



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
DIRECTORATE OF PUBLIC WORKS
1626 EVANS STREET, BLDG 1219
FORT CARSON, CO 80913-4143

REPLY TO
ATTENTION OF

March 28, 2017

Office of the Director

U.S. EPA, Region 8
Stormwater Coordinator (8WP-CWW)
Attention: Ms. Amy Clark
1595 Wynkoop Street
Denver, CO 80202-1129

Dear Ms. Clark:

Enclosed is Fort Carson's Municipal Separate Storm Sewer System (MS4) annual report covering the period of January 1 - December 31, 2016, which is submitted in accordance with the requirements of the National Pollutant Discharge Elimination System Permit COR042001.

Any questions regarding this information should be directed to Mr. Chip Hahn at (719) 526-1697 or chester.n.hahn.civ@mail.mil.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark K. Alguire", is written over a horizontal line. Below the signature, the name "Mark K. Alguire" and the title "Director of Public Works" are printed.

Mark K. Alguire
Director of Public Works

Enclosures

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REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT CARSON
1626 ELLIS STREET, SUITE 200
FORT CARSON, CO 80913

IMCR-ZA

30 September 2016

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Delegation of Authority for Stormwater Program Documentation

1. References. 40 Code of Federal Regulation (CFR) Part 122.22 (b) (1-3), Multi-Sector General Permit (MSGP) for Industrial Discharge, and Municipal Separate Storm Sewer System (MS4) Permit.

2. IAW the above reference, I delegate my signature authority for all reports and associated information requested by the Environmental Protection Agency (EPA) for stormwater permits, with the exception of the permit applications themselves, for Fort Carson, Colorado to the personnel listed below.

Deputy Garrison Commander (DGC) Mr. Roderick A. Chisholm
Director of Public Works (DPW) Mr. Hal K. Alguire

3. This delegation shall remain in effect until rescinded or superseded.

RONALD P. FITCH, JR.
COL, SF
Garrison Commander

DISTRIBUTION:

DPW
DGC

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**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.

PLEASE NOTE: This form may not include all of the information required to be submitted in your annual report. Please review your MS4 permit to ensure all required information is reported. Include supplemental pages to this form, if needed.

Completed forms should be mailed

to:

Amy Clark
EPA Region 8 Stormwater
Coordinator Mailcode: 8WP-CWW
1595 Wynkoop Street
Denver, CO 80202-1129
Email: clark.amy@epa.gov

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: COR042001
Have any areas been added to the MS4 due to annexation or other legal means? NO

B. Reporting Period: January 1, 2016 to December 31, 2016

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? If Yes:

Contact name: Chip Hahn

Position/work group title: Stormwater Program Manager, Environmental Compliance Branch

Contact phone number: 719-526-1697

Contact E-mail address: chester.n.hahn.civ@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://www.carson.army.mil/DPW/environmental/stormwater/index.html>

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:

| Measurable Goal(s) Including dates and numeric measures, as previously submitted | Status: Including dates and numeric measures | Changes proposed to BMP and/or Measurable Goal? (Yes/No). If yes, provide information on proposed changes and rationale. |
|--|--|--|
| Provide education and outreach program for Fort Carson that targets project managers, contractors, tenants, and environmental staff in an effort to provide education and outreach about the impacts of stormwater discharges on local water bodies and the steps that can be taken to reduce pollutants in stormwater runoff. | Fort Carson provided formal education and outreach during the Environmental Protection Officer (EPO) and Construction Stormwater courses. The course are provided on a regular basis to train Soldiers and contractors on the Fort Carson Stormwater Program and how their actions affect stormwater quality. A summary of the education and outreach programs is provided in Attachment 1. | |
| Produce and disseminate informational material to inform the public (i.e., project managers, contractors, tenants, students, and environmental staff) of the effects of erosion and runoff on water quality. | Fort Carson produces a stormwater brochure and maintains a program website to provide public information on effects of erosion and runoff on water quality. The website can be accessed at http://www.carson.army.mil/DPW/environmental/stormwater/index2.html . Attachment 2 provides a copy of the stormwater brochure and Attachment 3 provides the stormwater overview portion of the EPO and Construction Stormwater courses. | |
| Provide and document training to appropriate planning staff, project managers, contracting officers and other parties as applicable to learn about LID practices, green infrastructure (GI) practices, and to communicate the specific requirements for post-construction control and the associated SCM laid out within the SWMP. | Low Impact Development informational training is accomplished during the EPO training, and provides general information on LID features installed on Fort Carson and the procedures for requesting maintenance. Maintenance training is provided on an as needed basis for the installation service contractor. | Yes. Execute LID training in 2017 with Colorado State University to train new personnel on the design and maintenance of LID features. |

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| Provide a stormwater awareness brochure and track its distribution. | The Fort Carson SW brochure is available in the website and is provided during EPO and Construction SW training. 306 brochures were handed out to the public, Soldiers and contractors during 2016. Attachment 2 provides a copy of the stormwater brochure | |
| Ensure new resident guides include terms for occupancy that relate to household waste management, pet policy, lawn watering, petroleum management, fertilizer/pesticide management, and car washing. | The Fort Carson Housing office did not include information on household waste management, pet policy, lawn watering, petroleum management, fertilizer/pesticide management, and car washing in their new resident guides, although the information is available on the Fort Carson Stormwater website. | Yes. Provide copies of the stormwater program flyer and El Paso County hazardous Waste collection program to the Fort Carson Housing office for inclusion in their welcome packets. |
| Produce and disseminate informational material to inform employees and contractors working onsite of proper hazardous waste collection processes. These materials should be updated and distributed as necessary throughout the duration of the permit. | Training materials and presentations were provided to students during the EPO and Construction Stormwater courses. Attachment 3 provides the stormwater overview portion of the EPO and Construction Stormwater Courses. | |
| Document education and outreach activities in the SWMP, including documents created for distribution and a training schedule which notes the dates that trainings occurred and the target audiences reached. | The Fort Carson Stormwater program conducts training and outreach in support of the SWMP objectives. Events are scheduled annually and are included in the installation training calendar. Attachment 4 provides the training schedule for 2016. | |
| Document the required information related to public education and outreach as detailed in Permit Section 2.2.8 | The Fort Carson Stormwater Management Program documents programmatic information on our internal SharePoint page and in our electronic knowledge management systems. | |

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:

The Fort Carson Stormwater Program updated the instruction materials for both the Environmental Protection Officer stormwater overview and the construction stormwater training course. The new materials provide updated information on current stormwater regulations (e.g. 2017 Construction General Permit, 2016 Fort Carson Municipal Separate Storm Sewer System Permit) that affect operations for Soldiers and contractors.

The construction stormwater training improvements included more information on best management practices (BMPs), site management procedures, and the preparation of site specific Stormwater Pollution Prevention Plans (SWPPPs)

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:

| Measurable Goal(s) Including dates and numeric measures, as previously submitted | Status: Including dates and numeric measures | Changes proposed to BMP and/or Measurable Goal? (Yes/No). If yes, provide information on proposed changes and rationale. |
|---|--|--|
| Comply with applicable state and local public notice requirements when implementing a public involvement/participation program. | Public notice for projects with stormwater management impacts are handled through the National Environmental Policy Act (NEPA) review process. During 2016, two public notices were posted for public involvement for Environmental Assessments (EAs) through the NEPA process. | |
| Make all relevant Annual Reports available on the permittee web site or on another platform that is available to the public in an electronic format. | The Fort Carson annual reports are published to the installation stormwater page at http://www.carson.army.mil/DPW/environmental/stormwater/index2.html | |
| Provide volunteer activities (e.g., cleanup days) as practicable to help actively engage residents and personnel at Fort Carson in understanding water resources and how their activities can affect water quality. | Fort Carson held two major community events in 2016. The first event was a Make A Difference Day on October 22, 2016, where volunteers assisted in creek clean up. The second event was the 2016 Earth Day celebration, which included a household hazardous waste turn and stormwater presentations to the public. Attachment 5 provides the marketing materials and public outreach information on the 2016 Earth Day celebration. | |
| Maintain a log of public participation and outreach activities performed in the permittee's SWMP. | Public participation and outreach activities are included in Attachment 1. | |
| Maintain a copy of the most recent version of the facility SWMP and permit in a publicly accessible format (e.g., available in electronic format, online or in a publicly accessible location). | The Fort Carson SWMP is maintained in the stormwater program manager's office and is also available to the public at http://www.carson.army.mil/DPW/environmental/stormwater/index2.html | |

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| Document the required information related to public involvement/participation as detailed in Permit Section 2.3.6. | The Fort Carson Stormwater Management Program documents programmatic information on our internal SharePoint page and in our electronic knowledge management systems. | |
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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:

The two main community engagement events for the Fort Carson stormwater program are Make A Difference Day and Earth Day.

During the 2016 Make A Difference Day volunteer event, held on October 22, 2016, 23 community members assisted in creek cleanup. The work crew removed garbage and debris from Infantry creek from the commissary complex to Iron Horse park. By then of the day 50 bags of garbage had been collected and several truck load of debris had been removed from the creek.

The 2016 Earth Day celebration included a household hazardous waste turn and stormwater presentations to elementary students. The household hazardous waste turn was held on April 22, 2016. On April 27, 2016, the Fort Carson Stormwater program gave a presentations on protecting water resources to 520 students at the Abram and Patriot Elementary schools as part of the education fair at the Elkhorn Conference Center.

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.
- 5.

