

US EPA ARCHIVE DOCUMENT



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

MAY 1 - 2013

Honorable Harvey Hall
Mayor, City of Bakersfield
1600 Truxtun Avenue
Bakersfield, California 93301

Dear Mayor Hall:

Enclosed is EPA's final inspection report for the City of Bakersfield Storm Water Management Program. The inspection, led by EPA Region 9 and PG Environmental, LLC, occurred on August 29, 2012. Representatives from the Central Valley Regional Water Quality Control Board also participated. In addition, we are enclosing a copy of EPA's final report for our inspection of the County of Kern Storm Water Management Program, which occurred on August 28, 2012.

The purpose of the audit was to assess the City's compliance with the Storm Water Permit, NPDES No. CA00883399 (Permit). This effort included document reviews, interviews with City program managers and field verification inspections. My staff and I appreciate the time City staff spent preparing for and participating in the audit.

Our report identifies recommendations for program improvement and program deficiencies. We were particularly concerned with the City's inspection and enforcement of erosion and sediment controls at private construction sites, as well as the City's public outreach and education program for illicit discharges to the storm sewer system.

EPA and the Central Valley Regional Water Quality Control Board will follow up with appropriate City staff on this report. We welcome any program updates or clarifying comments from the City and we ask that responses be sent to EPA by June 15, 2013. The final inspection report will be posted on EPA's website at:
<http://www.epa.gov/region09/water/npdes/ms4audits.html>.

If you have any questions, please contact me at (415) 972-3873, or refer staff to Rebecca Glyn at (415) 972-3507 or via email at glyn.rebecca@epa.gov.

Sincerely,



Kathleen H. Johnson, Director
Enforcement Division

Enclosures

City of Bakersfield MS4 Inspection Report with attachments
County of Kern MS4 Inspection Report with attachments

Cc via email with enclosures

Mike Maggard, Chairman, County of Kern Board of Supervisors
Art Chianello, City of Bakersfield
Debra Mahnke, Central Valley Regional Water Quality Control Board
Dale Harvey, Central Valley Regional Water Quality Control Board



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 BAKERSFIELD,
CALIFORNIA**

INSPECTION REPORT

Inspection Date:
August 29, 2012

Final Report Date:
April 29, 2013

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Section 1.0 Executive Summary

The U.S. Environmental Protection Agency (EPA) conducted an inspection on August 28, 2012, of the City of Bakersfield, California's (the City), Municipal Separate Storm Sewer System (MS4) program.

EPA reviewed documents, met and interviewed staff, and conducted field activities to evaluate the City's MS4 program. The inspection focused on the two following program elements: (1) Illicit Discharge Controls, and (2) Construction Site Planning Procedures. At the conclusion of the inspection, EPA discussed preliminary observations with City representatives.

In this report, EPA identifies several recommendations for the City to improve its MS4 program, program deficiencies, and potential permit violations. EPA found particular concerns with the City's inspection and enforcement of erosion and sediment control requirements at private construction sites, resulting in multiple deficiencies observed by EPA at an active construction site. EPA also found concerns with the City's public education program for controlling illicit discharges to its MS4, including a storm drain stenciling program. Although this report identifies potential permit violations, it is not a formal finding of violation.

Section 2.0 City of Bakersfield Stormwater Program

On August 29, 2012, representatives from the U.S. Environmental Protection Agency (EPA), the State of California Central Valley Regional Water Quality Control Board (RWQCB) and EPA contractor, PG Environmental, LLC (collectively, the EPA Inspection Team) conducted an evaluation of the City of Bakersfield, California's (the City), Municipal Separate Storm Sewer System (MS4) Program.

Discharges from the City's MS4 and Kern County's (the County) MS4 (collectively, the Copermittees) are regulated under *Waste Discharge Requirements for the County of Kern and the City of Bakersfield for Urban Storm Water Discharges*, NPDES Permit No. CA00883399, Order No. 5-01-130, (the Permit), issued June 14, 2001. The Permit was first adopted by the RWQCB in 1994 and was re-issued in 2001. The Permit has been administratively continued according to RWQCB staff present at the inspection. The Permit is the second NPDES MS4 permit issued to the Copermittees.

The Permit authorizes the two Copermittees to discharge stormwater from the Copermittees' Phase I MS4s into the Kern River and various canals of the Tulare Lake Basin. Provisions D.3 and D.5 of the Permit require the Copermittees to develop, achieve, and implement an effective stormwater management plan designed to reduce the discharge of pollutants in stormwater to the maximum extent practicable (MEP) and not cause or contribute to exceedances of water quality standards for the permitted areas in the City of Bakersfield and Kern County. Pursuant to this Permit requirement, the Copermittees developed the *County of Kern & City of Bakersfield Revised Storm Water Management Plan*, dated 2001 (the SWMP). The SWMP is an integral and enforceable component of the Permit according to Finding 5 and Provision D.26 of the Permit. Any modifications or revisions of the SWMP that are approved according to Provision D.25 of the Permit are likewise incorporated and enforceable components of the Permit.

Although the City and County are regulated as Copermittees under the Permit, this inspection report only addresses the City's implementation of its MS4 Program. The EPA Inspection Team conducted a similar evaluation on August 28, 2012 of the Kern County MS4 program.

