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

MAY 1 - 2013

Mike Maggard, Chairman
Board of Supervisors, County of Kern
1115 Truxtun Avenue, 5th Floor
Bakersfield, California 93301

Dear Mr. Maggard:

Enclosed is EPA's final inspection report for the County of Kern Storm Water Management Program. The inspection, led by EPA Region 9 and PG Environmental, LLC, occurred on August 28, 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 City of Bakersfield Storm Water Management Program, which occurred on August 29, 2012.

The purpose of the inspection was to assess the County's compliance with the Storm Water Permit, NPDES No. CA00883399 (Permit). This effort included document reviews, interviews with County program managers, and field verification inspections. My staff and I appreciate the time County 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 County's inspection and enforcement of erosion and sediment controls at construction sites, as well as the County'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 County staff on this report. We welcome any program updates or clarifying comments from the County 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>.

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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

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

Cc via email with enclosures

Honorable Harvey Hall, Mayor, City of Bakersfield
Charles Lackey, County of Kern
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**

**COUNTY OF KERN,
CALIFORNIA**

INSPECTION REPORT

**Inspection Date:
August 28, 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 Kern County, California (the County) Municipal Separate Storm Sewer System (MS4) program.

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

In this report, EPA identifies several recommendations for the County to improve its MS4 program, program deficiencies, and potential permit violations. EPA found particular concerns with the County's inspection and enforcement of erosion and sediment control requirements at construction sites, resulting in deficiencies observed by EPA at an active construction site. EPA also found concerns with the County's public outreach and 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.

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Section 2.0 Kern County Stormwater Program

On August 28, 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 Kern County, California's (the County) Municipal Separate Storm Sewer System (MS4) program.

Discharges from the County's MS4 and the City of Bakersfield's (the City) 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 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 City and County.

The Permit authorizes the City and County to discharge stormwater from their 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 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. 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 jointly regulated under the Permit, this inspection report only addresses the County's implementation of its MS4 Program. The EPA Inspection Team performed a similar evaluation on August 29, 2012 of the City of Bakersfield MS4 program.

County Information

According to County staff, the County (including the City of Bakersfield) is approximately 8,200 square miles with a population of approximately 840,000. The Copermittees' application for NPDES Permit renewal (submitted on March 30, 2007) states that the drainage area discharging 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 County's Engineering, Surveying and Permit Services (ESPS) Department, a division within the County's Development Services Agency, is primarily responsible for the operation and maintenance of publicly owned drainage areas within the urbanized areas of the County.

According to County staff, the Copermittee's joint MS4 system, 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 County 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 County receives approximately 5-6 inches of average annual rainfall.

According to the 2001 Permit and confirmed by County 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. County staff explained 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 open 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. County staff noted 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 evaluation of the City of Bakersfield, City staff 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, EPA's inspection included an evaluation of the County'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 County'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 is organized to generally follow the structure of the Permit. Where applicable, EPA identifies recommendations for program improvement, program deficiencies, and potential permit violations. 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. Potential permit violations are areas where the County may not be fulfilling requirements of the Permit and/or SWMP; however, this report does not present formal findings of violation.

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 County's MS4 Program, fully document all lines of questioning conducted during personnel interviews, or document all in-field verification 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 County during the inspection process and in the development of this 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 County's MS4 Program, including staff coordination and SWMP and GIS development as follows.

3.1.1 Copermittee Coordination and SWMP Revisions

As required by Provision D.9 of the Permit, the County is party to an active, signed, formal agreement with the City. The County and City 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. County 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.

County 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 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 of Permit compliance. County staff told the EPA Inspection Team that City and County representatives typically meet at least annually to prepare and submit the joint annual report. County and City MS4 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 County must revise or amend the 2001 SWMP in response to changed conditions and to incorporate more effective approaches to pollutant control. 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 the changes are complete and applicable.

Recommendation for Program Improvement

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

According to County staff, the majority of its MS4-related tasks are accomplished between the County’s ESPS and Roads Departments; however, other County departments including, but not limited to, Fire, Sheriff, and Waste Management, have direct or indirect responsibilities in implementing the MS4 Program.