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

| Measurable Goal(s) Including dates and numeric measures, as previously submitted | Status: Including dates and numeric measures | Changes proposed to BMP and/or Measurable Goal? (Yes/No). If yes, provide information on proposed changes and rationale. |
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| Implement a program, policies, and/or procedures to detect and eliminate illicit discharges into its MS4. The program shall include procedures for detection, identification of sources, and removal of non-stormwater discharges from the storm sewer system. This program shall address illegal dumping into the storm sewer system, shall include inventories and investigations of interior floor drains in buildings for evidence of cross-connections between the storm and sanitary sewer systems, and shall include training for staff on how to respond to reports of illicit discharges. | Fort Carson's illicit discharge program consists of education and training, spill response guidance and procedures, routine inspections, and illicit discharge surveys. Fort Carson's spill response guidance is provided via the stormwater website at http://www.carson.army.mil/DPW/environmental/stormwater/index2.html | |
| Effectively prohibit, through ordinance or other regulatory mechanism available under the legal authorities of the MS4, non-stormwater discharges into the storm sewer system and implement appropriate enforcement procedures and actions. | Fort Carson's spill response guidance is provided via the stormwater website at http://www.carson.army.mil/DPW/environmental/stormwater/index2.html . Fort Carson maintains an installation-wide Spill Prevention, Control and Countermeasure Plan as required by 40 CFR part 112, which addresses the storage and management of petroleum oil and lubricant (POL) products. The installation's Stormwater Pollution Prevention Plan (SWPP) addresses spills and illicit discharges in Section 3.1.5. | |

| Measurable Goal(s) Including dates and numeric measures, as previously submitted | Status: Including dates and numeric measures | Changes proposed to BMP and/or Measurable Goal? (Yes/No). If yes, provide information on proposed changes and rationale. |
|---|---|--|
| Provide a mechanism for reporting of illicit discharges and provide this number on the Fort Carson stormwater website and any outreach materials as appropriate. | All EPO and construction stormwater training students receive training on the illicit discharge and spill reporting procedures. Facilities covered under the MSGP are required to have a spill response poster prominently displayed outlining spill prevention and response. Construction site SWPPPs are also required to include the Fort Carson spill response guidance as an appendix to the plan. | |
| Investigate any illicit discharge within 15 days of its detection, and take action to eliminate the source of the discharge within 45 days of its detection (or obtain permission from USEPA for such longer periods as may be necessary in particular instances). | When an illicit discharge is reported, the incident is investigated the same day and control measures are implemented immediately to prevent further impacts. Remediation actions are taken by the individual responsible or are handled by a contractor. In 2016, Fort Carson handled 28 spill reports. | |
| Maintain an updated storm sewer system map. At a minimum, the map or system of maps maintained within a Geographic Information System (GIS) shall show jurisdictional boundaries, the location of all inlets and outfalls, names and locations of all waters that receive discharges from those outfalls, locations of post-construction BMPs installed since the effective date of this permit, and locations of all facilities operated by the permittee, including any public or private snow disposal sites. The map shall be available in electronic or digital format as appropriate. | Illicit discharge reports are forwarded to the Fort Carson Geospatial Information Systems (GIS) section of addition to the post-wide spill map. Maps are maintained digitally and are printed upon request. | |
| Develop and maintain an Illicit Discharge Detection and Elimination (IDDE) tracking mechanism which tracks dry weather screening efforts and the location of remediation efforts to address identified illicit discharges. | Fort Carson's IDDE is a SharePoint-based system that tracks several aspects of the post's illicit discharge elimination program. IDDE tracking consists a prioritization of remediation efforts from the dry weather screening effort and corrective actions taken as a result of problems identified. The 2016 dry weather screening effort identified one location in B-Ditch which may be an illicit discharge in to the MS4 system. | |

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| Conduct dry weather screening annually at each of the major drainages within Fort Carson (B-Ditch, Clover Ditch, Infantry Creek, Rock Creek) for the presence of non-stormwater discharges. | Fort Carson conducts dry weather screening annually at each of the major drainages within Fort Carson (B-Ditch, Clover Ditch, Infantry Creek, Rock Creek) for the presence of non-stormwater discharges. The last annual screening was conducted in on September 20, 2016 and October 25, 2016. | |
| Have a household hazardous waste collection day as needed or as practicable, either as a separate Fort Carson activity or in conjunction with nearby civilian jurisdictions. | Fort Carson held a household hazardous waste collection day on April 22, 2016 as part of the post's Earth Day celebrations. Additionally, Fort Carson residents have access to the El Paso County household hazardous waste facility | Yes. Fort Carson will hold its next hazardous waste collection day as part of the post's 2017 Earth Day celebrations. |
| Stencil all storm drains (e.g., paint, placards, stenciling), as practicable, in all areas with industrial uses and residential uses by the end of year four of this permit. | Storm drain stenciling is included as part of new construction projects. Storm drains were marked in some areas in post as part of routine inspections and maintenance of the MS4. | Yes. The Fort Carson Stormwater program intends to focus effort in the summer of 2017 to mark storm drains in industrial and residential areas throughout post. |

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:

Spill reports are kept on the Stormwater Program SharePoint site. Spill Reports are analyzed based on size, location, and circumstances to determine trends and recommend improvements in procedures and best management practices. Prevention and best management practices from spill events are communicated to the post through the ECAT and during EPO training.

The storm sewer map is kept updated by the Fort Carson DPW Geographic Information System (GIS) team. A hard copy map is on the wall of the Stormwater Program Office and can be provided upon request.

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:

| Measurable Goal(s) Including dates and numeric measures, as previously submitted | Status: Including dates and numeric measures | Changes proposed to BMP and/or Measurable Goal? (Yes/No). If yes, provide information on proposed changes and rationale. |
|---|---|--|
| Require all contractors having a potential of disturbing one or more acres of land within the exterior boundaries of Fort Carson to obtain NPDES permit coverage for their construction stormwater discharges under an applicable USEPA permit, and to comply with other applicable state or local construction stormwater requirements. For sites disturbing less than one acre, contractors shall comply with requirements as determined by the facility in its SWMP. | Fort Carson requires all contractors having a potential of disturbing one or more acres of land within the exterior boundaries of Fort Carson to obtain NPDES permit coverage for their construction stormwater discharges under the USEPA's Construction General permit. Eight (8) construction permit were opened on Fort Carson in 2016. | |
| Use an ordinance or other regulatory mechanism available under the legal authorities of Fort Carson to require erosion and sediment controls and sanctions to ensure compliance with the terms of the NPDES General Permit for Stormwater Discharges for Construction Activity in Colorado, COR12000F (Construction General Permit). This shall include working with contract officers to determine methods for stopping work or penalizing contractors who violate the terms of the aforementioned construction stormwater permit. | Fort Carson Policy Letter #17 requires all construction activities to comply with the Construction General Permit and the MS4 permit. The policy letter is available on the Fort Carson stormwater website. Policy Letter #17 provides provisions for withholding of fund, project termination and stop work orders to compel compliance for civilian contractors. Policy Letter #17 is also a lawful order and can result in judicial and non-judicial punishment for military personnel. Refer to Attachment 6 for a copy of the policy letter. | |
| Maintain a list of policies and procedures that can be used to enforce construction site compliance within Fort Carson independent of USEPA staff directly enforcing the CGP. | Fort Carson maintains copies of the MS4 permit, CGP and Policy Letter #17 on the stormwater website. | |

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| Implement procedures for site plan review that incorporate consideration of potential water quality impacts. | All projects on Fort Carson are reviewed for compliance under the National Environmental Policy Act (NEPA), including stormwater impacts. Projects which are expected to disturb more than one acres of soil require the preparation and review of a Stormwater Pollution Prevention Plan (SWPPP) prior to the Notice of Intent being filed. | |
| Implement procedures for receipt and consideration of information, including complaints of construction site non-compliance, submitted by the public. | The Fort Carson stormwater website provides information for reporting of illicit discharges; however, it is not explicit in addressing reports of construction site non-compliance from the Fort Carson community. | Yes. The 2017 Construction General Permit has new signage requirements which provide additional information on reporting non-compliance from construction sites. The Fort Carson Stormwater Program will work with constructors to come in to compliance with the CGP no later than May 17, 2017 as well as update the stormwater website with reporting additional information. |
| Review the SOW for construction projects in order to ensure that the SWMP and SCMs for erosion and sediment control and construction dewatering can be determined to be effective given the regulations and environmental conditions at Fort Carson. | Projects which are expected to disturb more than one acres of soil require the preparation and review of a Stormwater Pollution Prevention Plan (SWPPP) prior to the Notice of Intent being filed. The SWPPP is reviewed twice by the Stormwater Program Manager for conformance to the CGP and for proper implementation and maintenance of Best Management Practices (BMPs) | |
| Implement an inspection plan and keep a copy of that plan in the SWMP which provides inspection triggers and a required timeframe upon which construction sites must be inspected by Fort Carson staff. All sites within this plan must be inspected at a minimum quarterly. | The Fort Carson Stormwater Program conducts quarterly inspections of construction sites to check compliance with the CGP. Direct feedback is provided to the constructor by the inspector on site. An inspection report is provided to the contractor and the project manager within 24 hours of the inspection for inclusion in the project SWPPP. If deficiencies are found, follow up is taken to verify corrective actions were completed within the timelines specified in the CGP. Inspection are prepared and tracked on the DPW SharePoint site. 136 construction inspections at 30 sites were completed in 2016. | |
| Maintain a site inspection form in the SWMP for use by Fort Carson construction management and oversight personnel when performing inspections required by Part 2.5.7. | A site inspection form is used by Fort Carson construction management and oversight personnel. A copy of the inspection form is included in Attachment 7 | Yes. The inspection form will be updated no later than May 1, 2017 to align with the changes on the 2017 CGP. |

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| Maintain and utilize a NOT form or alternative process for Fort Carson independent of the CGP NOT form and have Fort Carson stormwater staff inspect all construction sites prior to termination to ensure that 70% vegetative cover has been met at all areas of the site. | A Fort Carson Notice of Termination Form is included in Appendix D of the SWMP and is provided to this report in Attachment 8 | |
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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 are issues or concerns, they are addressed in the process. Basic information on MS4 and CGP requirements and compliance are provided in the review and are documented on the NEPA review form. In addition, a SWPPP review is conducted on projects disturbing more than one acre of land before the site is allowed to file its NOI for Construction General Permit coverage. All NEPA reviews are catalog on the DPW SharePoint system and are available upon request.

