



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 8**

1595 Wynkoop Street  
DENVER, CO 80202-1129  
Phone 800-227-8917  
<http://www.epa.gov/region8/stormwater>

**STORMWATER ANNUAL REPORT FORM**

This form is for regulated small MS4s (Municipal Separate Storm Sewer Systems) and may be used to meet the annual reporting requirements for regulated small MS4s as outlined in 40 CFR§122.34g(3). While it is not required for MS4 operators to use this form to meet federal regulations, MS4s are encouraged to use this format to allow for more efficient recordkeeping and to minimize paper consumption. This form may be submitted electronically provided that a signature is either scanned or provided as a hard copy addendum to the completed report form.

This form can be downloaded from the EPA Region 8 stormwater web site, <http://www.epa.gov/region8/stormwater>

Completed forms may be sent to:

██████████  
Mailcode: 8P-W-WW  
1595 Wynkoop Street  
Denver, CO 80202-1129  
Email: ██████████

**All sections of this form must be completed and Item I on Page 18 must be signed and certified.**

**Please print or type.**

**A. Permittee Information**

Permittee (Agency Name): Fort Carson  
Mailing Address: 1626 Evans Street BLDG 1219  
City, State and Zip Code: Fort Carson, Colorado 80913-4000  
Contact Phone Number: 719-526-1697  
Permit Certification Number: COR042000F  
Have any areas been added to the MS4 due to annexation or other legal means? NO

**B. Reporting Period (e.g., Jan 1, 2004 to Dec. 31, 2004):** January 1, 2011 to December 31, 2011

### **C. Construction Program Contact:**

The following information will be provided on EPA's web site to assist construction site operators in determining municipality-specific requirements for their projects:

Have you assigned an appropriate contact person/work unit to address questions regarding your municipality's construction and post-construction requirements? YES

If Yes:

Contact name: [REDACTED]  
Position/work group title: Stormwater Program Manager  
Contact phone number: 719-526-1697  
Contact E-mail address: [usarmy.carson.imcom-central.list.dpw-ed-storm-water@mail.mil](mailto:usarmy.carson.imcom-central.list.dpw-ed-storm-water@mail.mil)

If a web site has been created with information on complying with your municipality's construction and/or post-construction requirements, list the address:

[http://envems.carson.army.mil/environmental/water/stormwater/stormwater\\_home.htm](http://envems.carson.army.mil/environmental/water/stormwater/stormwater_home.htm)

### **D. Implementation of EPA's Stormwater Management Program**

The purpose of the annual report is to report on the status of your implementation of the permit requirements, including compliance with the standard of reducing the discharge of pollutants from your MS4 to the Maximum Extent Practicable (MEP). Address each of the following items for **each** of the six program areas:

1. Public education and outreach on stormwater impacts;
2. Public participation/involvement;
3. Illicit discharge detection and elimination;
4. Construction site stormwater runoff control;
5. Post-construction stormwater management in new development and redevelopment; and
6. Pollution prevention/good housekeeping for municipal operations

As the permittee, you must collect and maintain adequate information to demonstrate implementation of the six program areas as per your stormwater management program. Note that although the annual report only requires the submittal of certain information as outlined below, additional information may be requested by EPA to audit the implementation of your stormwater management program. For example, construction site inspection reports, outreach materials, and records of maintenance activities performed may be requested by EPA in addition to the annual report.

If another entity does not have its own permit but is instead covered under your permit, the annual report information under Section D of this form must also be provided for each such entity.

## 1. Public Education and Outreach on Stormwater Impacts

Provide the status of any measurable goal scheduled for completion during the reporting period or for which activities have begun. For program elements started, but not completed, any milestones that have been met must be indicated. If a change will be proposed to a BMP or measurable goal as part of the annual report, this must be stated and the proposed changes discussed. For each change proposed, you must provide information on:

1. The BMP/measurable goal for which a change is proposed;
2. Any proposed changes to the BMP description;
3. Any proposed changes to the measurable goals (including specific dates and measures); and
4. The rationale for the proposed changes.

Describe any measurable goal(s) for public education and outreach on stormwater impacts for the reporting period; including dates and numeric measures:

<b>Measurable Goal(s)</b> Including dates and numeric measures, as previously submitted	<b>Status:</b> Including dates and numeric measures	<b>Changes proposed to BMP and/or Measurable Goal? (Yes/No)</b> If yes, provide proposed changes and rationale.
Describe the methods, frequency, type, and target audience of stormwater outreach performed during the permit term.	<p>Many stormwater outreach activities were conducted in 2011 as seen in Attachment 1. Personnel that live and work on Fort Carson were targeted in this program.</p> <p>Approximately 218 stormwater awareness brochures were distributed at events such as Earth Day, Eggsperience, Make a Difference Day, and others.</p> <p>Construction contractors were targeted with the training, "Fort Carson Stormwater Management at Construction Sites", which was delivered 9 times with 100 people trained in 2011.</p> <p>Soldiers, civilians, and contractors were targeted with a stormwater awareness and training module in the Environmental Protection Officer classes. This class was given 5 times in 2011.</p> <p>The three elementary schools fourth and fifth graders participated in stormwater awareness activity that included poetry contests. Fountain middle school participated in a hands-on stormwater activity.</p> <p>Finally, all personnel at Fort Carson were targeted with two stormwater articles published in The Mountaineer, the Fort Carson newspaper that is distributed post-wide related to the ditch clean up projects.</p>	No.

Provide a copy or representation of public outreach materials provided to the target audience(s).	See Attachment 2 for the Stormwater awareness brochure that is distributed to the target audience. Other educational material can be provided upon request.	No.
Provide copies of any educational materials, lesson plans, or presentations provided to school age students and other target audience(s) regarding stormwater runoff and water quality issues.	See Attachment 3 for an example of the educational material for the Environmental Protection Officer course. More is available upon request.	No.
Estimate the number of people expected to be reached by the program over each year of the permit term.	An estimated 4,572 people were reached directly by the Stormwater Program in 2011 as calculated on Attachment 1. Another 20,000 were reached via indirect means (newspaper articles, etc.)	No.
Provide the name or title of the person(s) responsible for coordination and implementation of the stormwater public education and outreach program.	Title: Education and Outreach Specialist,	No.