EPA recommends that the County organize an internal MS4 steering committee to share information within its various departments to help the program run as efficiently and effectively as possible. The City and the County should also hold formal meetings, beyond the meetings held to prepare the annual report, to coordinate their MS4 programs and discuss the challenges and successes of their stormwater programs.

3.1.2 GIS Database

County staff noted that they maintain a GIS database that includes many different features of the County’s storm sewer infrastructure. The County ESPS Drainage Engineer explained that there is an ongoing effort to update the GIS database with features such as post-construction best management practices (BMPs) and land uses, which are currently incomplete or not included at all. For example, while the County inventories the locations and identification numbers of the retention basins that drain approximately 40 percent of their MS4 permit area, this information is not included in the County’s GIS database.

Recommendation for Program Improvement

Continue developing the County's geographic information system (GIS).

EPA recommends that the County include retention basins and other components of the storm sewer infrastructure in its ongoing effort to update the GIS database. As the County 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 County GIS staff collaborate and share data with GIS staff at the City of Bakersfield, 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 County 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 in their MS4.

Further, Provision D.8 of the Permit requires the County 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. Provision D.26 states that the approved SWMP is an enforceable component of the Order.

The County has established legal authorities and permit and planning regulations primarily through its County codes. According to County staff, construction plan review is conducted by ESPS and site inspections are conducted by the Building Inspection Division (BID; a division of ESPS). These processes are in place as a preventative measure to ensure that no illicit connections are installed and that contaminated runoff does not enter the MS4 during construction. Plan review and site inspections are 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 County 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 County failed to facilitate 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 County 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.

County representatives stated that a public outreach strategy focused on IC/ID control did not exist and little if any of the public education material targeted IC/ID directly. County staff was not able to provide any such material to the EPA Inspection Team. They further stated that the majority of public outreach occurs through the Waste Management Department and focuses on illegal dumping and hazardous waste. Furthermore, the County could 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.

According to County staff, potential IC/ID issues are occasionally discovered by County residents. However, since there is no direct reporting line, County staff noted that members of the public have called the County Engineering Department to report illicit discharges, though these calls were routed through other County offices first.

The County should develop its public reporting system for IC/ID complaints by establishing and publicizing a website or dedicated hotline phone number. The County could then develop a “hot spot” database, ideally using GIS in collaboration with the City, to track IC/ID complaints and evaluate where incidents are most frequently reported. The County and City 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.

Potential Permit Violation

The County 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.

County staff said that at one point, certain drains in the County's MS4 were stenciled; however, it had been years since a program was in place and most of the stenciling had worn off due to age. They further stated that the County 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, County 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 County and 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 and Provision D.23 of the Permit requires the County and City 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 County staff, the City conducts all dry weather screening of outfalls and the County conducts lab sampling and investigation of outfalls when dry weather flows are detected.

The Copermitees' 2010 – 2011 Annual Report states that the City conducted dry weather screening on all 67 outfalls in the MS4. Two of these outfalls, both located in the City, had dry weather flows. Details concerning the City's dry weather screening program can be found in the inspection report prepared for EPA's inspection of the City's MS4 Program which occurred on August 29, 2012.

Recommendation for Program Improvement

The County should become more involved with screening and analysis of its outfalls.

According to County staff, the County relies solely on the City to screen, analyze, and report results for the MS4 outfalls. They indicated that the County merely includes the dry weather field screening results from the City's survey in the joint annual report. The

County should become more involved in the screening of its outfalls and in the analysis and investigation of dry weather flows.

Program Deficiency

The County 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 taken to determine the source of these dry weather flows.

Program Deficiency

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

According to County staff, if an IC/ID issue is reported to the County, staff from the Code Compliance Division, a division of ESPS, investigates the source and determines if enforcement action is needed. If the IC/ID source is discovered to be residential, a letter may be sent to the homeowner. If the source is found to be industrial, a fine may be levied to the business owner. County staff stated that these actions could happen, but were unable to provide examples of when this took place or any written protocol or SOP describing their enforcement process, such as an Enforcement Response Plan (ERP). According to County staff, a fine escalation scale can be found in the County codes; however, the County staff interviewed during the inspection were unsure of the details.

To address this deficiency, the County should develop formal protocols for enforcement of IC/ID offenses, such as an Enforcement Response Plan (ERP), which include guidance for enforcement escalation.