Coordination between the Stormwater Program, US Army Corps of Engineers (USACE), DPW and other entities performing or observing construction activities is conducted on a regular basis. These include monthly and weekly scheduling meetings and design reviews. The stormwater program coordinates with DPW and USACE project management teams to schedule construction stormwater inspections and provides written comment back to the project managers to enable better oversight.

In 2016, the Stormwater Program prepared for transition to the 2017 CGP by reviewing the new permit and updating training materials used during the construction stormwater training provided to constructors.

All construction sites are inspected for permit compliance by the Fort Carson Stormwater Program before the Notice of Termination (NOT) can be filed. The NOT inspection form is included as part of the SWMP. Fort Carson DPW Environmental has additional personnel who are available to provide seeding, mulching and vegetation recommendations if conditions have not been met. DPW GIS maintains all “as-built” drawings of facilities in the GIS database for post-construction reference.

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:

| Measurable Goal(s) Including dates and numeric measures, as previously submitted | Status: Including dates and numeric measures | Changes proposed to BMP and/or Measurable Goal? (Yes/No). If yes, provide information on proposed changes and rationale. |
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| Establish and implement a process to ensure that all new and re-development projects that disturb equal to or greater than one acre and that discharge into permittee's small MS4, are designed and constructed with permanent post-construction stormwater control measures designed to prevent or minimize water quality impacts using structural or nonstructural BMPs appropriate for Fort Carson. | The project review process provides a way for new and redevelopment projects to be screened for their impacts on Fort Carson's MS4. There are several design reviews (e.g. initial, 60%, 100%) which allow for input from the stormwater program for both temporary (construction BMPs) and permanent (Low Impact Development BMPs) control measures. The NEPA and construction SWPPP review processes provide an additional opportunity to address stormwater controls concerns. | |
| For purposes of this permit, such BMPs shall be selected based on their ability to maintain onsite predevelopment runoff conditions and be implemented onsite, except to the extent it is impracticable to do so. Reasons for impracticability are included in the Permit Section 2.6.3.1. | The Department of the Army requires projects to consider Low Impact Development (LID) features from the beginning of the design process. Project engineers prepare a maintaining hydrology worksheet and employ the LID toolkit to ensure compliance with the applicable policies and regulations. | |
| To the extent the permittee determines it is impracticable to maintain predevelopment runoff conditions by implementing such BMPs at a new or redevelopment site, it shall install or utilize, and maintain, alternative stormwater control measures to prevent or minimize water quality impacts from the runoff from the new or redevelopment site. | The LID toolkit provides specific engineering data for each control measure and can be used to justify alternate solutions if specific control measures are determined to be impracticable. Refer to Attachment 9 for a review of projects determined to be impracticable to maintain predevelopment runoff conditions during 2016. | |

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| When updated, include hydrologic performance specifications and information related to the design and maintenance of permanent stormwater control measures in natural resource plans. | Design and maintenance of permanent stormwater control measures are included in the post construction project files and are should be included as part of the installation's Stormwater Management Plan. | Yes. The Fort Carson SWMP does not include a list of permanent stormwater controls although each feature is tracked individually for performance and maintenance in the DPW SharePoint system. The list will be added to the SWMP by August 2017 after the inspections are completed. Additionally, the stormwater control measures list will be referenced in the next revision of the Fort Carson Installation Natural Resources Management Plan. |
| Include post-construction BMP "as-builts" for all newly installed permanent stormwater control measures in a georeferenced data management system. | Post-construction BMP "as-built" drawings are included in the Fort Carson GIS system for all facilities. The information is georeferenced in the GIS database. | |
| Ensure that all newly installed post-construction stormwater control measures are working as designed prior to closing out contracts. | The Fort Carson Stormwater Management Plan includes a Notice of Termination check list which is reviewed proper to the project being closed out. The NOT inspection form is included in Attachment 8. | |
| Upon closeout of new construction projects, include maintenance requirements for newly installed permanent post-construction stormwater control measures into a long-term maintenance plan (e.g., the recurring work program). | A warranty walk through is conducted on any control measures with the base operations service contractor. The walk through allows the constructor, base operations service contractor, and stormwater program manager to define and understand the specific maintenance requirements need to maintain proper operation of the control measure. | |
| Ensure that permanent post-construction stormwater control measures are included in any applicable warranty reviews. | After the completion of the walk through, the control measure is also added to the base operations service contractor's technical exhibit in the service contract, enabling the contractor to complete the required maintenance under the contract's scope of work. | |

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:

Fort Carson conduct annual inspection of permanent stormwater controls and BMPs throughout the installation. The inspections assess the performance of the control measures and provide a basis for prioritization of maintenance activities. Controls that are not performing properly and require routine maintenance are provided to the base operations service contractor for action using the service order process. Controls that require extensive repairs are handled through the work order process and are added to the annual work plan.

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:

| Measurable Goal(s) Including dates and numeric measures, as previously submitted | Status: Including dates and numeric measures | Changes proposed to BMP and/or Measurable Goal? (Yes/No). If yes, provide information on proposed changes and rationale. |
|--|--|--|
| Provide annual training for facility maintenance contracted companies, environmental program managers, and other people identified as having fleet maintenance activities in line with the SWMP. Each of the categories of municipal activities referenced in the SWMP should receive stormwater training. | Annual pollution prevention training is provided for units, the base operations service contractor, and construction contractors. On the spot "opportunity training" is provided through stormwater and ECAT inspections and engagement with operators and constructors throughout the year. | Yes. Fort Carson will conduct pollution prevention training for snow removal operators prior to the 2017-18 snow fall season. |
| Provide deicing training to minimize the use of and runoff from chemical deicers and traction aggregates. | Fort Carson does not conduct chemical deicing of aircraft at Butts Army Airfield. Fort Carson does employ chemical deicing of installation roads within the cantonment area to enable the safe operation of military and civilian traffic. Fort Carson did not conduct pollution prevention training for road deicing operators prior to the 2016-17 snow fall season. | Yes. Fort Carson will conduct pollution prevention training for road deicing operators prior to the 2017-18 snow fall season. |
| Implement a schedule for cleanout of storm sewer inlets in a manner that prevents significant deposition of sediment or other debris to receiving waters and provide data or a description of this schedule and its implementation in the SWMP for the facility. | Permanent stormwater controls were inspected in June 2016. Maintenance was prioritized based on the inspections, and the work list was provided to the base operations service contractor for execution. | Yes. The Fort Carson SWMP does not include a list of permanent stormwater controls although each feature is tracked individually for performance and maintenance. The list will be added to the SWMP by August 2017 after the inspections are completed. |
| Implement a schedule for sweeping streets in a manner that prevents significant deposition of sediment or other debris to receiving waters and provide data or a description of this schedule and its implementation in the SWMP for the facility. | Primary streets are swept monthly; secondary streets are swept every two months. Parking lots are swept two times a year. If an area is identified that requires additional sweeping, a service order is generated to the base operations service contractor to address the condition. | |

| | | |
|---|--|--|
| Consider the need for and application of cover to prevent airborne deposition of particulates from storage piles at the municipal materials storage yard. | Fort Carson employs water to moisten storage piles to reduce the incident of materials being transported in the air and depositing outside of the storage area. The current dust suppression method appears to be effective, but it will be evaluated over time and procedures will be adjusted as needed. | |
|---|--|--|

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:

Fort Carson achieves its pollution prevention goals through education and inspections. The EPO construction stormwater training, and base operations service contractor training educates Soldiers, operators, constructors, and contractors on the BMPs associated with pollution prevention and good housekeeping. Leaders and constructors are empowered to take actions to address potential pollution generating activities and intervene before pollution occurs. The ECAT and stormwater inspection programs spot check compliance and work to solve problems at the lowest level through direction engagement in the field.

