



**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

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

Please print or type.

A. Permittee Information

Permittee (Agency Name): Fort Carson

Mailing Address: 1626 Evans Street BLDG 1219

City, State and Zip Code: Fort Carson, Colorado 80913-4000

Contact Phone Number: 719-526-1697

Permit Certification Number: COR042001

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

B. Reporting Period: January 1, 2018 to December 31, 2018

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: Kenny Morris
Position/work group title: Stormwater Program Manager, Environmental Compliance Branch
Contact phone number: 719-526-1697
Contact E-mail address: kenneth.r.morris.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:

Fort Carson Stormwater Page
<https://www.carson.army.mil/organizations/dpw.html>

Fort Carson Resident's Guide
<http://www.fortcarsonfamilyhomes.com/media/2107209/Carson-Resident-Guide-Updated--March-2017.pdf>

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.
<p>Implement an 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.</p>	<p>Fort Carson's main focus of education is through the Environmental Protection Officer (EPO) course, which is offered on a monthly basis to Soldiers and civilians who are responsible for compliance at the installation's motorpool and maintenance facilities.</p> <p>Additionally, the stormwater program conducts training with contractors and Soldiers who are executing construction projects on the installation to educate them on protecting water quality during construction.</p> <p>Attachment 1 provides the training events for 2018.</p> <p>Attachment 2 provides the training slides for the EPO course.</p> <p>Attachment 3 provides a newly created set of slides for refresher courses.</p>	<p>Yes. Continuously revise and update training materials to reflect current stormwater topics and issues.</p>

<p>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. Informational materials shall be updated and distributed as necessary throughout the duration of this permit, and should provide a location where all annual reports and/or SWMP updates as required by this permit may be viewed.</p>	<p>Fort Carson uses three main ways to disseminate information for the public:</p> <ol style="list-style-type: none"> 1. The Fort Carson Stormwater Brochure is provided to EPO and Construction Stormwater class attendees as well as to attendees of outreach programs. 2. The Fort Carson Resident's guide provides polices for protection water quality in the installation housing areas. 3. The Fort Carson Stormwater Homepage provides public information on the stormwater program. The URL is provided on Page 2. 	<p>No.</p>
<p>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.</p>	<p>Low Impact Development 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.</p>	<p>Yes. Improve maintenance training for the base operations contractor that aligns with the revised LID maintenance manual.</p>
<p>Provide a stormwater awareness brochure and track its distribution.</p>	<p>A copy of the Fort Carson Stormwater Brochure is provided in Attachment 4. Attachment 5 provides distribution of the brochure as part of the installation's outreach programs. In 2018, 599 brochures were handed out to trainees and residents.</p>	<p>No.</p>
<p>Ensure, to the extent feasible, that any 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.</p>	<p>The Fort Carson Resident's guide provides polices for protecting water quality in the installation housing areas. The guide is available at the URL provided on page 2.</p>	<p>No.</p>

<p>At a minimum, 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.</p>	<p>The Fort Carson Stormwater website provides information on the proper collection and disposal of household hazardous waste.</p> <p>The Fort Carson Environmental Battlebook provides information to Soldiers and installation workforce on the proper hazardous waste collection processes.</p> <p>Fort Carson DPW also provides the 40-hour and 8-hour refresher employee training for the Hazardous Waste Operations and Emergency Response (HAZWOPER) training, which specially addresses proper hazardous waste collection processes</p>	<p>No.</p>
<p>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.</p>	<p>Attachment 5 provides a log of the installation's public activities programs. In 2018, Fort Carson conducted 17 training sessions, which educated 3410 people on stormwater quality issues.</p>	<p>No.</p>

Public participation/involvement (continued)

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

The Fort Carson Stormwater Program created new instructional materials for the EPO Refresher course. The materials are intended for personnel who are partly responsible for identifying, reporting, and correcting environmental concerns at facilities on Fort Carson.

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 2018, one public notice was posted for public involvement for Environmental Assessments (EAs) through the NEPA process.	No.
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.	Annual reports for MS4 and MSGP activities are posted to the Fort Carson Stormwater Homepage. The homepage can be accessed at the URL provided on Page 2.	No.
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 conducts two community activities annually which engage residents on the importance of water resources – Earth Day and Make a Difference Day. Summaries of these activities are included in Attachments 6 and 7.	No.
Maintain a log of public participation and outreach activities performed in the permittee’s SWMP.	Attachment 4 provides a log of the installation’s public participation and involvement programs. In 2018, Fort Carson conducted two outreach events, which involved 176 people.	No.
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 most recent copy of the installation’s Stormwater Management Plan (SWMP) is posted to the Fort Carson Stormwater Homepage. The homepage can be accessed at the URL provided on Page 2.	No.

Public participation/involvement (continued)

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

1. Fort Carson Earth Day Celebration. This event is held annually in April and highlights the things residents can do to enhance and protect the environment. The community household hazardous waste collection day was held during the Earth Day celebration on April 26, 2018. More than 100 Fort Carson community members turned in used motor oil, batteries, electronics, cleaners, old televisions and assortments of other products which might have otherwise been taken to a landfill or disposed of in an improper manner.
2. Make a Difference Day (MADD). MADD is a nation-wide day of volunteer service where residents complete projects to enhance the community. In 2018, a group of approximately 25 people, including Soldiers, Scouts, Scout leaders, civilians along with two dump trucks cleaned up a 1.5 mile stretch of Infantry Creek from O Connell Blvd to Nelson Ave. Over the course of three hours, the group collected over 40 bags of trash, and various large household items.

