facilitate reporting of suspected illicit discharges by the public. City procedures include rotating storm water field staff through a 24-hour "call" schedule to ensure availability of personnel after hours should immediate response to a significant illicit discharge (i.e. sanitary sewer overflow) be necessary. All tips of alleged ID/ICs are documented through use of a tracking database and forwarded to the City's Environmental Compliance Specialists for follow-up.

Section II.B.3 of the Permit requires the City to "pursue enforcement actions as necessary to ensure compliance with the storm water management programs, ordinances and implementation plans, including physical elimination of undocumented connections and illicit discharges to drainage systems owned or controlled by the Copermittees."

EPA reviewed the City's database of reported ID/ICs (see Appendix B, B2), which documents receipt of 112 tips/complaints alleging ID/ICs during the 2012/2013 State fiscal year, and found that it lacks data fields specific to "corrective actions" taken by the responsible party necessary to ensure all documented ID/ICs are eliminated within a timely manner or subject to formal enforcement under the City's municipal code. In response to EPA's request, City staff provided case files from three recent illicit discharge investigations that resulted in formal enforcement response. Review of these case files, including the Notice(s) of Non-Compliance (NOC) issued, indicate that the City is meeting the 120-day timeline for eliminating or permitting all identified illicit discharges (see Appendix B – B3). Two of the case files reviewed addressed illicit discharges of wash water from pressure washing activities that were immediately eliminated as required by the City's NOC. The third incident involved a personal vehicle leaking fluids into the gutter and failure by the responsible party to take action in a timely manner to address the discharge. The City issued an NOC requiring immediate corrective actions, conducted multiple follow-up inspections confirming the illicit discharge continued unabated, and ultimately referred the matter to the City Attorney's Office for criminal prosecution which resulted in elimination of the discharge within the 120 day timeline required by the Permit.

As part of its Countywide storm water monitoring program, Orange County field staff routinely monitor receiving waters within the City's watersheds (i.e. Lower Santa Ana River, San Diego/Newport Bay, and Westminster) in both wet and dry weather conditions. If receiving water monitoring data indicates an illicit discharge is occurring, County staff immediately notify the City (often real time due to use of the County's mobile sampling and analytical laboratory) of the issue for response. Staff also explained that the City partially funds, along with other Copermittees, an implementation agreement with Orange County to allow for County spill response and clean-up as needed.

Recommendation for Improvement

The City should expand its database of ID/IC's to include information on corrective actions taken by the responsible party to eliminate the illegal discharge or connection as required by Section II.B.3.

3.1.3 Illicit Discharges and Illicit Connections Training for Municipal Staff

Section VII.3 of the Permit requires the City to evaluate its current ID/IC training program and revise its program as needed to address the expertise and competencies required by municipal inspectors. EPA reviewed the City's ID/IC related training program, which includes, among other elements, an annual review of the Countywide Drainage Area Management Plan (DAMP) and the City's Local Implementation Plan (LIP), both of which address ID/IC permit requirements. In addition, City staff explained that all Environmental Compliance Specialists attend quarterly authorized inspector meetings and annual storm water refresher training workshops hosted by Orange County. Review of the County's workshop training materials indicates that recent refresher training workshops have addressed implementation of an ID/IC elimination program. EPA did not identify any deficiencies in the City's ID/IC training program for municipal staff.

3.1.4 Litter, Debris and Trash Control

Section VII.4 of the Permit requires the permittees to "implement appropriate control measures to reduce and/or eliminate the discharge of trash and debris to water of the U.S." City staff explained that both structural and non-structural BMPs have been employed to prevent trash and/or debris from being discharged to surface waters within its jurisdiction. City staff explained that discharge of trash and debris to the storm drain system is a Countywide problem but most acute in the Old Towne area of the City. To address this problem, the City installed 96 retractable trash screens on storm drain inlets in the Old Towne area. In addition, the City is exploring the purchase of a hydrodynamic separator to screen, separate, and trap trash, debris, sediment, and oil and grease from its storm water runoff. Non-structural control measures being implemented by the City on an ongoing basis include routine street sweeping and annual cleaning of storm drain catch basins.