City Information

According to City staff, the City is approximately 145 square miles with a population of approximately 350,000; the permitted MS4 areas are located only within the urbanized areas of the City and the unincorporated areas of the County that surround the City. The Copermittees' March 30, 2007 application for NPDES Permit renewal states that the drainage area to the MS4 within the City and the County totals approximately 16,499 acres (approximately 25.8 square miles), with each Copermittee controlling approximately 50 percent of the system. The Streets Division of the City's Public Works Department is primarily responsible for the operation and maintenance of publicly owned drainage areas within the urbanized areas of the City. The MS4 Program is coordinated by the City's Water Resources Department. According to City staff, the MS4, including

the City of Bakersfield, consists of approximately 23 miles of major storm drain channels and approximately 40 miles of major closed conduit conveyances. The City is located in the southernmost portion of the San Joaquin Valley and the primary receiving waters are the Kern River and Tulare Lake Basin canals. The City receives approximately 5-6 inches of average annual rainfall.

According to the 2001 Permit and confirmed by City staff, approximately 40 percent of the drainage area within the permitted Bakersfield Urbanized Area (and approximately 90 percent of new development) is located in unsewered areas and discharges to open detention or retention basins. During a separate inspection with Kern County on August 28, 2012, County staff explained to EPA inspectors that new developments in the Bakersfield Urbanized Area are required to contain and infiltrate runoff in retention basins. This practice began in the 1980s to save costs of extending the municipal storm sewer system in the southern portion of the permitted area, where new development slopes south and away from the Kern River and canals. Therefore, instead of a conventional storm drainage system of pipes and outfalls, portions of the Bakersfield Urbanized Area convey stormwater into open basins using a combination of pipes, ditches, open channels, curbs and gutters.

According to the Permit, these basins are not considered waters of the United States; they are regulated by the Permit according to the State of California's jurisdiction over land discharges to groundwater. However, peak storm flow captured in the basins is occasionally discharged to waters of the United States. During EPA's inspection with Kern County, County staff told EPA inspectors that some basins overflow to other basins during major rain events. They also noted that older basins were constructed using different design criteria than newer basins and may not infiltrate or percolate at the same rate as newer basins. Also, sediment buildup, sometimes due to deferred or inadequate maintenance, can prevent basins from infiltrating as designed. As a result, basins may be drained or pumped into canals during peak storms to prevent flooding.

During the EPA Inspection Team's inspection with the City of Bakersfield, City staff stated that crews treat all drain inlets within the MS4 as if they drain to the Kern River, and that operation and maintenance procedures do not change based on whether an inlet drains to an open basin or the Kern River. They also noted that overflow from retention basins was pumped into canals during a major rain event in December 2010.

2.1 Program Areas Evaluated

In addition to overall MS4 Program Management, the inspection included an evaluation of the City's compliance with two of the SWMP elements described in the Permit:

- Illicit Discharge Controls
- Construction Site Planning Procedures

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

Section 3.0 Evaluation Findings

This section is organized to generally follow the structure of the Permit. Where applicable, EPA identifies recommendations for program improvement, program deficiencies, and potential permit violations. Potential permit violations are areas where the City may not be fulfilling requirements of the Permit and/or the SWMP; however, this report does not present formal findings of violation. Program deficiencies are areas of concern that may prevent successful program implementation or areas that, unless action is taken, have the potential to result in non-compliance in the future. Program deficiencies are also areas of concern whose compliance status is unclear due to vague Permit or SWMP language.

The inspection findings 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, fully document all lines of questioning conducted during personnel interviews, or document all in-field activities conducted during site visits.

Additional inspection report materials, including an inspection schedule, sign-in sheet, list of site visits conducted during the inspection, and site visit reports with photograph logs, are included in [Appendix A](#).

The EPA Inspection Team reviewed multiple documents provided by the City during the inspection and in the development of this inspection report (e.g., the Permit, SWMP, and MS4 annual reports). A list of EPA's reference materials is included in [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 as U.S. EPA Region 9 records and can be made available upon request.

3.1 Program Management

In addition to reviewing the Illicit Discharge Controls and Construction Site Planning Procedures programs, the EPA Inspection Team also reviewed the overall structure and management of the City's MS4 Program, including staff coordination and SWMP and GIS database development as follows.

3.1.1 Copermittee Coordination and SWMP Revisions

As required by Provision D.9 of the Permit, the City is party to an active, signed, formal agreement with the County. The City and the County entered an agreement on April 26, 2000 that required Copermittees to cooperate on permit requirements, consult each other before entering contracts to meet permit requirements, and share the cost of permit

compliance. This agreement expired July 1, 2004. City staff explained that these agreements have expiration dates to provide a means for re-evaluating the roles and responsibilities of the City and County under the Permit based on costs.

City staff provided the EPA Inspection Team with a new City and County agreement dated August 15, 2012. This agreement requires City and County staff to cooperate on all efforts and tasks required to comply with the Permit waste discharge requirements, SWMP, and Permit Monitoring and Reporting Program. In addition, this agreement requires the City and County to equally share in the costs associated with Permit compliance. City staff told the EPA Inspection Team that City and County representatives typically meet at least annually to prepare and submit the joint annual report. City staff further stated that City and County program staff communicate more frequently on an as-needed basis.