3. Illicit Discharge Detection and Elimination

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

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

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

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.
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. The homepage can be accessed at the URL provided on Page 2. A copy of the Fort Carson spill response procedure is included in Attachment 8.	No.
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. The homepage can be accessed at the URL provided on Page 2. 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 (SWPPP) addresses spills and illicit discharges in Section 3.1.4.	No.

<p>Provide a mechanism for reporting of illicit discharges and provide this number on the Fort Carson stormwater website and any outreach materials as appropriate.</p>	<p>Fort Carson has a spill line (526-0973) for the reporting of spills and illicit discharges which occur on the installation. The phone number for the spill line is posted to a variety of locations including the Fort Carson Stormwater Homepage. The homepage can be accessed at the URL provided on Page 2. A copy of the Fort Carson spill response procedure is included in Attachment 8.</p>	<p>No.</p>
<p>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).</p>	<p>Upon notification of a spill or illicit discharge, an investigation of the situation is made within 24 hours to determine the source and cause of the discharge. If required, temporary control measures may be installed until a service order is executed to fix the problem.</p>	<p>No.</p>
<p>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.</p>	<p>The Fort Carson Directorate of Public Works Geographic Information System (GIS) section maintains the installation's storm sewer system map. The map contains the pertinent data for the installation's storm sewer system and is updated as conditions change or new construction is completed.</p>	<p>No.</p>
<p>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.</p>	<p>The annual dry-weather screening was completed in December 2018. The screening identified one potential illicit discharge and other conditions which require attention (e.g. debris, erosion, etc). The results of the screening are incorporated into the IDDE tracker, which tracks the problems and corrective action.</p>	<p>No.</p>
<p>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.</p>	<p>The 2018 dry-weather screening was completed in December 2018. The screening identified one potential illicit discharges, and identified other conditions which require attention (e.g. debris, erosion, etc).</p>	<p>No.</p>

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.	The 2018 household hazardous waste collection day event was held on April 26, 2018. Attachment 6 provides information on the event.	No.
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.	In 2018, Fort Carson continued the marking of stormdrains throughout the installation. More than 50 storm drains were marked with vinyl stickers.	No.

Illicit Discharge Detection and Elimination (continued)

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

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 Fort Carson community through the Environmental Compliance Assistance Team (ECAT), Environmental Protection Officer (EPO) training, EPO refresher training, and the installation’s Environmental Quality Control Committee (EQCC).

In 2018, Fort Carson responded to approximately 20 spills, None of the spills met the threshold for reporting to the National Response Center (NRC). An excerpt from the the spill tracker is available in Attachment 9.

The storm sewer map is managed electronically by the Fort Carson DPW Geographic Information System (GIS) team.

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 works closely with contractors operating on the installation to maintain compliance with the requirements for protecting water quality through the MS4 permit and the Construction General Permit (CGP). For projects over one acre, constructors are required to obtain a NPDES permit for their construction activity. Before a Notice of Intent (NOI) can be submitted, approval of the constructor's Stormwater Pollution Prevention Plan (SWPPP) is required. Small projects are managed under the MS4 permit. Compliance is verified through routine inspections and interaction with the project managers and construction representatives. During 2018, Fort Carson reviewed and approved 15 projects which required NPDES Permit coverage.	No.

<p>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 Discharges from Construction Activities, (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.</p>	<p>Fort Carson’s Garrison Commander’s Policy Letter #17 is the installation’s construction site stormwater program policy. It applies to all construction activities on post and provides potential sanctions for violations.</p> <p>In 2018, Policy Letter #17 was not used to execute any stop work orders</p> <p>A copy of the policy letter is included in Attachment 10.</p>	<p>No.</p>
<p>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.</p>	<p>Fort Carson’s Garrison Commander’s Policy Letter #17 is the installation’s construction site stormwater program policy. It applies to all construction activities on post and provides potential sanctions for violations.</p> <p>The policy letter is posted to the Fort Carson Stormwater Homepage. The homepage can be accessed at the URL provided on Page 2</p>	<p>Yes. Policy Letter #17 was reviewed and is currently awaiting signature by the new commander.</p>
<p>Implement procedures for site plan review that incorporate consideration of potential water quality impacts.</p>	<p>The Fort Carson Stormwater Program is integrated in the design review process and provide inputs on water quality at the 30%, 60%, 90% and 100% design reviews. Specific erosion and sediment control plans are reviewed separately and must be approved prior to an NOI being submitted by the constructor. Design reviews for Low Impact Development and maintenance of hydrology are also included in the process.</p>	<p>No.</p>

<p>Implement procedures for receipt and consideration of information, including complaints of construction site non-compliance, submitted by the public.</p>	<p>The 2017 CGP requires all construction sites with a NPDES permit to post a sign indicating where the public can access or request a copy of the SWPPP. The sign used on Fort Carson includes contact information for the stormwater program manager along with USEPA Region 8. The public is encouraged to contact the Fort Carson stormwater program manager if they have concerns about operations at construction sites. Additionally, the Fort Carson spill line can also be used report complaints.</p>	<p>No.</p>
<p>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.</p>	<p>Erosion and Sediment Control Plans are included in the design review process and are required in the Stormwater Pollution Prevention Plan, which must be approved by the Fort Carson Storm water program prior to an NOI being submitted by the constructor. 2018 Construction projects over 1 acre are noted in Attachment 11.</p> <p>A copy of Fort Carson s SWPPP review form along with a recommended SWPPP template is posted to the Fort Carson Stormwater Homepage. The homepage can be accessed at the URL provided on Page 2.</p>	<p>No.</p>
<p>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.</p>	<p>Fort Carson executes inspections of construction sites on a quarterly basis to check compliance with the MS4 and CGP permits. Inspection reports are maintained on the program’s internal SharePoint portal and findings are provided to the project’s management team for action, if required. Follow up inspection are executed to verify corrective actions. Drive-by inspections are also conducted to check on project progress and to maintain situational awareness of construction activities.</p>	<p>No.</p>