Narrative description. Provide any descriptions which may further describe the implementation of this minimum measure. Such narrative may include descriptions of efforts which overlap several minimum measures or descriptions of documents or programs which have been created in an effort to implement this minimum measure:

An article on the topic of illicit discharges to the storm sewer system was written for the post newspaper (The Mountaineer) for publication in December 2011. At the monthly Garrison Commander's Sustainability Breakfast, the Stormwater Program at Fort Carson presented information regarding the efforts made in Low Impact Development on Fort Carson. Forty-five community members involved in community development, construction and sustainability attended this breakfast on March 9, 2011.

## 2. Public Participation/Involvement

Provide the status of any measurable goal scheduled for completion during the reporting period or for which activities have begun. For program elements started, but not completed, any milestones that have been met must be indicated. If a change will be proposed to the BMP or measurable goal as part of the annual report, this must be stated and the proposed changes discussed. For each change proposed, you must provide information on:

1. The BMP/Measurable goal for which a change is proposed;
2. Any proposed changes to the BMP description;
3. Any proposed changes to the measurable goals (including specific dates and measures); and
4. The rationale for the proposed changes.

Describe any measurable goal(s) for public participation and involvement on stormwater impacts for the reporting period; including dates and numeric measures:

<b>Measurable Goal(s)</b> Including dates and numeric measures, as previously submitted	<b>Status:</b> Including dates and numeric measures	<b>Changes proposed to BMP and/or Measurable Goal? (Yes/No).</b> If yes, provide information on proposed changes and rationale.
Document any events or other activities to clean up MS4 receiving waters.	An Earth Day event was organized to clean up B-ditch.  "Make A Difference Day" was an event used to work with 200 volunteers to clean out trash and debris Clover and Central Unnamed Ditch.	No.
Document any volunteer activities conducted to help actively engage residents and personnel at Fort Carson in understanding water resources and how their activities can affect water quality.	Storm drain stenciling was conducted in 2011 by volunteers including civilians and soldiers.  Fort Carson had two ditch clean up events ran by volunteers. An Earth Day event was organized to clean up B-ditch.  "Make A Difference Day" was an event used to work with 200 volunteers to clean out trash and debris Clover and Central Unnamed Ditch.	No.
Provide the name or title of the person(s) responsible for coordination and implementation of the storm water public education and outreach program.	Title: Education and Outreach Specialist	No.

**Public participation/involvement (continued)**

Narrative description. Provide any descriptions which may further describe the implementation of this minimum measure. Such narrative may include descriptions of efforts which overlap several minimum measures or descriptions of documents or programs which have been created in an effort to implement this minimum measure:

At the annual Make-a-Difference Day volunteer event, 200 community members cleaned waterways and ditches on Fort Carson. All Annual Reports are available at building 1219. The storm drain stenciling program is executed by the Stormwater Specialist, and a current status is available upon request.

### 3. Illicit Discharge Detection and Elimination

Provide the status of any measurable goal scheduled for completion during the reporting period or for which activities have begun. For program elements started, but not completed, any milestones that have been met must be indicated. If a change will be proposed to the BMP or measurable goal as part of the annual report, this must be stated and the proposed changes discussed. For each change proposed, you must provide information on:

1. The BMP/Measurable goal for which a change is proposed;
2. Any proposed changes to the BMP description;
3. Any proposed changes to the measurable goals (including specific dates and measures); and
4. The rationale for the proposed changes.

Describe any measurable goal(s) for illicit discharge detection and elimination for the reporting period; including dates and numeric measures:

<b>Measurable Goal(s)</b> Including dates and numeric measures, as previously submitted	<b>Status:</b> Including dates and numeric measures	<b>Changes proposed to BMP and/or Measurable Goal?</b> (Yes/No). If yes, provide information on proposed changes and rationale.
Describe the program used to detect and eliminate illicit discharges into the MS4, including procedures for detection, identification of sources, and removal of non-stormwater discharges from the storm sewer system.	The members of the Stormwater Team, the ECAT, and EPOs are all trained to detect and identify illicit discharges to the storm sewer system. The Post has a spill plan, which is followed to remove hazardous waste discharges. The Operations and Maintenance division of the MS4 removes other non-hazardous discharges.	No.
Describe the location and method of dry weather screening performed.	An illicit discharge survey was conducted in the first quarter of 2011. Four watersheds are surveyed; B-Ditch, Clover Ditch (I-ditch), Central Unnamed Ditch and Rock Creek.	No.
Describe illicit discharges located and all actions taken to eliminate sources of illicit discharges.	The dry weather illicit discharge survey was conducted in the 1 <sup>st</sup> quarter 2011. Also, discharges are reported through the Stormwater Program website, and contact information is giving during education and outreach events. The Stormwater Program encourages illicit discharge reporting through these avenues.  Some discharges are responded to immediately. Trash, however, is taken care of during ditch clean up events and through service orders via the operations and maintenance division.	No.

Describe training materials used and the frequency at which training was provided to the target audience(s) on how to respond to reports of illicit discharges.	This is met through the outreach and education tasks. See Minimum Control Measure 1 (MCM) for frequency information.	No.
Describe or cite the established ordinance or other regulatory mechanism used to prohibit illicit discharges into the MS4.	See Attachment 4, the Garrison Commander Policy.  Also, the Balfor Betty rental agreement also prohibits illicit discharges.	No.
Provide a copy or excerpt from the information management system used to track illicit discharges.	See Attachment 5. All of the data on this form is entered into a database and marked on a map. The data can be exported and analyzed.	No.
Describe the categories of non-stormwater discharges evaluated as potentially being significant contributors of pollutants to the MS4 and any local controls placed on these discharges.	A wash rack was found to be cross connected to the stormwater system. This wash rack is no longer in use until the connection to the sewer system can be established.	No.
Describe occasional incidental non-stormwater discharges (See Part 2.4.6) and any controls placed on these discharges.	The list of allowable non-stormwater discharges is presented in the SWMP, and residents are encouraged to coordinate any future events with the Stormwater Program through educational activities. Everyone on Post is encouraged to wash their cars at a washing facility.	No.
Describe hazardous waste collection events and summary data which generally covers what was collected.	Household hazardous waste is accepted by the El Paso County Household Hazardous Waste Facility. Education activities documented earlier in the education and outreach section provides information to residents on this opportunity.  A collection event was held on Oct 22 for electronic waste recycling that collection about 500 lbs of electronics.  Hazardous wastes generated from training activities are coordinated through the Hazardous Waste Storage Facility (HWSF) on-post. Turning in waste to the HWSF requires training to ensure all their requirements are met. Records of waste are maintained on a daily basis, and are kept at the HWSF.	No.