Recommendation for Program Improvement

The County and the City should establish legal authority where storm sewer lines are interconnected between City and County boundaries.

It was not clear 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 County staff, there is no protocol or standard operating procedure (SOP) between the City and County for determining which jurisdiction has legal authority to identify, investigate, and enforce illicit discharges. County staff were unable to recall if such an event had ever occurred; however, they acknowledged the need to address this issue.

The County and the City 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 Copermitttees' 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 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 and to submit the description to the RWQCB. A description of these procedures was provided to the RWQCB on September 12, 2001. As required by the Permit, 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 County has established mechanisms in its local code to require sediment and erosion control on construction projects. The County also maintains an inventory of active construction sites. The inventory includes information on the project status, owner/operator, site location, and ultimate stormwater discharge location (i.e., MS4 or retention basin). The County's Plan Review and Site Inspection programs are described below.

For various construction projects, the EPA Inspection Team reviewed copies of Stormwater Pollution Prevention Plans (SWPPPs) that had been developed, inspection reports, checklists, and site-specific grading plans. The County noted its use of the "Permits Plus" computer system to track review of building permits, though this was not displayed for the EPA Inspection Team.

3.3.1 Training

Provision D.11 of the Permit requires the County to implement a training program for County 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 County will conduct internal educational activities to ensure that all County 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* and the need to incorporate its requirements into projects (including public works projects) before they are approved for construction.

County staff stated that the County reaches out to local developers and contractors approximately every three years when building ordinances are updated. The last time this occurred was January 2011 when the County provided a PowerPoint presentation regarding the *2010 California Green Building Standards Code*. The EPA Inspection Team noted that only one slide of this training covered stormwater-related information, covering soil loss prevention for new developments of less than one acre.

The ‘Measurable Goals’ section under Part 2 of the SWMP, *Master Plan to Develop, Implement, and Enforce Controls for New Development and Significant Redevelopment*, requires the County to conduct annual training for the preparation and implementation of the SWPPP and BMPs to developers, contractors, and its inspectors.

Program Deficiency

The County has not prepared a summary report of educational and training activities made available as a resource for private construction operators as required by Permit Provisions D.22 and D.26 and SWMP Part 16.

County staff stated that contractors and developers are expected to receive on-the-job training and that the County does not otherwise provide guidance on stormwater training for private entities. EPA found no documentation in the 2009-2010 or 2010-2011 annual reports that the County made training materials available for contractors and developers.

Program Deficiency

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

The EPA Inspection Team requested training documentation from the County including SOPs, syllabi, and proof of County staff participation. County staff indicated that internal training has occurred at periodic “tailgate” meetings, however, the frequency, scope, and participation of trainings are not documented.

To address this deficiency, the County should develop a standardized stormwater training for County staff. Furthermore, with the next SWMP revision, the County should more clearly explain the training requirements of their staff.

3.3.2 Plan Check and Review

Grading plans for County-sponsored projects and private projects are reviewed and approved for permitting by the County ESPS Engineer (except for linear projects, which are reviewed by the Roads Department, as discussed in the following paragraphs).

According to the County ESPS Engineer, the County will occasionally use a contract engineer to assist in plan review when ESPS cannot review plans within a reasonable period of time. The ESPS Engineer or contractor uses a standardized list of requirements based on County codes to review and approve grading plans, including a review for erosion and sediment controls. If revisions to the site plan are required, they are noted in a letter to the developer for correction and re-submission. This process continues until the site plan is approved. The developer is also required to submit an "Applicability of NPDES Storm Water Program" form signed by a Qualified SWPPP Developer (QSD) to the County ESPS Department for earth disturbances greater than one acre.

If a County-sponsored project involves construction or modification of roads and/or highways, a grading plan will be developed by a contract engineer and reviewed by a County Resident Project Engineer from the Roads Department using a State of California/Caltrans stormwater site inspection checklist. Several Resident Project Engineers in the County's Roads Department have received Qualified SWPPP Practitioner (QSP) training; however, none are certified as a QSP. QSP certification is required for implementing BMPs. That responsibility, along with SWPPP development and implementation, rests with the contractor.

Recommendation for Program Improvement

Formalize site plan review procedures for private and County-sponsored construction projects greater than one acre (except for Roads Department projects).