<p>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.</p>	<p>Fort Carson uses a standard inspection form to inspect construction sites. Hard copies of the form are used to record notes in the field. The notes are then transferred to electronic inspection forms upon return to the office. Inspection forms are provided to the project's management team for action. A copy of the form is included in Attachment 12.</p>	<p>No.</p>
<p>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.</p>	<p>Fort Carson uses an NOT form to document compliance with the final stabilization requirements of the Construction General Permit. NOT inspections are scheduled with the constructor and the project management team. If all requirements are met, a letter is issued to the project manager along with NOT form, and the constructor is then authorized to terminate the NDPES construction permit.</p> <p>A copy of the inspection form is included in Attachment 13.</p> <p>During 2018, Fort Carson executed one NOT Inspection, which verified successful completion of final stabilization requirements</p>	<p>No.</p>

Construction Site Stormwater Runoff Control (continued)

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

The Fort Carson Stormwater Program conducts quarterly construction stormwater training to assist contractors, site supervisors, stormwater inspectors, SWPPP preparers, and Troop construction units with construction stormwater management and pollution prevention. Topics include Clean Water Act, NPDES and CGP overview; stormwater BMPs; site stabilization; inspection procedures; and SWPPP preparation. During 2018 the program conducted five training sessions with 38 personnel trained.

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.
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 Fort Carson Stormwater Program is integrated in the design review process and provide inputs on water quality at the 30%, 60%, 90% and 100% design reviews. If the project is over 5,000 square feet in size, the design engineer is required to complete the "Maintaining Hydrology on Army Construction Projects", which documents what control measures will be used to prevent or minimize water quality impacts resulting from the project.	No.
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.	As part of the design process, the design engineer submits the LID Design and Cost tool, which outlines the specific BMPs that will be used to maintain onsite predevelopment runoff conditions.	No.
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.	If the design engineer cannot meet the requirements of maintaining onsite predevelopment runoff conditions, the reasons why are documented on the "Maintaining Hydrology on Army Projects", which is maintained in the project file. In 2018, no projects were determined to be impracticable to maintain predevelopment runoff conditions.	No.

When updated, include hydrologic performance specifications and information related to the design and maintenance of permanent stormwater control measures in natural resource plans.	Hydrologic performance specifications and information is included in the project's basis of design and is maintained by the project management team.	No.
Include post-construction BMP "as-builts" for all newly installed permanent stormwater control measures in a georeferenced data management system.	The collection of "as-built" drawings and associated cut sheets are part of project close out. Deliverables are collected by the project management team and are provided to the DPW GIS section for inclusion in the installation's GIS database.	No.
Ensure that all newly installed post-construction stormwater control measures are working as designed prior to closing out contracts.	Stormwater control measures are included in the Notice of Termination (NOT) inspection process. Control measures which are not operating properly are addressed through the warranty process.	No.
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).	Newly installed permanent post-construction stormwater control measures are added to the base operations contractor's technical exhibit for long-term maintenance. The technical exhibit is updated annually.	No.
Ensure that permanent post-construction stormwater control measures are included in any applicable warranty reviews.	Stormwater control measures are part of the NOT inspection process. Control measures which are not operating properly are addressed through the warranty process.	No.

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

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

Fort Carson conducted annual inspections of 131 permanent stormwater controls and BMPs throughout the installation between April and July of 2018.

The inspections assessed the performance of the control measures and provide a basis for prioritization of maintenance activities. In 2018, the Fort Carson Stormwater program revised the permanent stormwater controls maintenance manual and improved the process for generating service orders to address operations and maintenance deficiencies of Low Impact Development features.

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 through various methods 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. Additionally, each facility is provided a pollution prevention poster, which is included in Attachment 14.	No.
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 conducts annual pollution prevention training for winter maintenance operations. A BMP cut sheet is included in Attachment 15.	No.
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.	All storm sewer inlets are inspected and cleaned annually through a schedule maintained by the base operations contractor.	No.

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.	No.
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.	No.

Pollution Prevention/Good Housekeeping for Municipal Operations (continued)

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

- | |
|---|
| <ol style="list-style-type: none"> 1. Postwide Clean Up Activities. Fort Carson executes a spring and fall clean up event on the installation. Efforts focus on cleaning up trash in unit areas and housing areas which has accumulated over the past months. These efforts reduce the amount of debris and waste in the MS4 and assist in protecting water quality. |
|---|