<p>Maintain an inventory of industrial facilities that discharge into the MS4 or to waters of the United States within Fort Carson. The types of industrial activities that must be inventoried are set forth in 40 CFR §122.26(b)(14)(i) through (xi). This inventory must include the location of the activity, the location of its outfall and corresponding receiving water, and the NPDES permit status for its stormwater discharge.</p>	<p>Industrial discharges at Fort Carson are regulated under the Multi Sector General Permit. Through the requirements of this permit, industrial activities are tracked in a spreadsheet that includes a reference to the Stormwater Pollution Prevention Plan for the site (including location of the activity, location of the outfall and corresponding receiving water, as well as permitting information), exposed materials, monitoring requirements, and comments on the facility.</p>	<p>No.</p>
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**Illicit Discharge Detection and Elimination (continued)**

Narrative description. Provide any descriptions which may further describe the implementation of this minimum measure. Such narrative may include descriptions of efforts which overlap several minimum measures or descriptions of documents or programs which have been created in an effort to implement this minimum measure:

<p>All spill reports are kept on the Stormwater Program SharePoint site. Spill Reports have been analyzed and no trends can be identified.</p> <p>Spills have not been found to be the source of any illicit discharge. When a spill does occur it is immediately reported to Fire Department and the Environmental Program then assists in clean up and ensure the site meets standards. The nature of activities at Fort Carson elevates the risk of spills but people are highly trained on spill response and clean up.</p> <p>The storm sewer map is kept updated by the Geographic Information System (GIS) team. A hard copy map is on the wall of the Stormwater Program Office.</p> <p>Regarding Flushing and sanitizing new water mains and building plumbing; Contractors are required to discharge these effluents to nearby sanitary or industrial sewers, or to truck the effluents to the installation wastewater treatment plant. Dechlorination of chlorinated effluents is required prior to discharge.</p> <p>Charity car washes or events of this nature have not been requested through the Wastewater or Stormwater Program in recent years.</p>
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#### 4. Construction Site Stormwater Runoff Control

Provide the status of any measurable goal scheduled for completion during the reporting period or for which activities have begun. For program elements started, but not completed, any milestones that have been met must be indicated. If a change will be proposed to the BMP or measurable goal as part of the annual report, this must be stated and the proposed changes discussed. For each change proposed, you must provide information on:

1. The BMP/Measurable goal for which a change is proposed;
2. Any proposed changes to the BMP description;
3. Any proposed changes to the measurable goals (including specific dates and measures); and
4. The rationale for the proposed changes.

Describe any measurable goal(s) for construction site stormwater runoff control for the reporting period; including dates and numeric measures:

<b>Measurable Goal(s)</b> Including dates and numeric measures, as previously submitted	<b>Status:</b> Including dates and numeric measures	<b>Changes proposed to BMP and/or Measurable Goal? (Yes/No).</b> If yes, provide information on proposed changes and rationale.
Describe “regulated construction activities” that occurred during the term of this permit.	<p>There were many active construction sites in 2011 ranging in locations, sizes and activities. Many of these were small projects under an acre but others are large facilities, linear utilities and residential improvements and developments. These projects are owned and expedited by USACE, DPW, Balfour Beatty housing communities, and AAFES.</p> <p>Quarterly inspections were done on all projects over an acre that did not receive a Low Erosivity Waiver in 2011. The Stormwater Program includes BMP requirements for smaller projects via the NEPA process and does site visits to small projects when time allows.</p>	No, will continue for the duration of the permit term.
Describe or cite the established ordinance or other regulatory mechanism used to require erosion and sediment controls.	See Attachment 4, the Garrison Commander Policy.	No.

<p>Describe the sanctions and enforcement mechanisms used to ensure that all “regulated construction activities” are in compliance with the terms of the Construction General Permit. This should include a description of any methods developed to stop work on construction sites in non-compliance independent of contracting procedures.</p>	<p>See Attachment 4, the Garrison Commander Policy.</p>	<p>No.</p>
<p>Describe the procedures for site plan review, including the review of pre-construction site plans, which incorporate consideration of potential water quality impacts and applicable contract language.</p>	<p>Every project goes through a NEPA review of which basic information on MS4 requirements and CGP requirements is given, and potential water quality impacts are assessed. The Program Manager attends design review meeting for large projects to ensure water quality is addressed. In addition, a SWPPP review is conducted before the site is allowed to file its NOI for Construction General Permit coverage.</p>	<p>No.</p>
<p>Describe the procedures for receipt and consideration of information submitted by the public.</p>	<p>The Stormwater Office contact information is distributed to the public via the Stormwater Program website, brochures (see section x for distribution intensity), and during presentations at community events (see section x for events attended). The public is encouraged to call or e-mail the Stormwater office. Public comments are immediately considered and acted upon when appropriate.</p>	<p>No.</p>
<p>Describe the procedures for site inspection, including how sites will be prioritized for inspection, including documentation of the frequency of site inspections and methods for prioritizing site inspections.</p>	<p>All construction sites covered under the Construction General Permit are inspected quarterly by a member of the Stormwater team. If an inspection is not to the satisfaction of the Stormwater team member, more frequent follow up inspections are scheduled. Inspection reports are located in their respective project files and available upon request.</p>	<p>No.</p>

Provide the name or title of the person(s) responsible for coordination and implementation of the construction site runoff control program.	Title: Stormwater Coordinator	No.
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Narrative description. Provide any descriptions which may further describe the implementation of this minimum measure. Such narrative may include descriptions of efforts which overlap several minimum measures or descriptions of documents or programs which have been created in an effort to implement this minimum measure:

All construction projects are reviewed by a team of natural resources and environmental specialists during the NEPA project review process, if there is an issue or concern; it is addressed at that point. Basic information on MS4 requirements and compliance and CGP requirements are given at this time. In addition a SWPPP review is conducted before the site is allowed to file its NOI for Construction General Permit coverage. All NEPA reviews are available upon request.

All construction related requirements and CGP compliance information has successfully been integrated into all RFPs. These RFPs include those sent out by USACE, DPW, AAFES, and Balfour Beatty Construction.

Construction sites are required to have a dewatering plan in place prior to the start of construction. A review of this plan is conducted during the SWPPP review process. Additionally, construction contractors are required to dewater on site and are prohibited from discharging to storm sewers or ditches. We have created a guidance document and can provide if needed.