In order to ensure adequate plan review and compliance with County ordinances, EPA recommends that the County develop and implement formal SOPs and a formal checklist to document that all provisions of the code requirements are accounted for and documented during construction site plan reviews.

3.3.3 Construction Site Inspections

Provision D.10 of the Permit requires that by December 15, 2001, the 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 County 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 County is not currently implementing a formal checklist system for construction site stormwater inspections.

The County ESPS Engineer explained that inspections are performed by a staff of 12 within the County Building Inspection Division (BID), a subdivision of ESPS that conducts inspections for all trades involved in County-sponsored and private construction projects. These inspectors are responsible for conducting, among others, plumbing, electrical, mechanical, and grading inspections.

The County ESPS Engineer also stated that grading-specific inspections, which include a review of erosion and sediment control measures, primarily occur when the contractor needs certification for grading status (i.e., rough, refined, or final). He indicated that the County has no recommended schedule for when grading inspections should occur, and that the time between permit acquisition and the first grading inspection differs greatly from project to project. The County ESPS Engineer stated that the County does not necessarily prioritize grading plan inspections for seasonal precipitation or recently cleared sites. He also stated that follow-up on project status is typically not conducted until a year has passed since the last inspection.

The County ESPS Engineer also indicated that the 12 County BID inspectors are responsible for inspections throughout the entire County (approximately 8,200 square miles), not just the permitted area. He further stated that the County has had issues recently with abandoned construction sites due to the current economic climate, resulting in unstabilized soil conditions at inactive construction sites.

Program Deficiency

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

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 County. Further, at the time of the EPA inspection, County staff stated that a checklist has not been implemented for construction site stormwater inspections. EPA recommends that the County and City work with the RWQCB to get a construction inspection checklist approved as part of the SWMP revision.

Program Deficiency

The County lacked formal procedures for inspecting County-sponsored and private construction sites as required by Permit Provisions D.8 and D.21.

The County had not implemented written or formal SOPs to describe a specific protocol for these inspections. Specifically, the County could not provide the EPA inspection

Team with inspection reports or details about how sites are prioritized, the level of detail for the inspections, or what frequency will be followed for the inspections. Formal inspection SOPs should be developed and implemented to support the construction site inspection program.

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

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 EPA Inspection Team visited the Hageman Road and BNSF Railroad Grade Separation Project during the inspection. The EPA Inspection Team observed erosion and sediment control practices installed on several of the newly formed embankments of the project. However, drop inlet protection and wattles on some of the new embankments were missing even though the site was not yet stabilized. The Site Contact indicated that the drop inlet protection was removed approximately three weeks prior to the EPA site visit due to the inlet protection being a potential traffic safety hazard as well as for cosmetic reasons. Details and photographs of this inspection can be found in [Appendix A.4](#).

Appendix A – Additional Inspection Report Materials

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A.1 – Inspection Schedule

Tentative Agenda for MS4 Program Inspection Kern County, California August 28, 2012		
Day	Time	Program/Agenda Item
Tuesday August 28, 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 County staff.

² Internal Discussion – Time for inspectors to arrange notes and prepare information to be discussed with the County at the out-brief. County participation is not expected.

A.2 – Inspection Sign-in Sheet

MS4 PROGRAM EVALUATION SIGN-IN SHEET (PLEASE PRINT)				
Permittee:	Kern County MS4 Inspection		Date conducted: 8/28/12	
Permit No.				
Name	Title	Company	Department	Phone
Jake Albright	USEPA Contractor	PG		774400344
Debra Mahnke	Water/Wastewater Environmental Scientist	RWGCB		559-445-6281
Elizabeth Sablad	Life Scientist/Inspector	US EPA	CWA Compliance	415-972-3044
Rebecca Glynn	Inspector	US EPA	CWA Compliance	45/972-3507
Heather Haddock	Engineer	County of Kern	ESPS	5094 (661) 862-8671
Phil D. Haglund	Spawning Biology Specialist	County of Kern	BIO	(661) 862-5000
Kevin Hamilton	Engineer	County of Kern	ESPS-drainage	(661) 862-5071
Benjamin	Eng. Aide	County of Kern	ESPS - Drainage	(661) 862-5069
Art Hansen	Engr. mgr.	County of Kern	ESPS	661 862-8671
Carol Fenton	Sr. Eng. Mgr.	"	"	661-862-5061
W. Dale Haring	Sr. Eng.	RWDLB		599 445 6190
Jim Burford	Resident Engineer	Kern County Roads	Roads	661 304 4629
Phil Chung	SUPERVISOR ENGINEER	KC ROAD	Roads	661 345 0397
Max Kuker	USEPA Contractor	PG		703.707-0258 ext 101