Provision D.26 of the Permit requires the City and County to implement the SWMP and its approved revisions. The joint City and County SWMP provided to the EPA Inspection Team was approved in 2001. The EPA Inspection Team found that the 2001 SWMP contains some outdated information, such as references to an “Area Plan” that was last revised in July 1990. The 2001 SWMP also does not accurately reflect the current outfall screening and analysis program.

Per Provision D.25 of the Permit, the City must revise or amend the 2001 SWMP in response to changed conditions and to incorporate more effective approaches to pollutant control. The City and County submitted a revised SWMP to the RWQCB in 2006; however, there is no record that the RWQCB approved it. Therefore, the 2001 SWMP remains in effect. According to RWQCB staff present at the inspection, a draft Permit is expected to be available for public comment in 2013 and at this point, the County should begin updating the SWMP in collaboration with the City of Bakersfield to ensure that changes to the SWMP are complete and applicable.

Recommendation for Program Improvement

Develop steering committee within the City, as well as between the City and County.

The City’s MS4 Program is primarily administered by the Water Resources Department. Through discussions with City staff however, the EPA Inspection Team found that many City departments may have direct or indirect MS4 program responsibilities, including but not limited to the Streets, Fire, Sheriff, Building, and Waste Management departments.

EPA recommends that the City organize an internal MS4 steering committee to share information and help the program run as efficiently and effectively as possible. Further, EPA recommends that the City and the County hold formal meetings – separate from the annual meeting to prepare and submit the joint annual report – to coordinate their MS4 Programs and discuss the challenges and successes of their stormwater programs.

Recommendation for Program Improvement

Monitor sump basins periodically once maintenance responsibility has been assigned to a homeowners association (HOA) or other private entity.

City staff stated that when private development occurs, new sump basins are typically constructed to capture and retain runoff from the newly developed area. When construction is complete, a private entity, such as a HOA, assumes operation and maintenance responsibilities for the sump, typically after one year. The City does not conduct formal assessments of privately operated sumps once the construction process is completed. EPA recommends that the City formalize a process to evaluate the potential for these sumps to overflow and impact the City's MS4 and receiving waters. In such instances, the City should require periodic monitoring of privately owned sumps and document any such overflows.

3.1.2 GIS Database

City staff demonstrated the City's GIS database, which includes multiple components of the City's infrastructure, including, but not limited to, sewer pipelines, manholes, catch basins, outfalls, and retention and detention basins. City staff stated that the GIS was developed using historical records of hard copy plans, and then verifying structures in the field. Once verified in the field, features of the storm sewer infrastructure are added to the GIS database along with copies of pertinent hard copy data. City staff estimated that the database is approximately 75 to 80 percent complete.

Recommendation for Program Improvement

Continue developing the City's Geographic Information System (GIS).

EPA recommends that the City continue to investigate and verify components of the storm sewer infrastructure in its on-going effort to update the GIS database. As the City upgrades its GIS system, it should be used to track implementation of other SWMP components, such as field screening, detection, and source identification of illicit discharges. In addition, EPA recommends that City GIS staff collaborate with GIS staff at the County, to ensure accuracy of storm sewer features where their infrastructure overlaps.

3.2 Illicit Discharge Controls

Provisions D.1, D.2, and D.23 of the Permit require the City to preclude the discharge of non-stormwater, implement and enforce controls on spills, dumping, and disposal of materials other than stormwater into the MS4, and to inspect, investigate, and if necessary, abate dry weather flows.

Further, Provision D.8 of the Permit requires the City to perform specific actions set forth in the SWMP, including, but not limited to: a) performing inspection, surveillance, and monitoring procedures necessary to determine compliance with ordinances, permits, and other components of the SWMP; b) implementing programmatic functions as described in the SWMP; c) providing the requisite funding and personnel to implement the stormwater program as described in the SWMP; and, d) enforcing codes, ordinances, and

permits. Permit Provision D.26 states the approved SWMP is an enforceable component of the Order.

The City has established legal authorities and permit and planning regulations primarily through its municipal codes. City Ordinance 8.35.020 prohibits non-stormwater discharges to the MS4. The status of the City's program for controlling illicit connections and illicit discharges (IC/ID) through public outreach and education (SWMP Part 9) and monitoring and enforcement (SWMP Part 11) are described in Sections 3.2.1 and 3.2.2. of this report, respectively.

According to City staff, the City has instituted plan review and inspection processes for construction projects as preventative measures to help ensure that there are no illicit connections installed and that contaminated runoff does not enter the MS4 during construction. Plan review and site inspections are further described in Sections 3.3.2 and 3.3.3 of this report, respectively.

3.2.1 Illicit Discharge Controls – Public Outreach and Education

Part 9 of the SWMP requires the City and County to develop a program to detect and remove illicit discharges to the storm sewer by promoting, publicizing, and facilitating public reporting of illicit discharges and their impacts to water quality, and to develop a program for public educational activities to facilitate the proper management and disposal of used oil and other toxic materials. The SWMP requires the City and County to implement the following BMPs for illicit discharge controls: 1) public reporting, including public access lines and municipal employee training, 2) used oil recycling programs, including collection events and point-of-purchase drop-off points, 3) household hazardous waste collection, and 4) storm drain stenciling.

The EPA Inspection Team and City staff discussed the status of the IC/ID controls for public reporting and storm drain stenciling as described below. We did not evaluate the used oil recycling or household hazardous waste collection programs.