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 eighty-two (182) visual assessment were conducted at 51 locations within the cantonment area during 2018. A qualitative assessment of the samples indicated that pollution prevention control measures appear to be working and that operators are complying with the installation s stormwater policies. Of the 182 samples observed, only two had signs of petroleum odor.
MSGP Quarterly Analytical Sampling	<p>Analytical sampling was conducted at the following locations at Fort Carson in 2018: 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).</p> <p>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, stormwater controls and pollution prevention.</p> <p>The results of the sampling are included in the 2018 quarterly discharge monitoring reports in the NetDMR system.</p>
MSGP Impaired Waters Sampling	<p>Fort Carson conducts impaired waters sampling at 5 locations. The data from 2018 indicates the presence of <i>E. coli</i> at Building 155 (Recycle Center), Building 9732 (Ammunition Residue Yard), Butts Army Airfield, and two motorpools (Buildings 2792 and 9062).</p> <p>The presence of <i>E. coli</i> is attributable to natural background in the soil and the presence of wild life (e.g. birds, rabbits).</p>
MS4 Semi-Annual Water Sampling	Fort Carson conducted two surface water sampling events in 2018. 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 water quality exceedances for <i>E. coli</i> , residual chlorine, iron, sulfate, nitrate nitrogen, and dissolved selenium in 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
Construction General Permit – Quarterly Construction Stormwater Inspections	<p>The Fort Carson Stormwater Program conducted 96 construction inspections at 29 sites in 2018.</p> <p>The inspections were conducted quarterly with some sites being inspected again as part of follow up from previous inspections. The inspections were documented in the DPW SharePoint system and provided to the project manager and constructor for inclusion in the project SWPPP. While inspectors made findings based on the contractor’s non-compliance with the CGP, generally the findings tended to be minor in nature and were corrected within the timelines specified by the CGP.</p>
Multisector General Permit – Quarterly Routine Facility Inspections	<p>The Fort Carson Stormwater Program conducted 336 routine inspections at 84 facilities on the Fort Carson Military Reservation during 2018.</p> <p>Minor deficiencies identified during the routine inspections were addressed on the spot by the inspector or through Environmental Compliance Assistance Team (ECAT) follow up with the facility operator.</p> <p>Regular inspections performed by the base operations contractor observed and corrected more than 39 stormwater issues. See attachment 15 Base Operations Stormwater Work.</p>
Stormwater Control Measures – LID Feature Annual Inspections	<p>The Fort Carson Stormwater Program conducted performance inspections at 131 LID features in the cantonment area in 2018.</p> <p>The inspection identified 6 features which required maintenance to enable continued proper performance.</p>
U.S. Army Environmental Command Environmental Performance Assessment and Assistance System (EPAAS) Inspection	<p>The U.S. Army Environmental Command (USAEC) executed its three-year EPAAS inspection at Fort Carson on June 19-22, 2017. The EPAAS inspection assessed both the Environmental Management System (EMS) and compliance aspects of a garrison’s environmental program. The team spent a week visiting various locations on the installation to ensure that operations met the requirements of laws such as the Clean Air Act, Clean Water Act, and Hazardous Waste regulations (or corresponding Final Governing Standards (FGS) as well as Department of Defense (DoD) and Army requirements.</p> <p>The inspection had one finding carried over for corrective action in 2018:</p> <ol style="list-style-type: none"> 1. Pollutants (specifically sediment) entering a storm drain due to improper design of stormwater drainage system at Building 1692. Action: The project was funded for repair and completed in 2018.

G. Proposed Changes to the Stormwater Management Program.

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

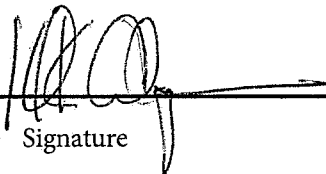
1. Continuously revise and update training materials to reflect current stormwater topics and issues. Training materials include presentations for the Environmental Protection Officer's Course, Construction Stormwater Training, stormwater program brochure, and informational materials.
2. Review and streamline the management of the program as needed in response to a loss of stormwater staff
3. Update to Garrison Commander's Policy Letter #17. New Fort Carson Garrison Commander will review and sign the updated policy

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."

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."

 _____ 21 March 2019
Signature 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).

Attachments

Attachment 1 – 2018 DPW-Environmental Division Training Events

Attachment 2 – EPO Stormwater Class Materials

Attachment 3 – EPO Refresher Training

Attachment 4 - Fort Carson Stormwater Brochure

Attachment 5 – 2018 MS4 Education and Outreach Tracker

Attachment 6 – 2018 Earth Day Celebration Information

Attachment 7 – Make A Difference Day Information

Attachment 8 – Fort Carson Spill Response Procedures

Attachment 9 – Illicit Discharge Tracker Excerpt

Attachment 10 – Garrison Commander’s Policy Letter #17

Attachment 11 – 2018 Construction Activities

Attachment 12 – Construction General Permit Inspection Form

Attachment 13 – Construction General Notice of Termination Inspection Form

Attachment 14 – Pollution Prevention Poster

Attachment 15 – Winter Maintenance Best Management Practices

Attachment 16 - Base Operations Stormwater Work

Attachment 1 – 2018 DPW-Environmental Division Training Events

DPW-ENVIRONMENTAL DIVISION

Environmental Events 2018

ENVIRONMENTAL PROTECTION OFFICER (EPO) CERTIFICATION TRAINING

40-hr EPO Course - 0800 – 1600 hrs, Monday – Friday

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

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

22 – 26 Jan 18; 05 – 09 Mar 18; 23 – 27 Apr 18
16 - 20 Jul 18; 17 - 21 Sep 18; 29 Oct – 02 Nov 18

POC: Suzanne Rohrs (suzanne.a.rohrs.civ@mail.mil) – 526-8893

Sam Saberniak (samuel.i.saberniak.civ@mail.mil) – 524-3534

ENVIRONMENTAL PROTECTION OFFICER (EPO) REFRESHER TRAINING

8-hr EPO Refresher Course – 0800-1600 hrs

Attendees: ESEOs, EPOs/EPNCOs (annually)

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

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

21 Feb 18; 23 May 18; 22 Aug 18; 5 Dec 18

POC: Suzanne Rohrs (suzanne.a.rohrs.civ@mail.mil) – 526-8893

Sam Saberniak (samuel.i.saberniak.civ@mail.mil) – 524-3534

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

Sam Saberniak – ECAT Program Manager – 524-3534

David Nino – 526-9176 Kevin Lyons – 526-0979

Nate Rutledge – 526-0755 James Conner – 526-8000

ENVIRONMENTAL QUALITY CONTROL COMMITTEE (EQCC)

Location: TBD – refer to meeting invite

15 Mar 18; 17 May 18; 9 Aug 18; 15 Nov 18

POC: Suzanne Rohrs (suzanne.a.rohrs.civ@mail.mil) – 526-8893

Sam Saberniak (samuel.i.saberniak.civ@mail.mil) – 524-3534

Attachment 2 – EPO Stormwater Class Material



Outline

- Stormwater and Why it Matters
- Water Quality
- Regulatory Background
- DPW Responsibilities
- EPO Responsibilities
- SWPPPs
- Stormwater: The Good, The Bad, and The Ugly
- Questions

TITLE007 FORT CARSON DPO COURSE 2

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

TITLE007 FORT CARSON DPO COURSE 3

Why Does Stormwater Matter?