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

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

- Dollar General construction site at 111-119 Roberts Lane
- Hageman Road and BNSF Railroad Grade Separation Project

The EPA Inspection Team generated a site visit write-up for the following site, which is included as Appendix A.4:

- Hageman Road and BNSF Railroad Grade Separation Project

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A.4 – Hageman Road and BNSF Railroad Grade Separation Project Site Visit Report and Photograph Log

Site Name: Hageman Road and BNSF Railroad Grade Separation Project

Site Location: Intersection of Hageman and Allen Roads, Bakersfield, CA

Date of Visit: August 28, 2012

Entry Time: 1440 hrs (approx)

Exit Time: 1515 hrs (approx)

Site Owner and/or Operator: Kern County

Site Contact: Kris Raber (County Resident Project Engineer)

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 Hageman Road and BNSF Railroad Grade Separation Project is a County Roads Department project to eliminate the at grade railroad crossing on Hageman Road near the intersection of Allen Road. The project includes dropping the grade of Hageman Road, creating a railroad overpass.

Site Observations

- The EPA Inspection Team observed erosion control practices in place on several of the newly formed embankments on the project (see [Photographs 1 and 2](#)). However, it should be noted that drop inlet protection and erosion control wattles had not been installed on some the new embankments at the project site (see [Photographs 3 and 4](#)). The Site Contact indicated that the drop inlet protection was removed approximately three weeks prior to the inspection due to them being a potential traffic safety hazard and also for cosmetic reasons. He further indicated that stormwater runoff from the site would discharge into one of the County's terminal retention basins and not waters of the United States.



Photograph 1. View of wattles which had been installed on several new embankments surrounding the railroad overpass. Note that erosion from the lower level would be discharged to the storm drain inlet because protection had been removed.



Photograph 2. Additional example of wattles which had been installed on several new embankments surrounding the railroad overpass. Note that the storm drain inlet has no protection.



Photograph 3. View of disturbed slope where wattles were not present on the new embankments south of Hageman Road.



Photograph 4. View of storm drain inlet without BMPs for inlet protection. Storm drain inlets surrounding the project area were found to be unprotected.

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 – Kern County, California Code of Ordinances

B.7 – Development Services Agency Organizational Chart for Kern County
(dated July 20, 2010)

B.8 – Kern County ESPS Department Public PowerPoint Presentation on California Green Building Standards (dated December 9, 2010)

B.9 – Technical Report Comparing the Existing SWMP with the General SUSMP (dated June 11, 2002)

B.10 – Proposed Public Outreach Program Targeting Users of Pesticides and Fertilizers (dated June 11, 2002)

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

B.12 – County of Kern & City of Bakersfield MS4 Outfall Locations

B.13 – Grading Permit Job Card for Grading Permit No. K201200040 - 111 Roberts Lane, Dollar General (dated June 25, 2012)

B.14 – Kern County Building Inspection Division Job Card for Building Permit No. K201105977 - 111 Roberts Lane, Dollar General (dated June 26, 2012)

B.15 – Proposed Outline of a Training Program for Storm Water Pollution Prevention and Detection (dated December 14, 2011)

B.16 – Proposed Plan to Further Control Illicit Dumping (dated February 14, 2002)

B.17 – Grading Plan Preparation and Checklist

B.18 – ESPS Applicability of NPDES Storm Water Program for a Project Disturbing One (1) Acre or Greater Within Kern County (blank form)

B.19 – County of Kern/State of California Standard Details for NPDES Sediment and Erosion Control BMPs

B.20 – List of Active Grading Permits in Kern County (as of August 28, 2012)

B.21 – Grading and Drainage Plans for Hageman Road and BNSF Railroad Grade Separation Project

B.22 – Site Inspection and Weather Reports for Hageman Road and BNSF Railroad Grade Separation Project

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