Potential Permit Violation

The City had not facilitated public reporting of IC/IDs by developing a flyer and reporting phone number as required by Permit Provision D.26 and SWMP Part 9, Section 1.

Part 9, Section 1 of the SWMP requires the City to facilitate public reporting of illegal dumping to the MS4 by distributing a flyer educating the general public about stormwater quality issues and listing a phone number to call and report an incident. The flyer would be made available in City and County offices.

City staff stated that a public outreach strategy focused on IC/ID control did not exist. They stated that the majority of public outreach occurs through the Solid Waste Department and that most of the focus of the material distributed for public education is concentrated on oil recycling and drug take-back programs. City staff indicated that little, if any, of the outreach material targeted IC/IDs directly. Furthermore, the City did not

provide examples of IC/ID public outreach material, such as a flyer with a public reporting phone number as required by the SWMP Part 9.

Recommendation for Program Improvement

Develop hotline or website for the general public to report IC/ID complaints.

The City should develop its public reporting system for IC/ID complaints by establishing and publicizing a website or dedicated hotline phone number. The City could then develop a “hot spot” database, ideally using GIS in collaboration with the County, to track IC/ID complaints and evaluate where incidents are most frequently reported. The City and County could then use this database to target outreach and inspection priorities and enforce illicit discharge control codes in these and other areas of concern detected through dry weather screening activities.

In addition to developing the required public outreach and education programs, EPA recommends that the City connect with and leverage community groups to provide citizen feedback and report IC/IDs such as Kern River Parkway Foundation and Bike Bakersfield.

Potential Permit Violation

The City had not fully implemented a storm drain stenciling program as required by Permit Provision D.26 and SWMP Part 9, Section 4.

Part 9, Section 4 of the SWMP, *Illegal Dumping Controls*, states that the City and County will develop and implement a storm drain stenciling program in the MS4 to increase the public's awareness of the storm drain system and its function. The City and County will provide stenciling kits to volunteer groups who will perform the stenciling. The kits will include all the materials necessary to conduct stenciling, including maps of the drain locations. Volunteer groups will be asked to record information on the number and location of storm drains stenciled. The City and County are required to document the results of the storm drain stenciling program, including number and location of drains stenciled and volunteers participating.

City staff stated that approximately 10 years ago, certain drains in the City's MS4 were stenciled; however, most of the stenciling had worn off due to age. They further stated that the City is not currently implementing a storm drain stenciling program. Additionally, when the EPA Inspection Team requested records of which storm drains had once been stenciled, City staff were unable to provide such records.

3.2.2 Illicit Discharge Controls – Monitoring and Enforcement

As discussed above, Provision D.2 of the Permit requires the City and County to implement and enforce controls on spills, dumping, and disposal of materials other than stormwater into the MS4. Further, Provision D.23 of the Permit requires the City and County to inspect for dry weather flows, investigate the source of the discharge, and if appropriate, proceed with abatement activities as described in the SWMP.

Part 11 of the SWMP requires the City and County to develop a program to monitor and control pollutants in stormwater discharges to the MS4 from municipal landfills, hazardous waste treatment, disposal, and recovery facilities, and industrial facilities that contribute substantial pollutant loading to the MS4. When suspicious or unusual discharges are detected, such as dry weather flows, stains, or deposits, the SWMP requires field crews to investigate the source of the unusual conditions.

According to City staff, all dry weather field screening of outfalls in the City and County is conducted by the City of Bakersfield. The Copermittees then include the information from the City's survey in a joint annual report.

The City's goal is to inspect 100 percent of the stormwater outfalls each year (67 total, according to the 2010-2011 Annual Report). City staff said that it is standard practice to wait at least five days after the last rain event to conduct screening, and that the date of the last rain event is noted in the screening report. According to City staff, the outfalls are dry for the vast majority of the time; however, if an outfall is observed to be wet during a dry weather field screening, the location will be marked for follow up and possible sampling.

According to City staff, potential IC/ID issues are often discovered by various City field crews and occasionally businesses and residents. In either case, if an IC/ID issue is reported to the City, the City's Wastewater Department takes lead on sampling and investigation at the outfalls when dry weather flows are detected. The Water Resources Department will investigate the source and determine if enforcement action is needed.

Potential Permit Violation

The City lacked written protocols for dry weather field screening and sampling as required by Permit Provision D.8 and SWMP Part 11.

Part 11 of the SWMP requires the City and County to identify priorities and procedures for inspections and for establishing and implementing control measures for illicit discharges. Through discussion with City staff and documentation within the Copermittees' 2010-2011 Annual Report, it appeared that the City was conducting dry weather field screening and dry weather sampling. However, the City could not provide the EPA Inspection Team with standard written protocols or standard operating procedures (SOPs) for conducting field screening and following up on potential IC/IDs. The City provided standard written procedures for wet weather monitoring; however, the document was dated October 21, 1994.

Recommendation for Program Improvement

The City should vary the time of year when dry weather field screening is conducted.

City staff indicated that dry weather field screening is typically conducted in late summer or early fall in conjunction with their dry weather sampling program. The City should vary the time of year when dry weather field screening is conducted to get a more complete picture of when and where dry weather discharges are most likely to occur.

Program Deficiency

The City failed to use its authority to investigate or take follow-up action for dry weather flows as required by Permit Provisions D.2, D.8, D.23, and SWMP Part 11.