Coordination between the Stormwater Program, USACE, DPW and other entities conducting construction activities is conducted on a regular basis. These include monthly and weekly scheduling meetings and design reviews. We also provide a monthly Stormwater Management at Construction Site training which is described in Section 1 (MCM1). We rely on Construction Representatives to be our eyes and ears in addition to constant drive by inspections. All Representatives have received Stormwater Management at Construction Sites Training.

All construction sites are inspected by the Fort Carson Stormwater personnel before the NOT can be filed. The NOT inspection form is provided in the SWMP. We have additional personnel who are available to provide seeding, mulching and vegetation recommendations if conditions have not been met. Operations Support maintains all As-builts of facilities on Microstation software.

## 5. Post-construction Stormwater Management in New Development and Redevelopment

Provide the status of any measurable goal scheduled for completion during the reporting period or for which activities have begun. For program elements started, but not completed, any milestones that have been met must be indicated. If a change will be proposed to the BMP or measurable goal as part of the annual report, this must be stated and the proposed changes discussed. For each change proposed, you must provide information on:

1. The BMP/Measurable goal for which a change is proposed;
2. Any proposed changes to the BMP description;
3. Any proposed changes to the measurable goals (including specific dates and measures); and
4. The rationale for the proposed changes.

Describe any measurable goal(s) for post-construction stormwater management in new development and redevelopment for the reporting period; including dates and numeric measures:

<b>Measurable Goal(s)</b> Including dates and numeric measures, as previously submitted	<b>Status:</b> Including dates and numeric measures	<b>Changes proposed to BMP and/or Measurable Goal? (Yes/No).</b> If yes, provide information on proposed changes and rationale.
Describe the program that ensures the pre-development hydrology is met for new development and re-development projects as required in Part 2.6.1 and the mechanism used to review the adequacy of post-construction BMPs.	The project review process described in Section 4 of this report allows for the Stormwater Program to review plans and ensure pre-development hydrology requirements are met and post-construction BMPs are adequate. Contracted stormwater modeling of the project review ensures all volume and rate requirements are met with the post-construction BMPs. Additionally, contract language adequately addresses these requirements. All NEPA reviews are available upon request.	No.
Describe the ordinance or other regulatory ordinance used to require the installation and maintenance of post-construction stormwater controls.	See Attachment 4, the Garrison Commander Policy.	No.
Describe the program that ensures the long-term operation and maintenance of post-construction BMPs, including an excerpt from any data management system that includes maintenance requirements and schedules for post-construction BMPs installed during the year.	KIRA holds the operations and maintenance contract at Fort Carson. KIRA is responsible for maintaining post-construction BMPs and does so as needed. KIRA contract does not have a contract requirement for a data management system or required to produce a schedule, but does maintenance as needed.	No.

<p>Describe the process used to ensure that all DPW, Military Construction, and downrange contracts initiated after the effective date of the permit contain language which requires the installation of post-construction stormwater controls and an excerpt of applicable contract language.</p>	<p>The post-construction BMPs are required because of the EISA 438. This is incorporated in the Fort Carson SMWP and also in contract language that states, "Construct BMPs to mitigate 110 percent of the difference in peak discharge and runoff volume between the pre-development and post-development conditions to the maximum extent technically feasible. The peak flow and volume of runoff will be determined using the 5-year, 24-hour duration SCS Type II storm. The 5-Year, 24-hour rainfall depth at Fort Carson is 2.7 inches."</p>	<p>No.</p>
<p>Provide the name or title of the person(s) responsible for coordination and implementation of the post-construction stormwater management program.</p>	<p>Title: Stormwater Program Manager</p>	<p>No.</p>

**Post-construction Stormwater Management in New Development and Redevelopment (continued)**

Narrative description. Provide any descriptions which may further describe the implementation of this minimum measure. Such narrative may include descriptions of efforts which overlap several minimum measures or descriptions of documents or programs which have been created in an effort to implement this minimum measure:

Requirements of the MS4 permit including EISA 438 were incorporated into request for proposal (RFP) language in 2011. In 2011 any project completed which impacted stormwater was reviewed during the NEPA process; these reviews are available upon request. Verification of each project meeting all CWA, NPDES and EISA 438 requirements is done during the NEPA reviews and is a partnership with numerous programs.

The NOT Inspection checklist is completed and in use. Construction reviews are conducted during all phases of construction, compliance for permanent stabilization and Post Construction BMP functionality is also achieved through the NOT inspection process. This document is available if needed. The landscaping, permanent stabilization, and post construction BMPs of each construction project is inspected for proper functionality before the NOT can be filed with the EPA. All as built and O & M specifications are given to DPW mapping section.

Maintenance of Post Construction BMPs is going to be a challenge in the future because of funding constraints but the Stormwater Program will continue with work with the Operations Division for proper management of these structures. The Stormwater Program will provide training and support for these projects.

**6. Pollution Prevention/Good Housekeeping for Municipal Operations**

Provide the status of any measurable goal scheduled for completion during the reporting period or for which activities have begun. For program elements started, but not completed, any milestones that have been met must be indicated. If a change will be proposed to the BMP or measurable goal as part of the annual report, this must be stated and the proposed changes discussed. For each change proposed, you must provide information on:

1. The BMP/Measurable goal for which a change is proposed;
2. Any proposed changes to the BMP description;
3. Any proposed changes to the measurable goals (including specific dates and measures); and
4. The rationale for the proposed changes.

Describe any measurable goal(s) for pollution prevention/good housekeeping for municipal operations for the reporting period; including dates and numeric measures:

<b>Measurable Goal(s)</b> Including dates and numeric measures, as previously submitted	<b>Status:</b> Including dates and numeric measures	<b>Changes proposed to BMP and/or Measurable Goal? (Yes/No).</b> If yes, provide information on proposed changes and rationale.
Describe the operation and maintenance program intended to prevent or reduce pollutant runoff from municipal operations, including a list of each of the activities evaluated under this program and a description of the controls for reducing or eliminating the discharge of pollutants from streets, roads, highways, parking lots, maintenance and storage yards, waste transfer stations, fleet or maintenance shops with outdoor storage areas, snow disposal areas, and salt/sand storage locations.	This will be a cooperative effort with the Stormwater Program, and Ops Division (via the KIRA contract). Currently primary streets are swept monthly; secondary streets are swept every two months. Parking Lots are swept two times a year. Some storm sewer systems, culverts and ditches were cleaned in 2011 and this task will be continued in the future indefinitely.  Additionally, the industrial maintenance and storage yards, waste transfer stations, and maintenance shops are permitted under the MSGP. This program includes training, inspections and monitoring at these sites. Results from inspections and monitoring events are used to prescribe future BMPs and good housekeeping efforts.	No.
Describe the contents and frequency of the training program for municipal personnel and a list of the personnel or positions trained during the term of the permit.	Training for operations is conducted by Ops Division and KIRA in the fall of every year. This training includes information on applications of liquid and granular deicing and training on equipment operation. We inspect where they store the MgCl monthly and it is managed properly.	No.