Flooding August 2013

TITLE007 FORT CARSON DPO COURSE 4

2013 Flooding Effects at Fort Carson

Tank Trail

Iron Horse Park

TITLE007 FORT CARSON DPO COURSE 5

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 due to flooding

Costly penalties may be imposed if permit provisions are not followed

TITLE007 FORT CARSON DPO COURSE 6

Why Does Stormwater Matter?

Stormwater can affect readiness

T9140267 FORT CARSON DPO COURSE 7

Water Quality

Cuyahoga River, Cleveland, Ohio, Late 1960s

T9140267 FORT CARSON DPO COURSE 8

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

T9140267 FORT CARSON DPO COURSE 9

DPW Stormwater Program 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!

T9140267 FORT CARSON DPO COURSE 10

EPO Stormwater Management 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

Be proactive and address deficiencies before they become problems.

T9140267 FORT CARSON DPO COURSE 11

Facility Stormwater Pollution Prevention Plan

- 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

Know your facility and the response plan.

T9140267 FORT CARSON DPO COURSE 12

Elements of the SWPPP Map

Labels on map: Trash Dumpster, Scrap Metal Dumpster, Spill Kit, HAZMAT Storage, 500 gal Used Oil Tank, 500 gal Used Oil Tank, Outfall.

Page number: 13

Typical Stormwater Collection Features

Labels on photos: Curb Inlets, Linear Drains, Catch Vaults, Drop Inlets.

Page number: 14

Stormwater Catch Vaults

Label on photo: Hand Valve

Stormwater Catch Vaults are intended to be secondary containment for fuelers

If the vault is contaminated or contains debris, call in a service order at (719) 526-5345

Page number: 15

Stormwater: The Good...

Labels on photos: Best Management Practices, Secondary Containment and Spill Kits, Clean Inlets, Secondary Containment.

Page number: 16

Stormwater: The Good... (Low Impact Development)

Labels on photos: Drainage Swale with Vegetation, Permeable Pavement, Green Roof, Biofiltration / Bioretention.

Page number: 17

Stormwater: The Bad...

Labels on photos: Poor housekeeping / spills, Poor material handling, Outdoor storage of batteries, Poor housekeeping / spills.

Page number: 18

Stormwater: The Ugly...Illicit Discharge



Washing vehicles in the motor pool

Use wash racks or the Central Wash Facility!!!

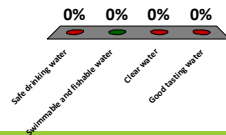
Questions?

Kenny Morris– Stormwater Program 719-526-1697
kenneth.r.morris.civ@mail.mil



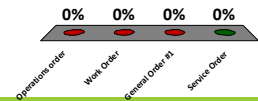
What is the goal of the Clean Water Act?

- A. Safe drinking water
- B. Swimmable and fishable water
- C. Clear water
- D. Good tasting water



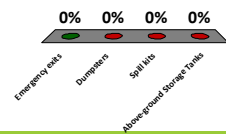
Which type of order do you submit for routine stormwater maintenance?

- A. Operations order
- B. Work Order
- C. General Order #1
- D. Service Order



Which is **NOT** an element of a SWPPP map?

- A. Emergency exits
- B. Dumpsters
- C. Spill kits
- D. Above-ground Storage Tanks



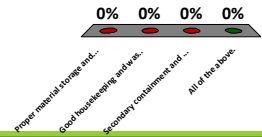
Catch vaults are found in all motorpools on Fort Carson.

- A. True
- B. False



Which are stormwater pollution prevention techniques?

- A. Proper material storage and handling
- B. Good housekeeping and waste management
- C. Secondary containment and spill kits
- D. All of the above.



Attachment 3 – EPO Refresher Training



The Unknown Unknown Knowledge

	Known	Unknown
Awareness	Known Things we are aware of and understand I got this!	Things we are aware of but do not understand Discovery Learning, Avoidance or "Make it Happen"
	Unknown Things we understand but are not aware of Hidden Knowledge	Things we are neither aware of nor understand Ignorance

- ### Outline
- Stormwater management objectives
 - The Unknown Unknown
 - Trends in stormwater management
 - Negative trends
 - Positive trends

Trends in Stormwater Management

Negative

- Poor spill kit management
- Poor material handling
- Tent washing
- Spills at used oil tanks
- Poor handling of wash rack sediments

Positive

- Spill response
- Hard stand maintenance

Discussion:
 What do I know?
 What am I aware of?
 How do I improve the process?

Stormwater Management Objectives

- Protect wetlands and aquatic ecosystems
- Improve quality of receiving waterbodies
- Conserve of water resources
- Protect public health
- Control flooding

Poor Spill Kit Management

Observations

- Lack of materials
- Poor resupply
- Used materials placed in overpack drums
- Poor placement

Discussion

- What should be in the spill kit?
- Where should used material be dispose?
- Who orders spill materials?
- Are kits positioned where they are most effective?