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.

| Measurable Goal | Results of information collected and analyzed that must be reported for this item |
|------------------------------------|---|
| MSGP Visual Assessments | One hundred and twelve (112) visual assessment were conducted at 24 areas within the cantonment area during 2016. A qualitative assessment of the samplers indicates that pollution prevention control measures appear to be working and that operators are complying with the installation's stormwater policies. Of the 112 samples observed, two presented with signs of petroleum odor and no free product was observed in the sampler. |
| MSGP Quarterly Analytical Sampling | Analytical sampling was conducted at the following locations at Fort Carson in 2016: Sector N Facilities – Building 400 (Recycle Center); Building 343 (Defense Logistics Agency Disposition Services); Building 155 (Recycle Center); Building 9732 (Ammunition Residue Yard), and Sector K Facilities – Range 121 (Demolition Range) and Building 9248 (Hazardous Waste Storage Facility). The sampling showed challenges with concentration of metals and total suspended solids above the average benchmark monitoring levels. Fort Carson is addressing these issues through implementation of better material handling procedures, storage BMPs, and stormwater controls. The results of the sampling are included in the 2016 quarterly discharge monitoring reports in the NetDMR system. |
| MS4 Semi-Annual Water Sampling | Fort Carson conducted two surface water sampling on November 2016. The sampling evaluates the four major cantonment drainages (B-Ditch, Clover Ditch, Infantry Creek (formerly Central Un-Named Ditch), and Rock Creek). The sampling effort detected <i>E. coli</i> , chlorine, iron, sulfate, and selenium some areas. |

*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 |
|---|---|
| <p>Multisector General Permit – Compliance Inspection June 9, 2016 USEPA inspection of Fort Carson Industrial Stormwater Facilities</p> | <p>During the inspection, the USEPA made the following findings:</p> <p>Finding #1 – Improve benchmark sampling procedures Finding #2 – Control site run on/run off from the Ammunition Storage Facility Finding #3 – Cover metal waste roll off container at Ammunition Storage Facility Finding #4 – Spill kit missing from fuel tank Ammunition Storage Facility Finding #5 – Ineffective sampler Ammunition Storage Facility Finding #6 – Out of date facility map at Ammunition Storage Facility Finding #7 – Lack of sediment controls at Ammunition Storage Facility Finding #8 – Poor spill clean-up procedures at Ammunition Storage Facility Finding #9 – No secondary containment for tote at Ammunition Storage Facility Finding #10 – Railyard sanding pollution prevention not addressed in SWPPP Finding #11 – Site maps do not show receiving waters and were out of date Finding #12 – WWTP screenings pollution prevention not addressed in SWPPP Finding #13 – Monitoring data not submitted within 30 days Finding #14 – Rain fall events not properly documented Finding #15 – Field notes not being kept for all inspections Finding #16 – Field notes not signed by the inspector Finding #17 – Control measure maintenance/repair records not kept in SWPPP Finding #18 – Visual assessment inspections missing data Finding #19 – Corrective actions not initiated for silt in visual samplers Finding #20 – Lag in review of inspection forms prevents corrective action Finding #21 – Improve corrective action reporting to EPA Finding #22 – Corrective actions not being properly documented Finding #23 – Improve training records management</p> <p>Fort Carson provided a response to the inspection on November 17, 2016 which addressed corrective actions to the findings. All of the findings have been resolved with the exception of Finding #3 due to problems with the ordering and shipping of the roll off tarp. Many of the findings were addressed with changes to the SWPPP and the Fort Carson Stormwater Program’s internal controls and processes.</p> |
| <p>Construction General Permit - Construction Stormwater Management August 16, 2016 USEPA inspection of the 4th Infantry Division Combat Aviation Brigade Flight Simulator Construction Site</p> | <p>During the inspection, the USEPA made the following findings:</p> <p>Finding #1 – Notice of permit coverage was not properly displayed Finding #2 – Sediment track out into the street was not minimized</p> <p>The findings were corrected by the contractor, Mirador Enterprises, Inc. within the 30 day window as directed by the USEPA in their inspection report. No citation was issued.</p> |
| <p>Construction General Permit - Construction Stormwater Management August 16, 2016 USEPA inspection of the 4th Infantry Division Combat Aviation Brigade General Support Aviation Battalion</p> | <p>During the inspection, the USEPA made the following findings:</p> <p>Finding #1 – A stormwater inspector was not included in the SWPPP Finding #2 – The SWPPP did not provide a record of staff training Finding #3 – Site inspections were not conducted on a weekly basis Finding #4 – Failure take corrective action within seven days of discovery</p> |

| | |
|---|---|
| Hangar | <p>Finding #5 – Two areas lacked stabilization</p> <p>The findings were corrected by the contractor, Swinerton Builders, within the 30 day window as directed by the USEPA in their inspection report. No citation was issued.</p> |
| Construction General Permit – Quarterly Construction Stormwater Inspections | <p>The Fort Carson Stormwater Program conducted 136 construction inspections at 30 sites in 2016. Inspections were conducted on a quarterly basis with some sites being inspected again as part of follow up from previous inspections. The inspections were document in the DPW SharePoint system and provided to the project manager and constructor for inclusion in the project SWPPP. While inspectors made findings made on the contractor’s non-conformance with the CGP, the findings tended to be minor in nature and were corrected within the timelines specified in the CGP.</p> <p>No stop work orders or punitive actions were issued to contractors under GC Policy #17 in 2016.</p> |
| Multisector General Permit – Quarterly Routine Facility Inspections | <p>The Fort Carson Stormwater Program conducted routine inspections at 77 facilities on the Fort Carson Military Reservation in 2016. Some minor problems were identified during the routine inspections and were addressed on the spot by the inspector or through Environmental Compliance Assistance Team follow up with the facility operator. The inspections did identified eight conditions which required corrective action in 2016, of which Fort Carson completed seven corrective actions. The eight condition, erosive conditions at the Aircraft Departure and Arrival Control Group facility, is included in the 2017 annual work plan and should be resolved by the end of the year.</p> |
| Stormwater Control Measures – LID Feature Annual Inspections | <p>The Fort Carson Stormwater Program conducted performance inspections at 106 LID features in the cantonment area in 2016. The inspection identified 11 features which required maintenance to enable continued proper performance.</p> |

G. Proposed Changes to the Stormwater Management Program.

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

During 2017, the Fort Carson Stormwater program intends to take the following actions to improve the program:

- Execute LID training in 2017 with Colorado State University to train new personnel on the design and maintenance of LID features.
- Provide copies of the stormwater program flyer and El Paso County hazardous Waste collection program to the Fort Carson Housing office for inclusion in their welcome packets.
- Hold household a hazardous waste collection day as part of the post's 2017 Earth Day celebrations.
- Focus effort in the summer of 2017 to mark storm drains in industrial and residential areas throughout post.
- Implement new CGP signage requirements that provide additional information on reporting non-compliance from construction sites no later than May 17, 2017
- Update the stormwater website with reporting additional information on reporting non-compliance from construction.
- Update the construction site inspection form no later than May 1, 2017 to align with the changes on the 2017 CGP
- Include a list of permanent stormwater controls to the SWMP by August 2017 after the annual inspections are completed.
- Conduct pollution prevention training for snow removal operators prior to the 2017-18 snow fall season.
- Conduct pollution prevention training for road deicing operators prior to the 2017-18 snow fall season.

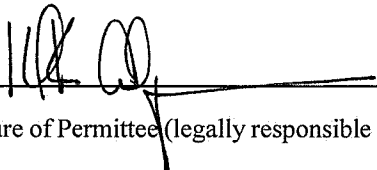
H. Notice of Program Element Operation by a Second Party.

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."

Not applicable

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)**

10 March 2017
Date Signed

Hal K. Alguire

Director, Public Works

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).

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Attachments

Attachment 1 – 2016 MS4 Education and Outreach Tracker

Attachment 2 – Fort Carson Stormwater Brochure

Attachment 3 – EPO Course Stormwater Class Materials

Attachment 4 – 2016 DPW Environmental Division Events

Attachment 5 – 2016 Earth Day Celebration

Attachment 6 – Garrison Commander's Policy Letter #17

Attachment 7 – CGP Inspection Form

Attachment 8 – CGP Notice of Termination Inspection Form

Attachment 9 – 2016 Stormwater Control Impracticability Table

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Attachment 1 – 2016 MS4 Education and Outreach Tracker

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2016 FORT CARSON STORMWATER PROGRAM PUBLIC EDUCATION, OUTREACH, INVOLEMENT AND PARTICIPATION SUMMARY

PUBLIC EDUCATION AND OUTREACH EVENTS

| DATE | GROUP | ACTIVITY | # of ATTENDEES | # of BROCHURES |
|------------|--|---|----------------|----------------|
| 1/6/2016 | Private Contractors | Stormwater Management at Construction Sites | 8 | 8 |
| 1/25/2016 | Assigned Unit Environmental Protection Officers (EPOs) | Stormwater Program | 39 | 39 |
| 2/3/2016 | Private Contractors | Stormwater Management at Construction Sites | 6 | 6 |
| 3/2/2016 | Private Contractors | Stormwater Management at Construction Sites | 2 | 2 |
| 3/17/2016 | Assigned Unit Environmental Protection Officers (EPOs) | Stormwater Program | 34 | 34 |
| 4/5/2016 | Private Contractors | Stormwater Management at Construction Sites | 8 | 8 |
| 5/4/2016 | Private Contractors | Stormwater Management at Construction Sites | 8 | 8 |
| 5/9/2016 | Assigned Unit Environmental Protection Officers (EPOs) | Stormwater Program | 26 | 26 |
| 6/15/2016 | Assigned Unit Environmental Protection Officers (EPOs) | Stormwater Program | 18 | 18 |
| 7/27/2016 | Assigned Unit Environmental Protection Officers (EPOs) | Stormwater Program | 27 | 27 |
| 8/3/2016 | Private Contractors | Stormwater Management at Construction Sites | 3 | 3 |
| 9/21/2016 | Assigned Unit Environmental Protection Officers (EPOs) | Stormwater Program | 22 | 22 |
| 11/2/2016 | Assigned Unit Environmental Protection Officers (EPOs) | Stormwater Program | 23 | 23 |
| 11/16/2016 | Private Contractors | Stormwater Management at Construction Sites | 6 | 6 |
| 12/7/2016 | Assigned Unit Environmental Protection Officers (EPOs) | Stormwater Program | 29 | 29 |
| 12/15/2016 | 4th Engineer Battalion Construction Leaders | Stormwater Management at Construction Sites | 12 | 0 |
| | | | | |
| | | Total: | 271 | 259 |

PUBLIC INVOLVEMENT AND PARTICIPATION EVENTS

| DATE | GROUP | ACTIVITY | # of ATTENDEES | # of BROCHURES |
|------------|--|--|----------------|----------------|
| 10/22/2016 | Active military, FTC residents, DPW Employees | Make a Difference Day Creek Cleanup | 23 | 0 |
| 4/22/2016 | Active military, retirees, FTC residents | Household Hazardous Waste collection event | 100 | 47 |
| 4/27/2016 | Abrams & Patriot Elementaries 3rd, 4th, 5th Students | Earth Day Stormwater Program Presentation | 520 | 0 |
| | | | | |
| | | Total: | 620 | 47 |

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Attachment 2 – Fort Carson Stormwater Brochure

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WHAT'S CAUSING OUR POLLUTION?