	<p>EPO training is provided regularly on Fort Carson. Various courses presented during the EPO training emphasize stormwater pollution prevention, to include “Pollution Prevention”, “Recycling at Fort Carson”, “Spill Response”, “Hazardous Waste Training”, “UST/AST Program”, “Environmental Performance Assessment System” and “Environmental Inspections”. See Attachment 3 for the slides from the stormwater module.</p> <p>In addition, stormwater pollution prevention is covered in more detail in the “Water Resources Management” course. The monthly stormwater management at construction sites course is open to any employees and contractors as well, information given above.</p>	
<p>Describe the evaluation performed on the street cleaning operations, catch basin cleaning operations, and street sanding/salt practices and any measures taken as a result of the evaluation to minimize negative impacts to water quality.</p>	<p>Sediment and material was sampled from a storm drain sump in 2009. Results from this sampling were used to characterize this type of waste for disposal options. Sediment and materials from catch basins on-post were properly disposed of either at on-site, or El Paso County landfills.</p>	<p>No.</p>

**Pollution Prevention/Good Housekeeping for Municipal Operations (continued)**

Narrative description. Provide any descriptions which may further describe the implementation of this minimum measure. Such narrative may include descriptions of efforts which overlap several minimum measures or descriptions of documents or programs which have been created in an effort to implement this minimum measure:

Training for operations conducted by Ops Division and KIRA in the fall of every year. This training includes information on applications of liquid and granular deicing and training on equipment operation.

The Environmental Compliance Assessment Team (ECAT) currently assesses any impacts to stormwater during their required monthly inspections and assists the stormwater program in corrective actions during the assessment of facilities. Stormwater language was permanently integrated into the ECAT inspection process in 2011. Many of these requirements are also met by activities conducted for MSGP compliance. Temporary BMPs are always used during maintenance, and training and inspections are conducted often.

Coverage of materials in storage areas presents a challenge to cover due to cost and accessibility issues. Temporary stormwater BMPs, good housekeeping measures and inspections are employed to mitigate any potential pollutants from entering the storm sewer system. Granular deicing product is always covered.

#### **E. Results of Information Collected and Analyzed.\***

If you have collected and/or analyzed information during the reporting period, including any monitoring data used to assess the success of the program at reducing the discharge of pollutants, submit a short summary of the information and any analysis completed.

##### **Summary**

Surface water sampling required by the SWMP was contracted and completed 2011. This sampling evaluates the 4 major cantonment drainages (B-Ditch, Clover Ditch, Central Unnamed Ditch, and Rock Creek) above and below Fort Carson. The sampling effort detected e.coli and selenium in some areas. Results from the last two years will determine the MS4's contribution of pollutants to receiving waters and will drive future management decisions. Continued monitoring is planned for 2012 as per requirements of the MS4 permit. Attachment 6 includes the entire data collect on the 2011 surface water sampling effort.

Fort Carson also samples five locations for compliance under the MSGP. That data is also available upon request.

\*Data collected to audit the implementation status of a program element does not need to be reported in the annual report unless required by an established measurable goal or as a requirement or result of an inspection or enforcement action. For example, data such as street miles swept, visitors at an information booth, or visits to a web site do not need to be included in the annual report unless directly related to a measurable goal or committed to be reported and/or analyzed in a program description.

**F. Summary of Inspections and Enforcement Actions.**

Provide a summary of the number and nature of inspections and formal enforcement actions performed. Site-specific information may also be included, but is not required.

Program Area	Description of Enforcement Actions/ Inspections
Construction Site Stormwater Runoff Control	<p>Fort Carson inspected approximately 61 major construction sites during 2011. These inspections included documentation review and a thorough site walk through.</p> <p>Enforcement actions included verbal warnings with follow up inspections from the stormwater inspector, verbal warnings from the program manger on more difficult sites, and finally verbal warnings from the contracting officer on one site.</p> <p>Additionally, the Stormwater Management Trainings at construction sites has been extremely successful. Approximately 62 Contractors, USACE construction representatives, and DPW Engineering and Environmental personnel have attended.</p>
Industrial Sites Permitted Under MSGP	<p>Industrial sites permitted under the MSGP were inspected comprehensively (annually) and routinely (quarterly). Industrial sites (mostly motor pools) were sampled for visual inspections as per MSGP requirements. Analytical samples were collected at five sites as required under the MSGP. Newly constructed sites were incorporated into the program. Environmental Compliance Assessment Team (ECAT) inspections of these sites also occur one time per month. Enforcement actions through ECAT are reported and logged internally, and involve follow up actions and inspections.</p>

**G. Proposed Changes to the Stormwater Management Program.**

Provide a narrative description of any changes or additions to the stormwater management program.

Fort Carson will require contractor to calculate water volumes that need to be keep onsite to fulfill the EISA 438 requirement. Fort Carson Stormwater Program will no longer provide those numbers, but only review EISA 438 compliance via the NEPA process.

**H. Notice of Program Element Operation by a Second Party.**

Another government entity may be relied on to perform requirements of your MS4 permit. However, as the permittee, you remain liable for compliance with the terms of the permit if the requirements are not fulfilled. You must complete this annual report for the geographic areas covered under your permit, for all program areas, even if one or more program elements/areas is being performed by another entity. (However, if you are performing a program element for another permittee, you do not need to include that activity in this report.) If you are relying on another government entity to satisfy some of your permit obligations (and if the information has not been previously provided to the EPA in earlier reports or the application), the annual report must include a statement to that effect. If the BMP and/or measurable goal will be modified in addition to the change of operator to another government entity, the change must be included in Item G, above. Example statement: "As of September 15, 2003, Monroe County is performing the construction site plan reviews for the Nixon Air Force Base in accordance with the procedures in the Base's original application."

N/A

**I. Certification.**

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Permittee (legally responsible person)\*\*

Date Signed



DPW Environmental Division Chief

Name (printed)

Title

\*\*This report may be signed by a duly authorized representative of the permittee in conjunction with the signatory requirements for NPDES permitting provided at 40 CFR§122.22(b).