Part 11 of the SWMP requires the Copermittees to take follow-up actions when the cause of unusual conditions, such as dry weather flows, is unknown. The 2010-2011 Annual Report describes two instances when dry weather flows were observed at outfalls and provides lab sample reports for the discharges. The Annual Report states that the discharge likely originated from household or landscape irrigation runoff. However, the Annual Report does not describe or provide documentation of any investigation or follow-up actions to determine the source of these dry weather flows.

Program Deficiency

The City lacked formal enforcement protocols for addressing illicit discharges as required by Permit Provisions D.2, D.8, D.23, and SWMP Part 11.

As discussed above, Provision D.2 of the Permit requires the City to implement and enforce controls on spills, dumping, and disposal of materials other than stormwater into the MS4. Further, Provision D.8 of the Permit requires the County to enforce its codes and ordinances. Provision D.23 of the Permit requires the County to inspect for dry weather flows, investigate the source of the discharge, and if appropriate, proceed with abatement activities as described in the SWMP.

The City does not have formal protocols for taking enforcement actions on IC/ID offenses. To address this deficiency, the City should develop formal protocols for IC/ID enforcement, such as an Enforcement Response Plan (ERP), which include guidance for enforcement escalation.

Recommendation for Program Improvement

The City and the County should clarify legal authority of storm sewer lines that are interconnected between City and County boundaries.

The City performs dry weather field screening-related activities on behalf of the City and County. After discussions with City staff, it was unclear to the EPA Inspection Team which Copermittee would have legal authority over an illicit discharge whose source was in the County and discharged to the City's system, and vice versa. Such a scenario could arise due to the interconnections between the City and County's adjoining MS4 systems or if contributions to the MS4 cross jurisdictional boundaries. According to City staff, there is no protocol or SOP between the City and County for determining which jurisdiction has legal authority to identify, investigate, and enforce illicit discharges. City staff were unable to recall if such an event had ever occurred; however, they acknowledged the need to address this issue.

The City and the County should establish a memorandum of understanding (MOU) or similar formal agreement that delineates legal authority where storm sewer lines are interconnected between City and County boundaries. The existing City and County agreement dated August 15, 2012 may be revised or amended with this language.

Furthermore, EPA recommends that jurisdictional details for outfalls be included in future annual reports. The Copermittees' 2010 – 2011 Annual Report does not detail which outfalls are in the County and which are in the City; however, on September 5, 2012, after the conclusion of EPA's inspection, the County provided the EPA Inspection Team with a separate list of MS4 outfalls which details each outfall's location and jurisdiction.

3.3 Construction Site Planning Procedures

Provision D.15 of the Permit requires the City and County to describe procedures for incorporating stormwater BMPs for new developments and public works projects. A description of these procedures was provided to the RWQCB on September 12, 2001 per the Permit requirement. The description includes information regarding which departments have authority to require BMPs, what BMPs are used, and in what cases BMPs are required.

Provision D.21 of the Permit requires the City and County to conduct compliance and enforcement activities to ensure that business, industrial, and construction activities comply with County or City stormwater ordinances. Provision D.22 of the Permit requires the City and County to perform activities in the SWMP and use their enforcement authority to ensure compliance with the construction and industrial NPDES permits for discharges.

Part 13 of the SWMP states that the City and the County are responsible for regulation and approval of construction activity within their respective jurisdictions. Each entity is required to develop and implement programs for construction site planning to incorporate potential water quality impacts from construction site runoff.

The City established mechanisms in its municipal code to require erosion and sediment control on construction projects. The City also maintains an inventory of active construction sites. The City's Plan Review and Site Inspection programs are described below.

The EPA Inspection Team visited two construction sites, one linear "TRIP" project and one private project. Both site visits are listed in [Appendix A.3](#) of this report while a detailed description of the private project is provided in [Appendix A.4](#).

3.3.1 Training

Provision D.11 of the Permit requires the City to implement a training program for City staff members who carry out stormwater pollution prevention, detection, and abatement activities required by the SWMP.

Part 13 of the SWMP, *Site Planning Procedures*, states that the City will conduct internal educational activities to ensure that all City personnel involved in construction site planning, review, and approval are aware of the requirements of the State of California *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm*

Water Discharges Associated with Construction and Land Disturbance Activity (the Construction General Permit) and the need to incorporate its requirements into projects (including public works projects) before they are approved for construction.

Program Deficiency

The City could not demonstrate that it conducted stormwater awareness training for City staff as required by Permit Provision D.11 and SWMP Part 13.

The EPA Inspection Team requested training documentation from the City including SOPs, syllabi, and proof of City staff participation. City staff indicated that internal training has occurred periodically; however, the frequency, scope, and participation in the training were not documented. City staff were only able to verbally indicate that internal training takes place. Therefore, the City should develop a standard stormwater training program for City staff. Furthermore, with the next SWMP revision, the City should more clearly explain the training requirements of their staff.

3.3.2 Plan Check and Review

According to City staff, plan review and oversight for City-sponsored construction projects is conducted by one of 12 staff members in the Construction and Engineering Division of the Public Works Department; however, plan review and oversight of private site plans and grading plans is conducted by the Building Division of the Development Services Department. City staff stated that the Building Division ensures that required construction documents have been developed, submitted, and distributed to the appropriate department for review for all private and public projects. Once the plans are approved, the Building Division issues a building permit.