Poor Material Handling

Observations

- Materials stored outside
- Lack of secondary containment
- Labeling

Discussion

- Do we need the material?
- Is there a delay in getting it turned in?
- Is there a better place to store the material?
- Is there a way to cover the material?
- What is the plan for marking and labeling?



T19L0217 FORT CARSON IFO COURSE 7


Handling of Wash Rack Sediments

Observations

- Wash racks are not being serviced properly
- Sediment is removed and dumped on site

Discussion

- What is the process of getting sediment removed?
- Is there a maintenance plan for the wash rack?
- Where should wash rack sediment be disposed?



T19L0217 FORT CARSON IFO COURSE 10


Tent Washing

Observations

- Wash water flowing into storm drains

Discussion

- How can we prevent flows into storm drains?
- Are there alternative locations where tents can be washed?
- Can you use soap or cleaning solutions?



T19L0217 FORT CARSON IFO COURSE 8


Spill Response

Observations

- Trained spill teams work
- Proper materials are available
- Rapid intervention

Discussion

- Are spill response teams established?
- Are the teams trained and rehearsed?
- Are spill response materials available?



T19L0217 FORT CARSON IFO COURSE 11

Spills at Used Oil Tanks

Observations

- Tanks are being overfilled
- Spills occur when material poured into tanks
- Spills are not cleaned up

Discussion

- What is the process for checking tank levels?
- When are tanks being serviced?
- What is the spill response procedure?
- Are spill materials on hand?



T19L0217 FORT CARSON IFO COURSE 9


Hard Stand Maintenance

Observations

- Units are keeping areas clean
- Sweeping up sediment
- Cleaning up spills

Discussion

- What is the process of keeping the motorpool clean?
- What are the procedures for hard stand maintenance after a unit returns from the field?



T19L0217 FORT CARSON IFO COURSE 12

Questions?

Kenny Morris – Stormwater Program Manager

719-526-1697

Kenneth.r.morris.civ@mail.mil



Attachment 4 – Fort Carson Stormwater Brochure

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, 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)**



December 2017 Revision

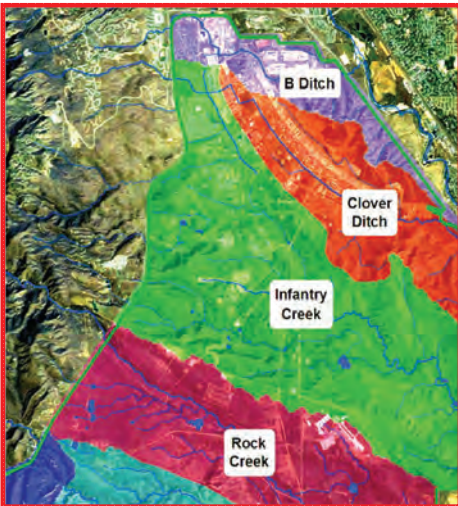
Keep OUR Streams Clean!



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

[http://www.carson.army.mil/DPW/
environmental/stormwater/index2.html](http://www.carson.army.mil/DPW/environmental/stormwater/index2.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 5 – 2018 MS4 Education and Outreach Tracker

Attachment 6– 2018 Earth Day Celebration Information

Community

Household hazardous waste collection is April 26

By **Susan C. Galentine**

Directorate of Public Works Net Zero/Sustainability
public relations

The Directorate of Public Works (DPW) Environmental Division staff is hosting an Earth Day Household hazardous waste collection to help reduce landfill waste and prevent pollution. The Fort Carson community is invited to bring old or used household cleaners, paints, lawn care products, electronics and automotive products to the household hazardous waste collection event set for April 26 from 8 a.m. to 2 p.m. at the parking lot west of the William "Bill" Reed Special Events Center, building 1829. Check out next week's issue of *The Mountaineer* for more information, as the event approaches.

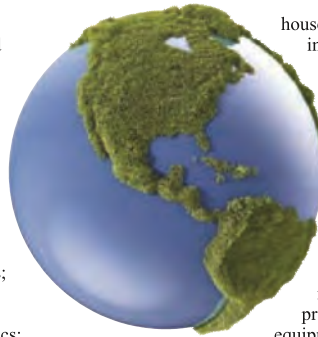
Community members with military identification cards, which includes active duty, Family members, retirees, civil service employees and the like, can drop off old or used household cleaners, paints, lawn care products, electronics and data media and automotive products for proper disposal through the El Paso County Household Hazardous Waste Facility. The event is for collection of household hazardous waste only.

The DPW hosts household hazardous waste collection events to encourage participation in

reducing expensive landfill waste, preventing pollution and helping the installation get one step closer to its Net Zero waste goal.

Household hazardous waste dropped off must be in closed and labeled containers that can be left at the site. Below is a list of items to turn in:

- Household products such as aerosols; ammonia; batteries; bleach; cleaners including: carpet, drain, oven and toilet; cooking and lamp oils; cosmetics; degreasers; deodorizers; fire extinguishers; floor cleaners and waxes; furniture polish and wax; laundry products; mercury; mothballs; photographic chemicals; propane and butane tanks (1 pound and 20 pounds); rust removers; silver cleaners; spot removers; and anything similar.
- Paint, stains, solvents: latex, oil-based, aerosol and hobby paints; and lacquers, stains, strippers, thinners, varnishes.
- Lawn and garden products including lawn and



houseplant fertilizers, herbicides, insecticides, pesticides, rodent poisons; and wood preservatives.

- Automotive products including antifreeze; batteries; brake and transmission fluids; cleaners such as bug, tar, chrome, engine and vinyl; contaminated motor oil; self-service uncontaminated motor oil in 5-gallon containers or smaller only; fuels; and wax.
- Electronics and data media including computers, printers, scanners, audio and video equipment, camcorders, cell phones, digital cameras, fax machines, microwave ovens, TVs, audio and video tapes, CDs, DVDs, Blue-Ray discs, game cartridges. Only one TV and one computer monitor per family will be accepted.