Recommendation for Improvement

EPA recommends the City consider applying for Orange County Transportation Authority (OCTA) grant funds for trash reduction related projects.

Based on discussions with other Permittees within the County, EPA understands OCTA grant funds have been used to implement structural BMPs to address the discharge of trash and debris to waters throughout the County. The City should consider developing additional trash reduction projects for OCTA funding consideration.

3.2 New Development (Including Significant Redevelopment)

Section XII of the Permit requires the City to minimize the short and long term impacts on receiving water quality from new development and significant redevelopment through, among other approaches (1) requiring the submittal of Water Quality Management Plans (WQMPs) emphasizing Low Impact Development (LID) principles and addressing hydrologic conditions of concern prior to the issuance of any grading and/or building permits and/or prior to recordation of any subdivision maps, (2) review and, if necessary, revisions to its planning procedures and CEQA document preparation processes to ensure that urban runoff-related issues are properly considered and addressed, (3) modifications to its project approval process to ensure that proper conditions of approval, design specifications and tracking mechanisms are included, and (4) field verification of post construction BMPs prior to project occupancy.

3.2.1 Low Impact Development -- Water Quality Management Plans

The City has established a process as required by Section XII.A.3 of the Permit for applicants of any new development and significant redevelopment to submit a WQMP, which emphasizes implementation of LID principles and addresses hydrologic conditions of concern, prior to obtaining any grading or building permits. City staff explained that it requires applicants for all development projects to submit WQMPs to its Planning Department at the "front-end" of its planning process to ensure potential water quality impacts are considered during the conceptual design phase of any development project. Additionally, the City requires applicants to submit preliminary WQMPs for all priority projects, defined to include, all redevelopment projects that add or replace 5,000 square feet or more of impervious surface on a developed site (i.e. significant redevelopment projects), and new development projects that create 10,000 square feet or more of impervious surface. City staff explained that all WQMPs and associated BMPs are reviewed against the requirements of the 2011 Model WQMP and associated Technical Guidance Document prior to the issuance of City development permits.

Section 3.2.2 CEQA Process Updates

Section XII.A.6 of the Permit requires the City to review its planning and CEQA document preparation processes to ensure that urban runoff related issues are properly considered and addressed. City staff explained that its planning and CEQA processes were reviewed and updated in 2003 when the County's DAMP was finalized. Updates to the City's planning and CEQA processes implemented as a result of this review included: revisions to its project application forms to require inclusion of a preliminary WQMP for all priority projects; revision of its application review checklist to ensure hydrologic conditions of concern, including potential impacts on groundwater quality, are properly considered and addressed; and adoption of the County's *Guidance for Preparing and Reviewing CEQA Initial Studies and Environmental Impact Reports* (i.e. DAMP, Section 7, Exhibit 7.1) to ensure any given project's potential impacts on water quality are properly characterized and mitigated.

3.2.3 Development Project Approval Process

Section XII.A.7 of the Permit requires the City to modify its project approval process to ensure that all conditions of approval, including design specifications, and BMP tracking mechanisms are included. City staff explained that its project review and approval processes contains standard conditions of approval for all development projects that prioritize the use of LID principles including: preservation of natural features, minimization of runoff through use of pervious surfaces, and use of infiltration as the primary method of treatment. City staff further explained that its Land Use Project Application Information Packet (see Appendix B – B4) requires all project applications to include a WQMP and post-construction BMPs.

Section XII.B.4 and B.5 of the Permit require that all source control BMPs be designed and built to comply with the volume or flow based numeric sizing criteria of the Permit, and any structural infiltration BMPs designed and built to meet specific criteria necessary to protect groundwater resources. City staff explained that its LIP requires the use of the County's Model WQMP Technical Guidance Document, and the City's WQMP Template for the preparation of all WQMPs. EPA reviewed the County's Technical Guidance Document (*Appendix I: Summary of BMP Sizing Requirements for North Orange County, and Appendix VII Groundwater Related Infiltration Feasibility Criteria*) and confirmed that it contains structural BMP sizing criteria and groundwater infiltration system specifications consistent with Permit requirements.