Construction

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

Around the House

- ✓ Cleaning brushes or rinsing paint containers into the gutter.
- ✓ Homeowners over-fertilizing lawns or using pesticides and herbicides improperly.
- ✓ Car washing in the driveway or street.
- Pouring cooking grease and oils down stormdrains.

Motor Vehicles

- Vehicles 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 and batteries.
- Off-road vehicles tracking mud onto paved streets.



**Remember,
ONLY rain and snow go
into storm drains.**

**Working together, we
can make a difference!**

**To report a spill
CALL 911
(Tell the operator you are
on Fort Carson)**



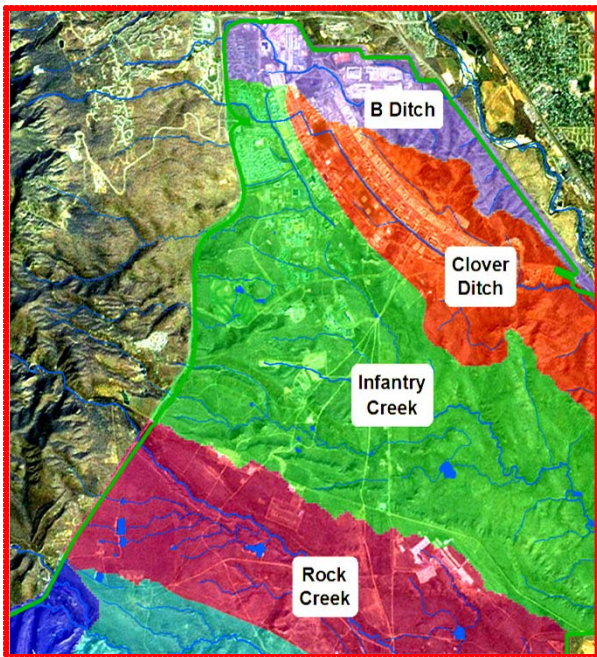
Keep OUR Streams Clean!



**Fort Carson Stormwater
Program 719-526-1697**

[http://www.carson.army.mil/DPW/
environmental/stormwater/index.html](http://www.carson.army.mil/DPW/environmental/stormwater/index.html)

At Fort Carson, the sanitary sewer system (wastewater) and the storm drain system (stormwater) are two separate systems. Inlets to the storm drain system are typically located outside along the gutters and streets. Rainwater and snowmelt (stormwater) that enters a storm drain inlet flows directly to our creeks and ditches, and eventually discharges into Fountain Creek, east of Fort Carson.



To report the release of ANY contaminant into the environment, call, 526-1697

Mud, oil, soap and trash that is tracked, spilled, poured or dumped, onto our streets and parking lots gets picked up by stormwater and can enter the storm drain system. Natural areas also contribute sediment (mud) through the process of erosion. This pollution then flows untreated into our creeks and ditches, causing adverse impacts to water quality. Aquatic life struggles to survive, and drinking water for people downstream is harder to purify.



Did you know – ONE quart of oil can contaminate over 250,000 gallons of water?

To keep our streams clean, it is important that **ONLY** stormwater goes into storm drains. Discharges of fuels, cooking oil, mud, debris and trash should be prevented!

HOW YOU CAN HELP ???

- ✓ Wash your car at the car wash (the water is usually recycled). If you do wash the car at home, chose a non-toxic, phosphate-free or biodegradable soap. If possible, wash the car on a grassy area, so the soapy water will soak into the ground and not go into the storm drains.
- ✓ Avoid off-road vehicle use.
- ✓ Don't rinse oil spills with water. Apply cat litter or other dry absorbent material, sweep it up and dispose of it in the trash.
- ✓ Follow directions on pesticides, herbicides and fertilizers. Do not apply if rain is expected within 48 hours.
- ✓ Do not rake or blow leaves into the storm drains – bag them.
- ✓ Use water-based, biodegradable cleaning products.
- ✓ **DON'T LITTER – RECYCLE!**
- ✓ To dispose of old paint, pesticides and other household hazardous waste, contact the El Paso County Hazardous Household Waste Facility at 520-7879



Attachment 3 – EPO Course Stormwater Class Materials

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FORT CARSON STORMWATER PROGRAM





EPO Certification Course
6 DEC 16


EPO Course



OUTLINE

- Water Quality
- Regulatory Background
- Stormwater and Why it Matters
- Stormwater and Fort Carson
- DPW Responsibilities
- EPO Responsibilities
- The Good, The Bad, and The Ugly
- Getting Involved
- Questions

EPO Course



WATER QUALITY



Cuyahoga River, Cleveland, Ohio, Late 1960s

EPO Course




THE CLEAN WATER ACT OF 1972

- Amended the 1948 Water Pollution Control Act and the 1956 Federal Water Pollution Control Act (FWPCA)
- Established a structure for regulating pollutant discharges into waters of the United States
- Made it unlawful to discharge any pollutant from a point source into navigable waters unless a permit was obtained
- Established the National Pollutant Discharge Elimination System (NPDES)
- Amended again in 1981 and 1987

Goals: Swimmable and fishable waters; Protect human health

EPO Course




NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

- Permits are required for the discharge of pollutants from:
 - Animal Feeding Operations
 - Aquaculture
 - Industrial wastewater
 - Incidental Discharges from Sea Vessels
 - Municipal wastewater
 - Stormwater from:
 - Construction activity
 - Industrial activity
 - Municipal sources




Fort Carson is permitted for these activities under NPDES

EPO Course




WHAT IS STORMWATER?

Water runoff generated from rain and snowmelt events that flow over land or impervious surfaces, such as paved streets, parking lots, and building rooftops, and does not soak into the ground.

Stormwater discharges are regulated by local, state and federal governments to protect general water quality

EPO Course



WHY DOES STORMWATER MATTER?

- Runoff accumulates debris, chemicals, sediment or other pollutants
- Adversely affects water quality if the runoff is not treated or controlled
- Eventually discharges to areas used for drinking water, commerce and recreation
- May cause damage to property and/or life from flooding



Costly penalties may be imposed if permit provisions are not followed

EPO Course



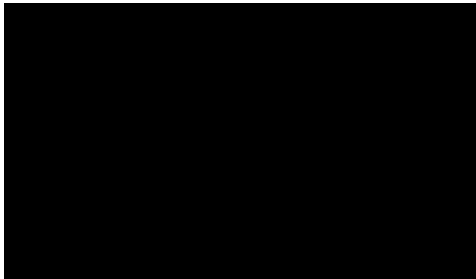
STORMWATER PROGRAM – CLEAN WATER ACT

[Flooding August 2013](#)

EPO Course



STORMWATER PROGRAM – CLEAN WATER ACT



EPO Course



HOW DO STORMWATER REGULATIONS AFFECT FORT CARSON?

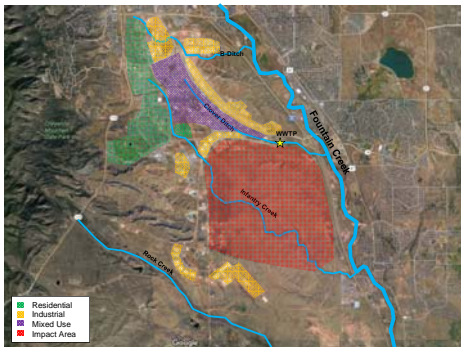
- All discharges of stormwater on Fort Carson are covered by permits issued by the Environmental Protection Agency (EPA) under the Clean Water Act (CWA)
- Three types of permits:
 - **Municipal Separate Storm Sewer System (MS4)** – general stormwater discharges
 - **Multi-Sector General Permit (MSGP)** – discharges associated with industrial areas (motorpools, DLADS, recycle facilities, etc)
 - **Construction General Permit (CGP)** – construction sites that will disturb over an acre, or smaller sites that are part of a larger common plan of development (ie – housing)

If water leaves Fort Carson, somebody is interested in it

EPO Course



FORT CARSON STORMWATER OVERLAY



EPO Course



STORMWATER IMPACTS



Stormwater can affect readiness

EPO Course



FORT CARSON DPW RESPONSIBILITIES

- Implement the Stormwater Pollution Prevention Plan (SWPPP)
- Check compliance with permits through routine inspections
- Review development plans and engineering designs for stormwater impacts
- Recommend Low Impact Design (LID) features as part of the design process
- Maintain drainage structures and control measures
- Respond to spills
- Conduct training and community outreach

Fort Carson DPW is a resource for you!