The City's Assistant Building Director (from the Building Division) stated that plan reviewers verify that erosion and sediment control (ESC) details are provided on grading plans unless a Notice of Intent (NOI) has been provided. If an NOI has been provided, no ESC review is conducted. The City's commercial construction inspector (City Inspector), who is also responsible for plan review, stated that she does not review building plans for ESCs if the project has a SWPPP. The City Inspector further stated that if the project does not have a SWPPP, she conducts a review of ESCs and provides comments to the project engineer. However, she did not retain plan review notes or any other documentation of her reviews. The City Inspector further stated that she uses the municipal code as a guide during her review.

The City also participates in the Thomas Roads Improvement Program (TRIP), a \$630 million cooperative effort between multiple local and state agencies (i.e., City of Bakersfield, Kern County, CalTrans, and Kern Council of Governments) to update and improve highways and build new freeways in and around the City of Bakersfield and Kern County. TRIP project plans are typically reviewed by CalTrans and consultants hired to do all TRIP design work.

Recommendation for Program Improvement

Formalize site plan review procedures for private and City-sponsored construction sites. In order to ensure adequate plan review and compliance with City codes and ordinances, EPA recommends that the City develop and implement formal SOPs and a formal checklist for site plan reviews.

3.3.3 Construction Site Inspections

Provision D.10 of the Permit requires that by December 15, 2001, the City and County shall submit a template stormwater inspection checklist to the RWQCB. Following approval by the Executive Officer of the RWQCB, the checklist shall be used by the City and County during construction site inspections to assist in compliance with Provision 8.a of the Permit (which requires inspections to determine compliance with County ordinances). Provision D.21 also requires the City to conduct adequate compliance and enforcement activities to ensure that construction activities comply with County requirements.

In a conversation with RWQCB staff, the EPA Inspection Team determined that the County submitted a construction inspection checklist to the RWQCB, on behalf of the City and County, for review on December 15, 2001. RWQCB responded to the County on January 8, 2002 asking for revisions. According to RWQCB staff, the County re-submitted a revised checklist for construction inspections on February 7, 2002. No evidence was found past the February 7, 2002 correspondence to indicate whether the checklist template was approved or not; however, as mentioned above, the City is not currently implementing a formal checklist system for construction site stormwater inspections.

According to City staff, stormwater inspections for City-sponsored construction sites are conducted by staff from the Construction and Engineering Division of the Public Works Department. Stormwater inspections for private construction sites, which include a review of erosion and sediment control measures, are conducted by staff from the Building Division. Construction and Engineering Division inspectors are responsible for inspecting private construction site improvements located on public rights-of-way or easements. TRIP projects are inspected by a contractor using the CalTrans Stormwater Site Inspection Report checklist. The City does not typically conduct TRIP site inspections.

City staff indicated that City inspectors have the authority to issue stop-work orders. They further stated that this authority was a key compliance tool used to incentivize developers to comply with erosion and sediment requirements in an effort to save time and costs related to project delays. City staff also noted that pre-construction meetings were used to review erosion and sediment control plans. According to the City Inspector, the use of stop work authority had not been used in the three to six months that she had been in the position.

Part 15 of the SWMP states that the City and County inspect construction sites and enforce compliance with permits and approved plans. New construction site requirements must be inspected as they begin to be included in the permits and approved plans issued for construction.

Program Deficiency

The City has not implemented a stormwater inspection checklist for site inspections as required by Permit Provision D.10.

As part of the records request provided prior to the inspection, the EPA Inspection Team requested a checklist used by field inspectors for performing stormwater inspections. This document was not provided by the City. City staff stated that a checklist has not been implemented for construction site stormwater inspections. The City and County should work with the RWQCB to get a construction inspection checklist approved as part of the SWMP revision.

Potential Permit Violation

The County failed to use its authorities to ensure compliance with construction NPDES permits as required by Permit Provisions D.8, D.21, and D.22 and SWMP Part 15.

The City Inspector met the EPA Inspection Team during a site visit to the 9902 Brimhall Medical Suites construction site. She indicated that she had been conducting inspections of commercial construction sites for the previous three to six months, and before then, there was no City inspector for private commercial projects. She further stated that she had conducted grading plan reviews in the Building Division for approximately three to four years. The City also has an inspector for private residential construction projects; however, that individual was unavailable at the time of EPA's inspection.

The City Inspector indicated that the City did not have a standard checklist for conducting construction site stormwater inspections and that notes, if taken during the inspection, are typically discarded once the inspection is over. Further, the City inspector was not able to provide a history of inspections, correspondence or documentation of required follow-up actions to be taken by the contractor, or past enforcement actions. Based on this information, and the lack of documentation of any construction site inspections in the 2009-2010 and 2010-2011 annual reports, the EPA Inspection Team concluded that there was no record that the City conducted private construction site stormwater inspections.

Multiple deficiencies were observed during the site visit to the 9902 Brimhall Medical Suites construction site ([see Appendix A.4](#)). The construction site lacked general erosion and sediment perimeter controls and sediment appeared to have been transported offsite in the direction of a City MS4 inlet.