# Attachment 1: STORMWATER EDUCATION AND OUTREACH 2011

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# Attachment 2: EXAMPLE OF OUTREACH MATERIAL

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# Attachment 3: EXAMPLE OF ENVIRONMENT PROTECTION OFFICER COURSE MATERIAL

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**Attachment 4: GARRISON COMMANDOR  
ENFORCEMENT OF STORMWATER  
MANAGEMENT PROGRAM POLICY**

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# Attachment 5: EXAMPLE OF ILLICIT DISCHARGE FROM

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# Attachment 6: 2011 ANNUAL MS4 WATER QUALITY SAMPLING REPORT

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# WHAT'S CAUSING OUR POLLUTION

## Construction

- ➔ Contractors disposing of concrete washout in the streets, storm drains or drainage ditches.
- ➔ Sediment washing into gutters and streets from job sites.

## Home Improvements

- ➔ People cleaning brushes or rinsing paint containers into the gutter.
- ➔ Homeowners over-fertilizing or using pesticides and herbicides improperly.

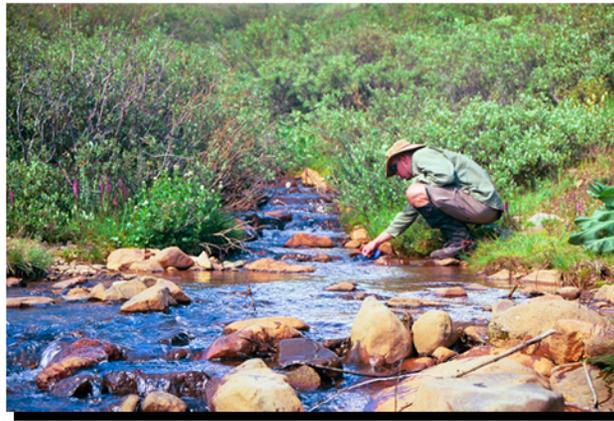


## Motor Vehicles

- ➔ Vehicles in bad repair leaking oil and gas onto the streets.



- ➔ Spills of oil and fuel during maintenance and refueling.
- ➔ Cracked batteries.
- ➔ Improper disposal of antifreeze and old tires.
- ➔ Off-road vehicles tracking mud onto paved streets.

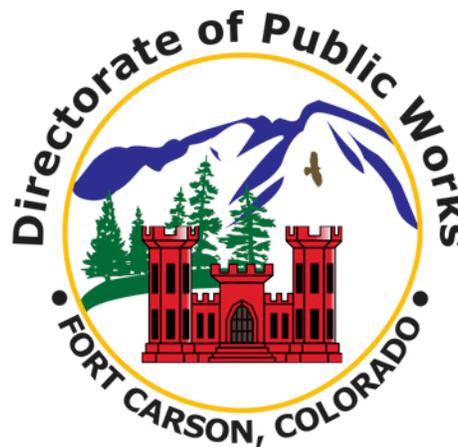


Remember,

Only Rain and Snow Should Enter the Storm Drain System.

Working Together,  
We Can All Make A Difference.

To Report a Spill  
Call 911



# What's Polluting Our Streams?



Fort Carson Stormwater  
Program 719-526-1697

At Fort Carson and the surrounding communities, the sanitary sewer system (wastewater) and the storm drain system (stormwater) are separate systems. Inlets to the storm drain system are typically located outside along the gutters and streets. Rainwater and snowmelt that enter storm drain inlets flow directly into our creeks and ditches, which eventually discharge into Fountain Creek. Materials such as mud, liquids and trash that are tracked, poured, spilled or dumped onto our streets and parking lots can enter into the storm drain system. This pollution then discharges to ditches and creeks without being treated, causing adverse impacts to water quality and to the aquatic life in our streams.

To keep our streams clean, it is very important that only rain and snowmelt (stormwater) go down the storm drains. Discharges of sediment, fuels and other liquids, and trash to the storm drains should be prevented. We need to keep our parking lots and other outdoor areas clean to help prevent discharge of pollutants to our storm drains.

Did you know that just one quart of oil can pollute over 250,000 gallons of water?



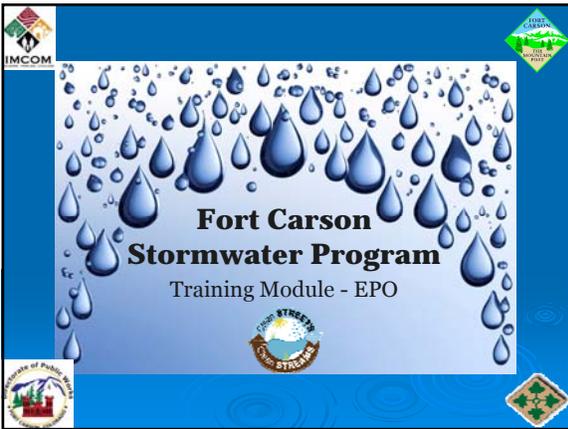
- 👉 Avoid off-road vehicle use when the soil is muddy.
- 👉 Take your vehicle to a commercial car wash whenever possible. If you wash your car at home, choose soaps labeled non-toxic, phosphate-free or biodegradable. Don't wash your car in the street, wash it over a grassy area so the water will soak into the ground, not go into the storm drains.
- 👉 Don't rinse spills in with water. Use dry cleanup methods such as applying cat litter or another absorbent material, then sweep up all material and dispose of it in the trash.
- 👉 Follow directions on pesticides, herbicides and fertilizers. Do not apply if rain is predicted within 48 hours.
- 👉 Do not rake or blow leaves or grass clippings into the street or gutter. Instead, dispose of them in your trash.
- 👉 Use water-based/biodegradable cleaning products.
- 👉 Use the local recycling centers for recyclable wastes.
- 👉 Don't litter streets and parking lots -

Use a  
Trash Can!



Contact El Paso County  
Household Hazardous Waste  
Facility to locate the appropriate  
recycle center near you  
520-7878

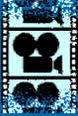




Fort Carson Stormwater Program

### Presentation Summary

- What is Stormwater?
- Stormwater on Fort Carson
- EPA Regulation
- Permits on Fort Carson
- Working Together
- Contact Information



Fort Carson Stormwater Program

### What is Stormwater?

- Runoff from land, paved streets, parking lots and building rooftops during rainfall and snowmelt events.
- Stormwater runoff can pick up debris, chemicals, dirt and other pollutants – flows untreated into storm sewer system, pond, creek, river or wetland.
- Waterbodies used for swimming, fishing, and providing drinking water to people downstream.