EPO Course



EPO RESPONSIBILITIES

- Educate others at your facility on SWPPP requirements
- Maintain good housekeeping
- Minimize exposure of hazardous materials (e.g. fuel, metals, waste) to precipitation
- Know your spill plan and report spills immediately
- Know the location of stormwater controls in your area, how they operate and where they drain to
- Report maintenance problems immediately
 - Routine maintenance = Service order
 - Construction/New work = Work order

EPO Course



FACILITY STORMWATER POLLUTION PREVENTION PLANS (SWPPP)

- Required as part of the Fort Carson Multisector General Permit (MSGP)
- Units must maintain a copy of the applicable Stormwater Pollution Prevention Plan (SWPPP) map on-site as well as a stormwater poster
- Request a copy from your ECAT assessor or from the Stormwater Program Office



The SWPPP maps depicts:

- Stormwater flow direction
- Storage areas
- Inlets and outfalls
- Spill kits
- Sewer lines
- Any other areas of potential pollution

EPO Course



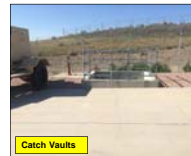
TYPICAL STORMWATER COLLECTION FEATURES IN MOTORPOOLS



Curb Inlets



Linear Drains



Catch Vaults



Drop Inlets

EPO Course



STORMWATER CATCH VAULTS



- Stormwater Catch Vaults are intended to be secondary containment for fuelers
- If the vault is contaminated or contains debris, call in a service order

EPO Course



THE GOOD...



Stabilization



Dewatering



Secondary Containment and Spill Kits



Inlet Protection



Secondary Containment

EPO Course



THE GOOD...



Drainage Swale with Vegetation

Clean Inlets

Permeable Pavement

Green Roof

Biofiltration / Bioretention

EPO Course

THE BAD...



Poor housekeeping / spills

Poor storage


Poor materials maintenance

Outdoor storage of batteries

Poor housekeeping / spills

EPO Course

THE UGLY...



DO NOT CHANGE OIL IN BARRACKS PARKING LOTS !!

Use the MWR Auto Craft Center (Building 2427)

EPO Course


GETTING INVOLVED

- Earth Day – April 22nd (...and every day!)
- Creek Week
 - Annually in September
 - Watershed approach – multiple communities participate during the same time frame
- Make a Difference Day
 - Annually in October
 - 7.46 tons of trash and debris removed in 2014
- America Recycles Day – November 15th
- Post Cleanup (April and October)
- Stenciling of storm drains

EPO Course

QUESTIONS?

Chip Hahn – Stormwater Program Manager
719-526-1697
chester.n.hahn.civ@mail.mil



EPO Course

Attachment 4 – 2016 DPW Environmental Division Events

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DPW-ENVIRONMENTAL DIVISION ENVIRONMENTAL EVENTS for 2016

ENVIRONMENTAL QUALITY WORKING GROUP (EQWG)

Thursday of each EPO Certification Training Course

Attendees: ESEOs, EPOs/EPNCOs

Location: Bldg # 1219 – Crestone Conference Room - Room 325A: 1030 - 1130

**28 Jan 16; 17 Mar 16; 12 May 16; 16 Jun 16;
28 Jul 16; 22 Sep 16; 10 Nov 16; 08 Dec 16**

POC: Suzanne Rohrs - 526-1697

ENVIRONMENTAL PROTECTION OFFICER (EPO) CERTIFICATION TRAINING

40-hr EPO Course - 0900 – 1600 hrs, Monday – Thursday

Registration for Soldiers is through Troop Schools; Civilians contact DPW-ED POC

Location: DPW – Bldg # 1219 – Rm 325A

**25 – 28 Jan 16; 14 – 17 Mar 16; 09 - 12 May 16; 13 - 16 Jun 16
25 – 28 Jul 16; 19 - 22 Sep 16; 07 – 10 Nov 16; 05 – 08 Dec 16**

POC: James Ahl, 526-4446/james.w.ahl.civ@mail.mil

Environmental Compliance Assistance Team (ECAT)POCs General Environmental Awareness Training and Assessments

Donna Soria - Senior ECAT Assessor – 524-3534

Rob Cavanaugh – 526-9176 Kevin Lyons – 526-0979

Tammy Collins – 526-0755; James Abraham – 526-8000

ENVIRONMENTAL QUALITY CONTROL COMMITTEE (EQCC)

Location: Garrison Headquarters – Bldg # 1118 – Conference Room – 1400 - 1500

18 Feb 16; 07 Jun 16; 18 Aug 16; 17 Nov 16

POC: James Lessard – 526-6838

Suzanne Rohrs - 526-1697

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Attachment 5 – 2016 Earth Day Celebration

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April 21, 2016

Carson hosts Earth Day activities

Displays set

The Directorate of Public Works Environmental Division staff will set up Earth Day information tables from 11 a.m. to 1 p.m. April 22 at the Commissary and Exchange.

The staff will hand out informational items as part of the national Earth Day observance.

By Susan C. Galentine

Directorate of Public Works Net Zero outreach and public relations

Continuing its long history of teaching environmental stewardship to future leaders, the Fort Carson Directorate of Public Works (DPW) is hosting Earth Day activities for its 29th year.

Earth Day is celebrated annually April 22, 2016, around the world.

Earth Day-related events are scheduled for April 21-28, 2016, at Fountain-Fort Carson District 8 schools on post. Activities are accomplished through partnering with various local, state and federal organizations that help provide a broad, multifaceted curriculum.

DPW is hosting an Earth Day education fair April 27, 2016, at the Elkhorn Conference Center, which will consist of 15-minute presentations tailored toward the grade levels at the on-post schools. The subjects presented will include:

- Renewable energy
- Benefits of trees
- Pollinators
- Stormwater
- Recycling

Fort Carson is also holding an Earth Day-themed grocery bag art contest for kindergarten through sixth-grade students and has volunteers reading Dr. Seuss' "The Lorax" to kindergarten through second-grade classes April 21, 2016.

A sustainability bus tour for high school students from the surrounding community is slated for April 28, 2016.

Wrapping up events around Earth Day is an Arbor Day tree-planting and site cleanup event May 5, 2016, behind Carson Middle School. Arbor Day activities are an annual requirement for Fort Carson's Tree City USA certification, which the installation has maintained for 29 years.

The DPW Environmental Division staff at Piñon Canyon Maneuver Site (PCMS) is hosting its third annual all-day EnviroFair for local schools April 28. The staff anticipates approximately 250 students, plus teachers and parents from Las Animas and Otero counties to participate in the Earth Day event.

Students will rotate in small groups through about a dozen stations learning about various topics including:

- Colorado wildlife
- Water conservation
- Paleontology
- Wildlife current issue (pollinators)
- Forestry
- Botany
- Stormwater
- Recycling
- Fire ecology
- Watersheds
- Archaeology

The PCMS environmental team is partnering with the following organizations for the EnviroFair: Comanche National Grasslands, Colorado Parks and Wildlife, Clean Valley Recycling, Trinidad State Junior College, the Directorate of Emergency Services (Fort Carson and PCMS fire departments and conservation law officers) and Trout Unlimited.

Other Earth Day activities planned at PCMS include a "Trash-to-Treasure" art show where students in sixth- through 12th-grade create artwork from recycled materials. Awards will be given for "Most Artistic," "Best Use of Recycled Materials," "Most Functional" and "Judges Choice." The art will be on display during the EnviroFair.

Call the DPW Environmental Division at 526-1692 for more information about Earth Day activities.

<http://www.fortcarsonmountaineer.com/2016/04/carson-hosts-earth-day-activities/>



Earth Day Household Hazardous Waste Collection Event



Fort Carson is hosting a **free** household hazardous waste collection event April 22 from 8 a.m. to 2 p.m. at the Victory Loop parking lot as part of the national Earth Day observance. The Fort Carson community is encouraged to participate in reducing expensive landfill waste, preventing pollution and helping the installation get one step closer to its Net Zero waste goal. Drop off your old/used household cleaners, paints, lawn care products, electronics and data media and automotive products for proper disposal.

What will be collected April 22?

Containers must be closed and labeled.

- **Household products:** Aerosols, ammonia, batteries, bleach, cleaners (carpet, drain, oven and toilet), cooking and lamp oils, cosmetics, degreasers, deodorizers, fire extinguishers, floor cleaners/waxes, furniture polish/wax, laundry products, mercury, mothballs, photographic chemicals, propane and butane tanks (1 pound and 20 pounds), rust removers, silver cleaners, spot removers, etc.
- **Paint, stains, solvents, etc.:** Latex, oil-based, aerosol and hobby paints; and lacquers, solvents, stains, strippers, thinners, varnishes, etc.
- **Lawn and garden products:** Lawn and houseplant fertilizers, herbicides, insecticides, pesticides, rodent poisons, wood preservatives, etc.
- **Automotive products:** Antifreeze, batteries, brake and transmission fluids, cleaners (bug, tar, chrome, engine and vinyl), contaminated motor oil, self-service uncontaminated motor oil in 5-gallon containers or smaller only, fuels, wax, etc.
- **Electronics and data media:** Computers, printers, scanners, audio/video equipment, camcorders, cell phones, digital cameras, fax machines, microwave ovens, TVs, audio and video tapes, CDs, DVDs, Blue-Ray discs, game cartridges, etc. (Only 1 TV and 1 computer monitor per family, please.)