Appendix A – Additional Inspection Report Materials

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US EPA ARCHIVE DOCUMENT

A.1 – Inspection Schedule

Tentative Agenda for MS4 Program Inspection City of Bakersfield, California August 29, 2012		
Day	Time	Program/Agenda Item
Wednesday August 29, 2012	8:00 am - 9:00 am	Kick-off Meeting & Program Management Overview (Office) (Including Mapping Overview)
	9:00 am - 10:30 am	Illicit Discharge Controls (Office)
	10:30 am - 12:00 am	Construction Site Storm Water Runoff Control (Office)
	12:00 pm - 1:00 pm	Lunch Break
	1:00 pm - 3:00 pm	Construction Site Storm Water Runoff Control (Field)
	3:00 pm - 4:00 pm	Open Period for Additional Activities ¹ (Tentative time slot)
	4:00 pm - 4:30 pm	Internal Discussion ²
	4:30 pm - 5:00 pm	Informal Out-brief (Tentative time slot)

¹ Open Period for Additional Activities – Will be decided by the EPA Inspection Team during the onsite evaluation 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 out-brief. City participation is not expected.

A.2 – Inspection Sign-in Sheet

MS4 PROGRAM EVALUATION SIGN-IN SHEET (PLEASE PRINT)				
Permittee: <u>City of Bakersfield</u>		Date conducted: <u>8/29/12</u>		
Permit No. _____				
Name	Title	Company	Department	Phone
Max Kuer	EPA Contractor	PG Environmental		783-707-8258 Ext 101
Jake Albrecht	EPA Contractor	PG Environmental		717 440 0344
Elizabeth Sablad	Environment Scientist US EPA	US EPA		415-972-3044
Rebecca Glyn	Life Scientist, Inspector	USEPA		415 972-3507
W. Dale Harvey	AWQCB ← Sr Engineer			559 445 6190
Debra Mehnke	Water Resource Engineer	RWQCB	NPDOS	559-445-6281
Jason Meadows	Water Resources Director	City of Bakersfield	Water Resources	661-326-3715
ART CHIARIELLO	WATER RESOURCES MGR	CITY OF BAKERSFIELD	WATER RESOURCES	661-326-3715
Bryan Kraeger	NVS CU TRIP	NVS	TRIP	559-367-6262
Luis Topete	CE-III Project Mgr	City of BAK	TRIP	661-326-3478
Robert Voyles	Construction Supervisor	City of Bakersfield	Public Works	661-326-3527
Zachary Meyer	Engineer III - Wastewater	City of Bakersfield	Public Works	661-326-3249
Greg Wolff	Industrial Waste Inspector	City of Bakersfield	Public Works	661-326-3249

MS4 PROGRAM EVALUATION SIGN-IN SHEET (PLEASE PRINT)

Permittee: _____ Date conducted: ____/____/____

Permit No. _____

Name	Title	Company	Department	Phone
Marion P Shaw	Civil Engineer IV	COB	PW-Sub	661-326-3599
John Ryan	Hydrographic Supervisor	COB	Water Resources	661-326-3715

A.3 – List of Site Visits Conducted during the Inspection

The EPA Inspection Team visited the following sites during the inspection:

- 9902 Brimhall Medical Suites
- Westside Parkway Phase IV (TRIP project)

The EPA Inspection Team generated a site visit write-up for the 9902 Brimhall Medical Suites sites which is included as Appendix A.4.

A.4 – 9902 Brimhall Medical Suites Site Visit Report and Photograph Log

Site Name: 9902 Brimhall Medical Suites

Site Location: 9902 Brimhall Road, Bakersfield, CA

Date of Visit: August 29, 2012

Entry Time: 1350 hrs (approx)

Exit Time: 1430 hrs (approx)

Site Owner and/or Operator: McDivitt Development (Bakersfield, CA)

Site Contact: Janice Horcasitas (City Inspector)

Conducted by: Max Kuker (PG Environmental, LLC), Rebecca Glyn (U.S. EPA Region 9), and Jake Albright (PG Environmental, LLC)

Accompanied by: Elizabeth Sablad (U.S. EPA Region 9), Dale Harvey (Central Valley Water Quality Control Board), and Debra Mahnke (Central Valley Water Quality Control Board)

Site Visit Report Prepared by: Jake Albright (PG Environmental, LLC)

Site Summary

- The 9902 Brimhall Medical Suites project is a private project in the City. At the time of the site visit, the site had been cleared and initially graded, and the contractor's crew was installing building foundation pads (see Photograph 1). It should be noted that the site appeared to be part of a greater development plan and a portion of the development was incomplete. It appeared that only a portion of the site would discharge to the City's MS4, though it was unclear whether the drain inlet on Brimhall Road discharged to the City's MS4 or a retention basin.

Site Observations

- The EPA Inspection Team was met on site by the City Inspector.
- The City Inspector stated that she had been tasked with conducting inspections of commercial construction sites for previous three to six months. Before that time, she said there was no dedicated City inspector for private commercial projects.
- The EPA Inspection Team viewed the grading plans at the site. The City Inspector's signature was on the grading plans with a notation that the project needed coverage under the State's *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* (Construction General Permit); however, she explained that she did not recall reviewing the plans or conducting site inspections for the project.
- The EPA Inspection Team did not observe anything on site to suggest that the developer obtained coverage under the Construction General Permit.