For more information about the event, call 526-4340 or 491-0218.

Military unit hazardous waste must be taken to the DPW Hazardous Waste Storage Facility off of Butts Road for proper disposal. Call 526-0980 for more information. ♻️

Earth Day Household Hazardous Waste Collection



Photo by Susan C. Galentine

Rob Cavanaugh, left, and Joe Tarquino, Directorate of Public Works Environmental Division, inspect household items dropped off for proper disposal during the Earth Day Household Hazardous Waste Collection Event held April 26 at the William "Bill" Reed Special Events Center. Approximately 140 people stopped by to support Fort Carson's efforts to reduce pollution during the annual event.

Attachment 7 – Make A Difference Day Information

Feature



Photo by Pfc. Matthew Rabahy

Above: Joaquin Thola, an 8-year-old volunteer, paints a wooden wall during Make a Day Difference Day Oct. 27 as part of a local beautification project.



Photo by Spc. Robert Vicens Rolon

Right: Sotera Reed, a volunteer, paints a building during the national Make a Difference Day Oct. 27.

Kami and Adilynn Rouse, Girl Scout volunteers, rake leaves during the post's observation of national Make a Difference Day (MADD) at Iron Horse Park Oct. 27. More than a half dozen local volunteer organizations and over 300 volunteers came out in support of MADD, participating in various community improvement projects including raking, painting and drainage cleanup.



Photo by Pfc. Matthew Rabahy

Right: Helen Kidwell, a medical support assistant at Evans Army Community Hospital, scoops a pile of leaves and branches into a compost bag during Make a Difference Day Oct. 27 at Iron Horse Park. Members of several nonprofit organizations volunteered their services.



Photo by Pfc. Matthew Rabahy

Volunteers rake and pick up leaves during the Make a Difference Day Oct. 27 at Iron Horse Park. The Fort Carson Army Volunteer Corps has organized the post's own local Make a Difference Day for 20 years.

Labor of love: Volunteers make difference

By Spc. Robert Vicens Rolon
14th Public Affairs Detachment

Just before the Saturday morning sunrise, Joey Bautista, Fort Carson's volunteer manager, and a retired Army veteran, shines a spotlight in the dark at Iron Horse Park, the field where later in the day hundreds of volunteers gathered to receive a community improvement assignment.

Make a Difference Day, always held on the fourth Saturday in October, is a national event encouraging people throughout the country to perform volunteer work, acts of charity and good will.

"We get here early and we stay late," Bautista said.

More than 300 volunteers from several local volunteer organizations, as well as volunteers without affiliation, participated in a number of on-post community improvement projects in observance of national Make a Difference Day, Oct. 27.

The projects included raking leaves in Iron Horse Park, painting local fences and walls in the community and cleaning storm water drains.

"It's a labor of love," said Bautista, talking about the volunteers, which included Soldiers, retirees and veterans with their families and friends who dedicated Saturday morning to serve the local Fort Carson community.

"I call it the 'miracle that makes a difference,'" said Bautista, pointing at his heart.

There's something in the volunteers' hearts that no matter how busy they are, when Bautista calls for the volunteers' help, they always come.

Heather Rousse, a volunteer, brought her daughters to participate in the event with the local Girl Scouts.

Kami worked alongside her sister, Adilynn, raking leaves with rakes two or three times their size.

"I did it when I was younger," Heather Rousse said. "It's a great way for them to make a sisterhood and get out in the community. It shapes them to be better people."

Heather Rousse wants her daughters to learn the importance of volunteer service and wants them to bring those values back home to New Orleans, where she is originally from.

Elvin Delgado, a Soldier from Puerto Rico who now calls Fort Carson home, said he enjoyed joining his friends in contributing cleanup efforts in his new community.

"It feels good to make a difference and help the community," Delgado said, working alongside dozens of volunteers to paint a wooden wall with rich, red paint.

Everyone on painting duty focused on the task, but there was enough time for the children to have fun while improving the community. Young Joaquin Thola, an enthusiastic boy who came out to paint alongside his sister and mother, got caught up in a painting frenzy and frantically began painting the wall as fast as he could.

"With no regard for the flecks of paint that splattered all over his face, hair, arms and clothes, he finished the wall without breaking a sweat.

"I'm not tired," said Thola, nearly covered head-to-toe in red paint. "Just thirsty."

Many of the volunteers around him laughed out loud, acknowledging that he stole the show.

At the end of the morning's work, the volunteers were treated to a lunch of pizza, hot dogs, chips and other snacks.

Col. Brian K. Wortinger, garrison commander, U.S. Army Garrison Fort Carson, thanked the many local volunteer organizations that were represented at the event.

The volunteers do incredible things, said Wortinger. He thanked those who gave their Saturday, and committed their time to help out the community post. "The best businesses in the Army."

Attachment 8 – Fort Carson Spill Response Procedures



SPILL RESPONSE PROCEDURE



Is spilled material greater than 5 gallons?

NO

YES

Has spilled material entered a drain or storm ditch?

NO

YES

Is the spilled material a fire hazard?

NO

YES

Is the spilled material a health and safety hazard?

NO

YES

Is an SDS for the spilled material onsite?

YES

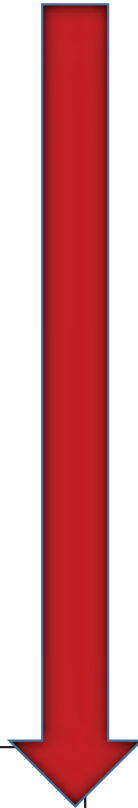
NO

Are the cleanup materials and equipment specified in the SDS readily available?