Date: Earth Day, Friday 22 APR.
**Location: Victory Loop parking lot,
located off Specker Ave, next to the
softball fields.**
**Contact: For more information,
call 526-4340.**



April 28, 2016

Carson hosts Earth Day activities

By Susan C. Galentine

Directorate of Public Works Net Zero outreach and public relations

Fort Carson pulled out all the stops in hosting its 29th year of Earth Day activities, celebrated annually April 22, 2016, providing a number of activities tailored toward students and adults.

The Directorate of Public Works (DPW) sponsored events for elementary school students the week of Earth Day including a grocery bag art contest and volunteers reading Dr. Seuss' "The Lorax" to kindergarten through second-grade classes.

For the community, DPW hosted a household hazardous waste collection event on post and set up information tables at the Exchange and commissary for customers on Earth Day.

Events wrapped up this week with educational fairs at Fort Carson and Piñon Canyon Maneuver Site for schoolchildren and a bus tour of the post for Fountain-Fort Carson School District 8 high school students to learn about installation sustainability projects.

<http://www.fortcarsonmountaineer.com/2016/04/carson-hosts-earth-day-activities-2/>

Attachment 6 – Garrison Commander’s Policy Letter #17

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DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT CARSON
1626 ELLIS STREET, SUITE 200
FORT CARSON, CO 80913

REPLY TO
ATTENTION OF

GC Policy #17

IMCR-ZA

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Enforcement of Construction Site 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 Municipal Separate Storm Sewer System (MS4) Permit (COR042001) as defined in Clean Water Act (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's 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.

IMCR-ZA

SUBJECT: Enforcement of Construction Site Stormwater Management Program Policy

c. Copies of these documents are available on the Fort Carson Stormwater website at <http://www.carson.army.mil/DPW/environmental/stormwater/index2.html>.

4. Responsibilities:

a. Directorate of Public Works - Environmental Division (DPW-ED) will enforce this policy through contractor oversight and project planning. Projects with the Corps of Engineers and any other entity as the proponent are subject to these regulations and oversight.

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. Mission and Installation Contracting Command (MICC) 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 of 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. Point of contact is the DPW-ED Stormwater Program Manager at 719-526-1697 or usarmy.carson.imcom-central.list.dpw-ed-storm-water@mail.mil.


RONALD P. FITCH, JR.
COL, SF
Garrison Commander

DISTRIBUTION: A

Attachment 7 – CGP Inspection Form

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CGP/MS4 Construction Inspection Form

Name Of Site:

Inspection Date/Time:

Inspector Name & Contact Information:

Select...

Site Information

Nature Of Project:

- DPW: ☐
Industrial: ☐
Residential: ☐
Roadway: ☐
USACE: ☐
Utility Linear: ☐

Construction Stage:

- Clearing: ☐
Construction: ☐
F.Grading: ☐
F.Stabilization: ☐
Infrastructure: ☐
Rough Grading: ☐
T.Stabilization: ☐

Name Of Receiving Waters:

- B Ditch: ☐
Clover Ditch: ☐
Fountain Creek: ☐
Infantry Creek: ☐
Rock Creek: ☐

Nature Of Project Other:

Construction Stage Other:

Receiving Waters Other:

Site Location:

Cross Streets:

Building Number:

Is the receiving water a tributary to waters of the US?

- ☐ Yes
☐ No

Within the Fort Carson MS4 footprint?

- ☐ Yes
☐ No

GPS Coordinates:

Operator/Contact Information

Name and titles of person(s) meeting the definition of "operator": ([CGP APP. A8](#)):

Facility Contact:

Delegated Authority:

Is the Stormwater Team identified in the SWPPP ([CGP part 7.2.1](#))

- ☒ Yes
☐ No

Notes:

Basic Information

Is There Permit Coverage?:

- ☐ Yes
☐ No

NOI visibly posted at entrance to site? ([CGP section 1.6](#)):

- ☐ Yes
☐ No

What is the NOI date:

NOI Number:

Co-Permitee NOI Date:

Co-Permitee NOI Number:

SWPPP Location sign posted at entrance? ([CGP section 1.6](#)):

- ☐ Yes

Is there access to the 2012 CGP onsite (electronic or hard copy):

- ☐ Yes

Percent Complete: %

☐ No☐ No

1. SWPPP Review

| Item | Yes | No | NA | Notes |
|--|--------------------------|--------------------------|--------------------------|-------|
| 1.1 Is the SWPPP on site or electronically available (CGP part 7.3) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 1.2 Has the SWPPP been reviewed and updated PRIOR to filing an NOI by the Fort Carson Stormwater Program and is the SWPPP review form included (MS4 PERMIT & CGP part 7.1.1) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 1.3 Signature Certification Statement included in SWPPP (CGP part 7.2.15 and App I subsections I.11, I.11.1.1 and I.11.4) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 1.4 Is information on receiving waters, impaired waters, and TMDLs correctly listed? (CGP part 3) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 1.5 Is there a site description (CGP part 7.2.2) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 1.6 Total area of site and total area to be disturbed in acres (CGP part 7.2.2) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 1.7 Are all construction support activities described (materials, equipment staging areas, concrete or asphalt batch plants, stockpiles and borrow areas) (CGP parts 7.2.2 and 1.3.c) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 1.8 Is the sequence and timing of construction included (CGP part 7.2.2) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 1.9 Is there a list of allowable non-stormwater discharges (CGP part 1.3.d and 7.2.8) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 1.10 Is the Fort Carson NEPA Record of Environmental Consideration (REC) included in the SWPPP? (Operator evaluation of endangered species/historic properties) (CGP part 7.2.14) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 1.11 Does the SWPPP contain buffer documentation (CGP part 7.2.9) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 1.12 Does SWPPP include BMP descriptions and details (CGP part 7.2.10.1) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 1.13 Where the BMP is a sediment basin, are design maintenance requirements in the SWPPP (CGP part 2.1.3.2) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 1.14 Does SWPPP include a dewatering plan (MS4 PERMIT) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 1.15 Does SWPPP include temporary stabilization measures (descriptions and specs) (CGP parts 2.2 and 7.2.10.3) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 1.16 Does SWPPP include permanent stabilization measures (permanent BMPs and specs) (CGP parts 2.2 and 7.2.10.3) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 1.17 Are construction site pollutants and pollutant generating activities listed in the SWPPP (CGP part 7.2.7) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 1.18 Are waste management and spill prevention | | | | |

| | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------|
| and response procedures in the SWPPP (CGP parts 2.3, 7.2.11.1 and 7.2.11.2) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 1.19 Is there documentation that the stormwater team or other responsible personnel have been trained on their requirements of the CGP prior to earth disturbing activities commencing (CGP part 6) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 1.20 Is the SWPPP amendment log current (CGP part 7.4) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 1.21 Is the SWPPP current and complete (CGP part 7.3) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 2. Map Review | | | | |
| Item | Yes | No | NA | Notes |
| 2.1 Is there an up-to-date general site map on site (CGP part 7.2.6) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 2.2 Are drainage patterns (flow arrows) included on map Stormwater, Topography and existing vegetation (CGP parts 7.2.6.5 and 7.2.6.6 a.b.) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 2.3 Does the site map show all required features (CGP part 7.2.6.1 a.) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 2.4 Are pollutant generating activities, as described in the SWPPP on the map (CGP part 7.2.6.7) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 2.5 Are the locations of BMPs, as described in the SWPPP, on the map (CGP part 7.2.6.8) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 2.6 Does the SWPPP or site map identify stormwater management measures to address stormwater runoff once the construction is complete (culverts, ponds, inlets, etc.) (MS4 Permit) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3. Inspections Review | | | | |
| Item | Yes | No | NA | Notes |
| 3.1 Is the named inspector (or the inspector's position) a duly authorized representative of the operator (CGP APP I.11.2) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3.2 Is the delegation of authority signed by the operator in the SWPPP (CGP part APP I.11.2.3) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3.3 Are the inspectors qualifications in the SWPPP (CGP part 4.1.1) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3.4 Are inspections performed according to inspection schedule noted in the SWPPP (CGP parts 4.1.2, 4.1.4, 7.2.12.2) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3.5 Date of last inspection | | | | |
| 3.6 Does the inspection report cover all BMPs, pollution prevention practices, and all areas requiring inspection (CGP part 4.1.5) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3.7 If applicable, is weather information included in the inspection reports (CGP part 4.1.2.2) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3.8 Were findings from last inspection addressed within 7 days (CGP part 5.2.1) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| | | | | |