Fort Carson Stormwater Program

### Stormwater on Fort Carson

Three main drainages within cantonment area.

Fort Carson Stormwater Program

### Stormwater on Fort Carson (con't)

Initiated in 2007...

- Drainage monitoring
- Drainage assessment – erosion, sedimentation, channel quality, debris, structure damage
- Hydrologic Model development
- Outfall Inventory
- Industrial facility assessments
- Stormwater conveyance survey validation
- Public awareness

Fort Carson Stormwater Program

### EPA Regulation

- 1987 Water Quality Act added a section 402(p) to the Clean Water Act – EPA to develop and implement a storm water permitting program.
- National Pollutant Discharge Elimination System (NPDES) permit requirements – municipal, industrial, construction sites. NONCOMPLIANCE = FINES
- Permits at Fort Carson:
  - Municipal Separate Storm Sewer System (MS4)
  - Multi-Sector General Permit (MSGP)
  - Construction General Permit (CGP)

Fort Carson Stormwater Program

### Permits on Fort Carson

## Municipal Separate Storm Sewer System (MS4)

Fort Carson Stormwater Program

### Permits on Fort Carson – MS4

Management is on a larger scale and centers on the facility's area of authority

- Typically multiple MS4s located within a regional watershed (i.e. Fort Carson, Colorado Springs, Peterson AFB)
- Enforce Six Minimum Control Measures
  - Public Education and Outreach
  - Public Involvement and Participation
  - Illicit Discharge Detection and Elimination
  - Construction Site Runoff Control
  - Post-Construction Stormwater Management
  - Pollution Prevention/Good Housekeeping
- Only stormwater allowed IN STORM SEWERS

Fort Carson Stormwater Program

## Permits on Fort Carson

### Construction General Permit (CGP)

Fort Carson Stormwater Program

## Permits on Fort Carson - CGP

- Site by site management
- Primary focus is sediment and erosion control
- Sites at Fort Carson range is area of disturbance from <1-acre to >150-acres
- Multiple efforts within the same watershed
- Recent EPA enforcement inspections
- Currently, main focus for EPA and Fort Carson's MS4 permit

Fort Carson Stormwater Program

## Permits on Fort Carson

### Multi-Sector General Permit (MSGP)

Fort Carson Stormwater Program

## Permits on Fort Carson - MSGP

- Site by site management
- Primary focus is point source discharge from an industrial activity
- Regulated sites include motor pools, DRMO, recycle facility, wastewater treatment plant, airfield, landfills
- Multiple efforts ongoing within the same watershed
- Requires sampling
- "No Exposure" is an option

**Your place of work may fall subject to this permit. There will be a required stormwater plan in place and sampling will be conducted. The Fort Carson Stormwater Program will manage these requirements, but may need support from the facility.**

Fort Carson Stormwater Program

## Permits on Fort Carson – MSGP (con't)

- Minimize exposure of industrial materials and activities to stormwater by locating inside or protecting with storm resistant coverings.

✓ The following will help minimize exposure:

- ✓ Grade, berm, or curb to prevent contamination and divert run-on away from industrial activities
- ✓ Address leaks and spills
- ✓ Perform cleaning operations indoors, under cover, or in bermed areas
- ✓ Ensure washwater drains to a proper collection system



Fort Carson Stormwater Program

## Permits on Fort Carson – MSGP (con't)

**Don't Forget...DIRT is a Contaminant too!**





Fort Carson Stormwater Program

## Permits on Fort Carson – MSGP (con't)

### Good Housekeeping and Maintenance

- Regularly inspect, test, maintain, and repair all industrial equipment and systems to avoid conditions leading to spills or leaks.
- Maintain all control measures (such as a drip pan or dumpster/roll-off lid) in effective operating condition.
- If control measure needs to be replaced or repaired, make necessary repairs or modifications expeditiously.
- Keep all exposed areas clean that are potential sources of pollutants.



Fort Carson Stormwater Program

## Permits on Fort Carson - MSGP

### Spill Prevention and Response

- Minimize the potential for leaks and spills that may be exposed to stormwater
- Develop plans for effective response
- Implement, at a minimum, the following:
  - Labeling of containers susceptible to spills or leaks
  - Barriers between material storage and traffic areas, secondary containment, and procedures for material storage and handling
  - Procedures for expeditiously stopping, containing, and cleaning up spills or leak
  - Train employees who may cause, detect, or respond to a spill or leak
  - Procedures for notifying facility personnel or other agencies



Fort Carson Stormwater Program

## Working Together

- Communicate with others at your facility to ensure that good practices are being implemented.
- Coordinate with the Fort Carson Stormwater Program regarding any questions or needed information.
- Ensure that stormwater drains are protected and nothing is stored/parked in close proximity to them.
- **Don't forget, your actions directly affect the public's drinking and recreational water resources – YOUR water!**
- When in doubt.....ASK!



Fort Carson Stormwater Program

## Contact Information

██████████  
 Stormwater Coordinator  
 719-526-1697

Email:  
 ██████████

Website:  
[http://sems.carson.army.mil/environmental/water/stormwater/stormwater\\_home.htm](http://sems.carson.army.mil/environmental/water/stormwater/stormwater_home.htm)



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
US ARMY INSTALLATION MANAGEMENT COMMAND  
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT CARSON  
6101 WETZEL AVENUE, RM 223  
FORT CARSON, CO 80913-4143

**GC Policy #17**

IMWE-CAR-ZA

6 July 2007

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Enforcement of Stormwater Management Program Policy

1. REFERENCES.

a. U.S. Installation Management Command, U.S. Army Environmental Command memo, IMAW-BDC, subject: U.S. Army Environmental Command (USAEC) "Sample" Command Policy and Supplemental Guidance Document for Stormwater Compliance at Construction Sites, dated 31 Jan 07.

b. Fort Carson operates a "municipal separate storm sewer system" ("MS4"), [permit number: COR042000] as defined in Clean Water Act stormwater regulation 40 CFR 122.26.

2. PURPOSE. Establish a policy for management of Stormwater on Fort Carson, specifically at construction sites. The federal stormwater regulations and Fort Carson's MS4 permit require development, implementation and enforcement of a Stormwater Management Program designed to reduce the discharge of pollutants from the Installation stormwater system to the maximum extent practicable to protect water quality. The program must implement six minimum control measures, including construction site stormwater runoff control and post-construction stormwater management in new development and redevelopment. The construction control and management measures include requirements for erosion and sediment controls and best management practices.