3.2.4 Field Verification of BMPs

Section XII.G.1 of the Permit requires the City to establish a mechanism to verify that treatment control BMPs are designed and constructed in accordance with the approved WQMP. City staff explained that it requires project proponents to provide "as built" specifications for all treatment BMPs. The City's Environmental Program Manager and/or Environmental Scientist utilize the "as built" specifications to conduct on-site field verification inspections to ensure treatment BMPs are installed consistent with its WQMP approval.

As part of the inspection, EPA, together with City staff, visited several active or recently completed construction sites subject to the City's WQMP requirements. City staff explained that a prior field verification inspection of the first site (i.e. Ayres Hotel), uncovered treatment BMP deficiencies. Specifically, the contractor had installed fewer storm water detention units than approved by the City, thereby reducing the effectiveness of the post construction BMP. City staff explained that they were able to resolve this issue informally through negotiations with the project developer, which resulted in the installation of additional storm water detention units consistent with the approved WQMP.

EPA also visited two publicly funded construction projects. The first of the two, a 2.5 acre existing office complex, was being redeveloped by the Government Services Administration (GSA) to allow for construction of a covered vehicle maintenance

structure, additional parking, a new covered trash enclosure, and expansion of an existing loading dock. The project incorporated an above-ground bio-retention basin, permeable pavement and a series of underground storm water detention chambers as treatment BMPs. Construction activities had been completed, so few observations as to the sufficiency of the BMPs could be made during the inspection. Following the on-site inspection, EPA reviewed the project's approved WQMP which indicates that due to the increase in pervious area and the routing of drainage to on-site detention/retention basins the project is anticipated to lower the total volume of storm water runoff and increase the amount of time it will take the peak rainfall intensity to reach the site's discharge point.

The Inspection Team also visited the City's Santiago Creek Bike Path construction project. EPA reviewed the WQMP developed for the project, detailing the design of a linear infiltration basin adjacent to the bike path as the primary treatment control BMP. Based on EPA's limited observations of site conditions, it appeared that site grading and infiltration basin itself had been constructed consistent with approved plans. City staff reiterated that the project was designed to incorporate infiltration as the primary means of mitigating runoff consistent with the hierarchy of LID principles described in the Permit.

**City of Orange, CA
Municipal Separate Storm Sewer System (MS4)
Compliance Audit Report**

Appendix A

**Tentative Agenda for MS4 Program Inspection
City of Orange, California
August 27—28, 2013**

Day	Time	Program/Agenda Item
Tuesday, August 27, 2013	8:00 am - 8:30 am	Kick-off Meeting & Program Management Overview (Office)
	8:30 am - 10:00 am	Illicit Discharge/Illicit Connections; Litter, Debris and Trash Control (Office)
	10:00 am - 11:30 am	New Development (Including Significant Re-Development) (Office)
	11:30 am - 12:30 pm	Lunch Break—including discussion among the EPA Inspection Team members
	12:30 pm - 2:30 pm	Illicit Discharge/Illicit Connections; Litter, Debris and Trash Control (Field)
	2:30 pm - 4:30 pm	New Development (Including Significant Re-Development) (Field)
	4:30 pm - 5:00 pm	Recap and Planning for Wednesday
Wednesday, August 28, 2013	8:00 am - 10:00 am	Open Period for Additional Activities ¹ (Tentative time slot)
	10:00 am - 10:30 am	Internal Discussion ²
	10:30 am - 11:00 am	Closing Conference ³ (Tentative time slot)

¹ Open Period for Additional Activities – Will be decided by the EPA Inspection Team during the inspection activity in collaboration with City staff.

² Internal Discussion – Time for inspectors to arrange notes and prepare information to be discussed with the City at the Closing Conference. City participation is not expected.

³ The City is encouraged to invite representatives from all applicable organizational divisions/departments.