4. Best Management Practices

| | | |
|---|---|--|
| Straw Wattle / Rock Socks: <input type="radio"/> Adequate <input type="radio"/> Deficient <input type="radio"/> N/A Notes: | Silt Fences: <input type="radio"/> Adequate <input type="radio"/> Deficient <input type="radio"/> N/A Notes: | Straw Bales: <input type="radio"/> Adequate <input type="radio"/> Deficient <input type="radio"/> N/A Notes: |
| Storm Drain Inlet Protection: <input type="radio"/> Adequate <input type="radio"/> Deficient <input type="radio"/> N/A Notes: | Rip Rap: <input type="radio"/> Adequate <input type="radio"/> Deficient <input type="radio"/> N/A Notes: | Check Dam: <input type="radio"/> Adequate <input type="radio"/> Deficient <input type="radio"/> N/A Notes: |
| Diversion Structure (berms, swales, etc.): <input type="radio"/> Adequate <input type="radio"/> Deficient <input type="radio"/> N/A Notes: | Sediment Pond: <input type="radio"/> Adequate <input type="radio"/> Deficient <input type="radio"/> N/A Notes: | Track Pad / Street Cleaning effective: <input type="radio"/> Adequate <input type="radio"/> Deficient <input type="radio"/> N/A Notes: |
| Dumpsters / Waste Management Practices (Lids or Covers Required): <input type="radio"/> Adequate <input type="radio"/> Deficient <input type="radio"/> N/A Notes: | Concrete Washout: <input type="radio"/> Adequate <input type="radio"/> Deficient <input type="radio"/> N/A Notes: | Hazardous Materials Secondary Containment Devices: <input type="radio"/> Adequate <input type="radio"/> Deficient <input type="radio"/> N/A Notes: |
| Spill Kit / Spill Response Info: <input type="radio"/> Adequate <input type="radio"/> Deficient <input type="radio"/> N/A Notes: | Good Housekeeping Measures / Equipment and Maintenance Areas: <input type="radio"/> Adequate <input type="radio"/> Deficient <input type="radio"/> N/A Notes: | Vegetative Buffer: <input type="radio"/> Adequate <input type="radio"/> Deficient <input type="radio"/> N/A Notes: |
| Portable Toilets: <input type="radio"/> Adequate <input type="radio"/> Deficient <input type="radio"/> N/A Notes: | Temporary Stabilization Practices: <input type="radio"/> Adequate <input type="radio"/> Deficient <input type="radio"/> N/A Notes: | Dewatering: <input type="radio"/> Adequate <input type="radio"/> Deficient <input type="radio"/> N/A Notes: |

5. Final Stabilization

| | | |
|---|--|---|
| Are stockpiles or areas observed that are unstabilized after 14 days: <input type="radio"/> Adequate <input type="radio"/> Deficient <input type="radio"/> N/A Notes: | Seeding (bag tags checked?): <input type="radio"/> Adequate <input type="radio"/> Deficient <input type="radio"/> N/A Notes: | Mulching or Other Stabilization Methods: <input type="radio"/> Adequate <input type="radio"/> Deficient <input type="radio"/> N/A Notes: |
| Landscaped areas: <input type="radio"/> Adequate <input type="radio"/> Deficient <input type="radio"/> N/A Notes: | Post Construction BMPs properly installed: <input type="radio"/> Adequate <input type="radio"/> Deficient <input type="radio"/> N/A Notes: | Are these structures adequately maintained: <input type="radio"/> Adequate <input type="radio"/> Deficient <input type="radio"/> N/A Notes: |

6. Site Review

Site Description:


Discharge of Sediment:

Discharge of Pollutants:

Are BMPs maintained adequately to prevent discharge:

Notes

Attachments

 File Attachment

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Attachment 8 – CGP Notice of Termination Inspection Form

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Fort Carson Stormwater Program Notice of Termination (NOT) Inspection Form

Date:

Project Name:

Project Location:

Permittee #1 .

NOI #

Dates of CGP Coverage:

Permittee #2:

NOI #

Dates of CGP Coverage:

Target Date for NOT filing:

NOT Inspector & personnel:

Construction General Permit Conditions for filing NOT:

☐ 1. Final stabilization has been achieved on all exposed portions of the site for which you are responsible.

☐ A. All soil disturbing activities at the site have been completed and either, or a combination of, the two following criteria have been met:

☐ i. If you are vegetatively stabilizing any exposed portion of your site through the use of seed or planted vegetation, you must provide established uniform vegetation (*e.g., evenly distributed without large bare areas*), with the following criteria:

- 70 percent or more of the density of coverage that was provided by vegetation prior to commencing earth-disturbing activities
- No invasive species
- Vegetative cover must be perennial
- Immediately after seeding or planting the area to be vegetatively stabilized, to the extent necessary to prevent erosion on the seeded or planted area, you have selected, designed, and installed non-vegetative erosion controls that provide cover (*e.g., mulch, rolled erosion control products*) to the area while vegetation is becoming established.

☐ ii. If you are using non-vegetative controls to stabilize exposed portions of your site, you must provide effective non-vegetative cover to stabilize any such exposed portions of your site, including, but not limited to, riprap, gabions, and geotextiles.

OR

☐ B. In arid and semi-arid areas or drought-stricken areas only, all soil disturbing activities at the site have been completed and both of the following criteria have been met:

☐ i. The area you have seeded or planted must, within 3 years, provide established vegetation that covers 70 percent or more of the density of vegetation prior to commencing earth-disturbing activities; and in addition to seeding or planting the area to be vegetatively stabilized, to the extent necessary to prevent erosion on the seeded or planted area, you must select, design, and install non-vegetative erosion controls that provide cover for at least 3 years without active maintenance by you.

AND

☐ You have removed and properly disposed of all construction materials, waste and waste handling devices, and have removed all equipment and vehicles that were used during construction, unless intended for long-term use following your termination of permit coverage.

☐ You have removed all stormwater controls that were installed and maintained during construction, except those that are intended for long-term use following your termination of permit coverage or those that are biodegradable.

☐ You have removed all potential pollutants and pollutant-generating activities associated with construction, unless needed for long-term use following your termination of permit coverage.

OR

☐ 2. Another operator has assumed control according to Section 8.2.2 of the CGP over all areas of the site that have not been finally stabilized.

If so, please provide POC information _____

OR

☐ 3. Coverage under an individual or alternative general NPDES permit has been obtained.

If so, please provide Permit # and Date _____

MS4 Program Conditions for filing NOT:

☐ Received a copy of all post-construction stormwater BMP design drawings/as-builts (in both '.dgn' and hard copy format). Please note that this information will need to be verified by Fort Carson staff prior to filing for an NOT.

☐ Received a copy of all post-construction stormwater BMP O&M specifications, as applicable

☐ Received a copy of design grading and drainage plans (in both '.dgn' and hard copy format)

☐ Received a copy of final, general layout of project site (to include buildings, roads, etc.)

☐ Received a copy of the Maintaining Hydrology on Army Construction Projects form (as applicable).

☐ All post-construction BMPs have been cleaned out and are in optimum operating condition.

☐ Site conditions are stable and acceptable. If not, provide actions needed prior to filing NOT:

Once the Fort Carson Stormwater Program has signed this form and returned it to the project proponent(s), the NOT filing process can be initiated. The NOT must be submitted within 30 days of conditions 1, 2 or 3 above being adequately met. Authorization to discharge terminates at midnight of the day the NOT is signed.

Name
Fort Carson Stormwater Program

Signature

Date

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Attachment 9 – 2016 Stormwater Control Measure Impracticability Table

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2016 MS4 Stormwater Control Impracticability Summary

| Project Number | Name | Location | Identifying project description; | Reason(s) for making the impracticability determination; | Any information developed or relied upon to support the impracticability determination (e.g., feasibility analyses, geologic studies, groundwater data, etc.); and | Description of other stormwater control measures implemented to meet the requirements of Part 2.6.3. |
|-----------------------|--|---|---|---|---|---|
| PN77405 | Maintenance Equipment Storage Facility | Butts Army Airfield (BAAF), Fort Carson, CO | Construct a storage facility and parking behind existing fire pump house. | - Limited project area due to site constraints and exisiting topography. - Limitations on standing water to reduce bird strike hazard. | - 4th Combat Aviation Brigade Master Plan - US Army Corps of Engineers Hydrology Repor | - Remainder of runoff goes to a regional detention basin (Northside Reservoir) - Permeable Pavers in parking areas |
| PN 77305 | Interim Aircraft Maintenance Shelters (LAMS-A) | Butts Army Airfield (BAAF), Fort Carson, CO | Construct two LAMS-A structures for aircraft maintenance | - Limited project area due to site constraints and exisiting topography. - Limitations on standing water to reduce bird strike hazard. | - 4th Combat Aviation Brigade Master Plan - US Army Corps of Engineers Hydrology Repor | - Remainder of runoff goes to a regional detention basin (Northside Reservoir) - Infiltration basin |
| PN77885 | Butts Army Airfield Runway | Butts Army Airfield (BAAF), Fort Carson, CO | Renew/replace/expand runway for BAAF | - Limited project area due to site constraints and exisiting topography. - Limitations on standing water to reduce bird strike hazard. | - 4th Combat Aviation Brigade Master Plan - US Army Corps of Engineers Hydrology Repor | - Remainder of runoff goes to a regional detention basin (Northside Reservoir) |
| PN77405 | Fire Pump House/Water Storage Tanks | Butts Army Airfield (BAAF), Fort Carson, CO | Constuct a fire pump house and elevated fire water storage tanks to service new hangars | - Limited project area due to site constraints and exisiting topography. - Limitations on standing water to reduce bird strike hazard. | - 4th Combat Aviation Brigade Master Plan - US Army Corps of Engineers Hydrology Repor | - Remainder of runoff goes to a regional detention basin (Northside Reservoir) |
| PN77304 | Aircraft Parts Storage Building | Butts Army Airfield (BAAF), Fort Carson, CO | Construct a storage facility and covered outdoor storage area for aircraft parts. | - Limited project area due to site constraints and exisiting topography. - Limitations on standing water to reduce bird strike hazard. | - 4th Combat Aviation Brigade Master Plan - US Army Corps of Engineers Hydrology Repor | - Remainder of runoff goes to a regional detention basin (Northside Reservoir) - Grass swale |

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