3. APPLICABILITY.

a. Installation staff, tenants, activities, contracting offices, and contractors must comply with all the requirements outlined in the sections of Fort Carson's Stormwater Management Plan that address elimination of illicit discharges, construction site runoff control and post-construction site runoff control.

b. When coverage under the Environmental Protection Agency's Construction General Permit (CGP) is applicable, compliance with all CGP requirements is mandatory. Failure to comply with these requirements will result in appropriate disciplinary actions being taken against violator(s) as appropriate.

c. Copies of these documents are available on the Sustainability and Environmental Management System (SEMS) website at  
[http://sems.carson.army.mil/environmental/water/stormwater/default\\_sw.htm](http://sems.carson.army.mil/environmental/water/stormwater/default_sw.htm).

IMWE-CAR-ZA

SUBJECT: Enforcement of Stormwater Management Program Policy

4. RESPONSIBILITIES.

- a. DPW will enforce this policy through contractor oversight and project planning.
- b. Fort Carson Stormwater Program staff has the authority to conduct inspections of site activities as needed, to ensure compliance with the above cited plan and permit.
- c. DOC will enforce this policy by incorporating a reference to this policy in all applicable contract language.
- d. Potential sanctions for contractor violations may include, but are not limited to:
  - (1) Contract payment withholding, liquidated damages, setoff, or equitable adjustment;
  - (2) Indemnification of Government costs due to administrative enforcement and litigation;
  - (3) Contract termination;
  - (4) Consideration in past performance evaluations in award of future contracts;
  - (5) Suspension or debarment from bidding or working on future contracts; and/or
  - (6) Stop-work orders may be issued for the entire project until violations have been rectified to the satisfaction of the U.S. Government.

5. The point of contact for this issue is the Installation Stormwater Program Manager at 526-1697 or [REDACTED]

[REDACTED]

COL, FA  
Garrison Commander

DISTRIBUTION: A

**FORT CARSON SPILL / ILLICIT DISCHARGE REPORT**  
electronic)

(FC FORM 1200-E, 31 DECEMBER)

Name and phone number of person discovering spill:

[REDACTED]

Date and time spill occurred:

10/31/2011 00:00

Was the spill/discharge illicit:

- Yes
- No

Location of spill:

In stormdrain at bldg 6058, near the intersection of Martinez and Nelson

Type of material spilled:

- NA
- MOGAS
- JP8
- DIESEL
- Latex Paint

**In accordance with FC Reg 200-1, all spills of more than 5 gallons, or covering more than feet, and/or any amount entering a drain or ditch must be reported to the Fort Carson Fire Department at 911.**

**Estimated quantity of material spilled (gallons):**

1 Gallon

Was the spill reported to the fire department:

- Yes
- No

Cause Of Spill:

Not Known

Affected Resources Or Facilities:

Fort Carson Storm sewer system

Did any spilled material enter any drains or ditches:

- Yes
- No

Estimated quantity and type of contaminated soil, dry sweep and/or other clean-up materials expected:

Not known; paint was dried at time of discovery

Description of clean-up or other remedial action taken:

Not known

Location recorded on map:

Yes

No

POC Name and Phone:

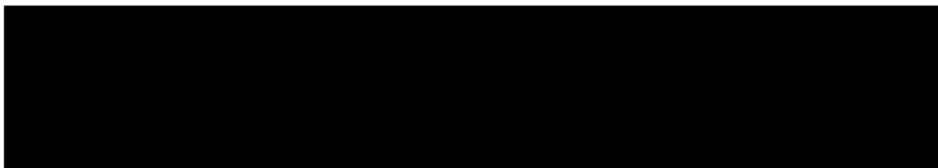
[Redacted]

File attachment:

 File Attachment

 [Click here to sign this section](#)

11/7/2011



**ATTACHMENT 1: STORMWATER PUBLIC EDUCATION AND OUTREACH 2011**

<b>DATE</b>	<b>AUDANCE</b>	<b>PRESENTATION</b>	<b># of ATTENDEES</b>	<b># of BROCHURES</b>
5-Jan-11	Private Contractors	Stormwater Mgmt at Const. Sites	14	14
25-Jan-11	EPO Certification course	Stormwater-EPO Module	35	0
2-Feb-11	Private Contractors	Stormwater Mgmt at Const. Sites	10	10
2-Mar-11	Private Contractors	Stormwater Mgmt at Const. Sites	13	13
8-Mar-11	EPO Certification course	Stormwater-EPO Module	33	0
9-Mar-11	Garrison Comm.Breakfast	Stormwater LID at Fort Carson	45	0
15-Mar-11	Fountain Middle School - 6th grd	Stormwater demo	28	28
6-Apr-11	Private Contractors	Stormwater Mgmt at Const. Sites	6	0
16-Apr-11	Attendees at Fort Carson's annual Spring event "Eggsperience"	Educational games and crafts related to strowmater pollution prevention	2500	100
18-Apr-11	Abrams, Patriot, Weikel Elementary Schools 4th & 5th grades	Stormwater awareness, poetry contest	400	0
19-Apr-11	Mountainside & Weikel Elementary Schools 4th & 5th grades	Stormwater awareness, poetry contest	455	0
23-Apr-11	Residents, volunteers	Ditch clean-up	12	0
4-May-11	Private Contractors	Stormwater Mgmt at Const. Sites	5	5
24-May-11	EPO Certification course	Stormwater-EPO Module	23	0
1-Jun-11	Private Contractors	Stormwater Mgmt at Const. Sites	5	5
2-Jun-11	52nd Engineers/Troop Construction	Stormwater Mgmt at Const. Sites	8	0
10-Jun-11	244th EN BN	Stormwater Mgmt at Const. Sites	30	0
23-Jun-11	43rd SB Safety Day	Spill Scenario	600	0
11-Jul-11	Fort Carson Engineering	LID Design	30	0
23-Aug-11	EPO Certification course	Stormwater-EPO Module	34	0
6-Sep-11	Fort Carson Housing Mayors	Stormwater awareness	36	36
7-Sep-11	Private Contractors	Stormwater Mgmt at Const. Sites	9	0
21-Sep-11	Balfour Beatty Project mgrs	MS4 and proposed 2012 CGP	7	7
4-Oct-11	EPO Certification course	Stormwater-EPO Module	34	0
22-Oct-11	Residents, volunteers	Ditch clean-up	200	0
<b>Totals</b>			<b>4,572</b>	<b>218</b>