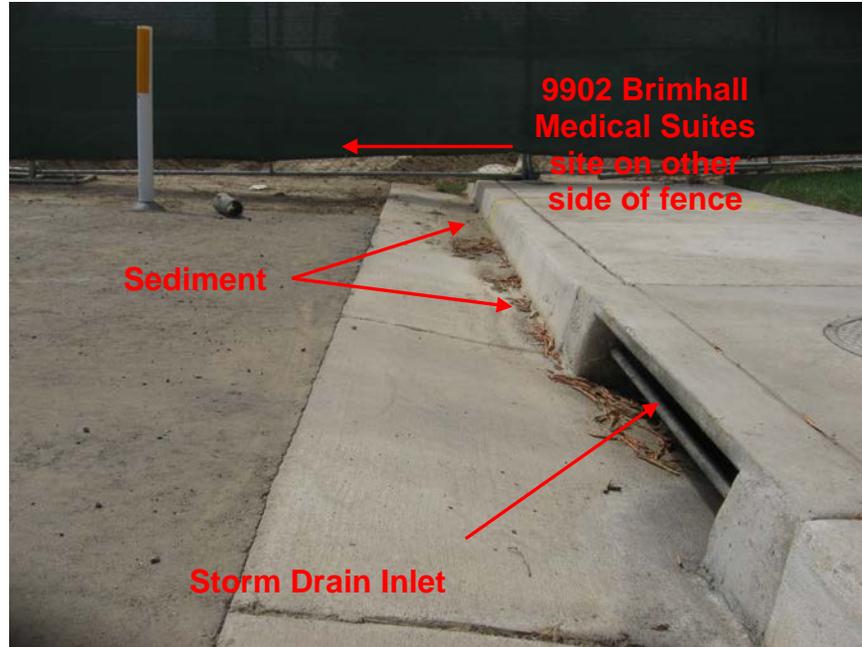
- The construction site lacked general erosion and sediment control measures for perimeter control (e.g., silt fence) (see [Photograph 2](#)).
- Just beyond the construction safety fence near the southeast corner of the project, sediment was present in the curb and gutter flow line up gradient of a storm drain inlet without BMPs for inlet protection. It appeared that the sediment had been transported off site from the construction project toward the storm drain inlet along the roadway (see [Photographs 3 and 4](#)).



Photograph 1. View of southwest corner of the construction site. Note that the site had been initially graded and a contractor was installing building foundation pads at the time of the site visit.



Photograph 2. View of the eastern perimeter of the construction site. Note that there is no silt fence to prevent sediment from leaving the site.



Photograph 3. The construction site lacked general erosion and sediment control measures (e.g., silt fence). View of storm drain inlet on roadway adjacent to the project near the southeast corner of the site. Note sediment in curb and gutter flow line and lack of inlet protection BMPs.



Photograph 4. Alternate view of sediment in curb and gutter flow line upgradient of unprotected storm drain inlet shown in Photograph 3. It was not clear to the EPA Inspection Team whether the drain inlet discharged to the City's MS4 or to a retention basin.

Appendix B – Catalog of Reference Materials

The materials listed in this appendix are relevant to the evaluation but have not been included in the submittal of this inspection report. Copies of materials noted below are maintained in U.S. EPA Region 9 records and can be made available upon request.

B.1 – California Regional Water Quality Control Board, Central Valley Region, Order No. 5-01-130, NPDES Permit No. CA00883399, *Waste Discharge Requirements for the County of Kern and the City of Bakersfield for Urban Storm Water Discharges*

B.2 – City-County NPDES Agreement (dated August 15, 2012)

B.3 – County of Kern and City of Bakersfield Revised Storm Water Management Plan (last revised June 2006)

B.4 – City of Bakersfield/County of Kern NPDES Joint Permit No. CA00883399
Bakersfield Metropolitan Area 2010-2011 Annual NPDES Report

B.5 – County of Kern/City of Bakersfield NPDES Storm Water Permit Application for Renewal – NPDES No. CA00883399 (dated March 30, 2007)

B.6 – Bakersfield Municipal Code (referenced online: <http://qcode.us/codes/bakersfield/>)

B.7 – Public Works Organizational Chart for City of Bakersfield

B.8 – Water Resources Department Organizational Chart for City of Bakersfield

B.9 – Construction and Engineering Division Organizational Chart for City of Bakersfield

B.10 – NPDES – Dry Weather Outfall Inspection List

B.11 – Proposed Plan to Investigate Sources of High Zinc Concentration Fount at the Chester Site (dated June 11, 2002)

B.12 – City of Bakersfield Haz-Mat Complaints& Releases (dated August 11, 2008 through June 28, 2012)

B.13 – Hazardous Materials Response Team – Training Level & Certification Date

B.14 – City of Bakersfield Hazardous Materials Area Plan

B.15 – City of Bakersfield Drainage Sump Map Book

B.16 – City of Bakersfield Site Protocol (for sampling)

B.17 – City of Bakersfield Wet Weather Monitoring Program Standard Operating Procedures (dated October 21, 1994)

B.18 – County of Kern/City of Bakersfield Proposed Plan to Further Control Illicit Dumping (dated February 14, 2002)

B.19 – TRIP SWPPP Checklist and Template

B.20 – SWPPP Training Log for TRIP Project

B.21 – Westside Parkway Phase IV Grading and Site Plans and Inspection Reports