YES

NO

Clean up spilled material with onsite spill response equipment AND notify the ECAT or HWSF.



Call 911 – ask for the Fort Carson Fire Department

- Without endangering personal health and safety, prevent further spillage and use onsite spill response materials to minimize the spill.
- CALL THE DPW ENVIRONMENTAL SPILL LINE: 526-0973.
- Complete FC Form 1200-E (Spill Report) and submit to ECAT or DPW Environmental personnel.



Environmental Do's

Containers **MUST** be closed and labeled with their contents.

Spills **MUST** be cleaned and reported according to these Spill Response Procedures.

All containers 55 Gallons and above **MUST** be on secondary containment.

Flammable materials **MUST** be stored in flammable storage lockers.

Environmental Do Not's

Don't wash tactical vehicles unless in an authorized wash area.

Don't pour/rinse products into drains.

Don't mix products or wastes.

Environmental Phone Numbers

Environmental Compliance Assessment Team (ECAT)
524-3534 or 526-0979/0755/8000/9176

AST Manager:	526-9411
Hazardous Waste Storage Facility:	526-8003
Pollution Prevention:	526-4340
Recycle Program:	526-5898
Stormwater Manager:	526-1697
Wastewater Manager:	526-1730
Service Orders:	526-5345

Fort Carson DPW Environmental Battle Book
<http://www.carson.army.mil/DPW/>



YOUR EPO/EPNCO IS:

Attachment 9 - Illicit Discharge Tracker Excerpt

Stormwater > Illicit Discharge Report > All Documents =

Pictures	Type	Spill ID	Name	Modified	Modified By	Checked Out To	Spill Location	Quantity Spilled	Cause Of Spill	Affected Resources Or Facilities	Enter Drain Or Ditches	Cleanup Materials Expended	Cleanup Action Taken	Location Recorded On Map	POCName	Was Discharge Illicit
Stormwater Images Clip Art		18-019	18-019 - 2018-07-17T00_00_00-06_00	7/23/2018 7:44 AM	Saberniak, Samuel L Mr CIV USA		Bronco yard to bldg 8300	180	Class III Leak	Paved road	No	360g of dry sweep	Dry sweep from bronco yard to bldg 8300		CW3 Sala, Juan	No
Libraries Site Pages Shared Documents		18-017	18-017 - 2018-06-18T00_00_00-06_00	6/18/2018 12:41 PM	Rutledge, Nathaniel M Mr CTR USA		Building 8300	10	Leaking from PLS Fuel Tank	Building 8300 Motor Pool	No	3-4 Bags Dry sweep, Unit had spill mitigated upon arrival.	Unit had spill under control, was using drip pans to capture leaking diesel, Unit was in process of trying to defuel the tank.		CWO3 Salajimenez	Yes
CGP-MS4-Construction-Inspection-Form		18-016	18-016 - 2018-05-30T15_00_00-06_00	5/31/2018 1:56 PM	Farmer, Jeffery B Mr CIV USA		Building 2615	20 gallons	Fuel line leak from track vehicle	Drainage ditch.	Yes	40 absorbent pads / 4 ea. 55 gallon drums for water contaminated with fuel and soil	Soldiers from 4/10 Cavalry were directed and conducted cleanup operations. Soldiers drained the pool which resulted in approximately 80 gallons of water and fuel to be placed properly into 55 gallon drums for disposal. Soldier then excavated the soil at t	Yes	LT Tack / SGT Flowers	
Illicit Discharge Report MSGP Quarterly Visual Assessments Drop Off Library Routine Inspections LID_BMP_Inspections Shared Documents 2 Shared Documents 3 Shared Document 4		18-015	08-015 - 2018-05-23T08_30_00-06_00	5/31/2018 2:50 PM	Farmer, Jeffery B Mr CIV USA		Dirt located on NE side of the motor pool from HEMTT fueler	20-30 gallons	Broken filter separator, secondary containment plug failed.	Dirt	No	N/A - Used front end loader to scrape up affected soil.	Scraped up affected soil. HWSF delivered empty drums to place contaminated soil in.		SFC Duffield, Mark	No
Lists Calendar Tasks		18-014	18-014 - 2018-05-17T12_00_00-06_00	5/21/2018 6:59 AM	Hahn, Chester N Mr CIV USA		Rte 11 (8° 37'53.28"N // 104° 51'56.49"W)	5 gallons	Front drive shaft and pierced the oil plan of an LMTV	Wearing surface on Route 11 and adjacent drainage ditch.	Yes	40 lbs of dry sweep.	Free product on the road surface was cleaned up using dry sweep. Impacted soil was excavated from the site. All waste materials were taken to the hazardous waste storage facility.	Yes	1SG Romick Spencer	No
Discussions Team Discussion		18-013	18-013 - 2018-05-16T11_30_00-06_00	5/21/2018 8:04 AM	Hahn, Chester N Mr CIV USA		Training Area 14 (38° 38'35.28"N // 104°47'37.95"W)	30 Gallons	Cam lock on the hose was not secured properly during fueling operations.	3 BCT fuel distribution point and Training 14'	No	1 spill kit was used.	5 cubic yards of contaminated soil was excavated.	Yes	SFC Mark Duffield	No
CORACT TRACKER MS4 LID INSPECTION TRACKER MS4 OUTREACH TRACKER		18-012	18-012 - 2018-05-14T20_15_00-06_00	5/21/2018 7:43 AM	Hahn, Chester N Mr CIV USA		Route 5 (38° 39'46.65"N // 104°46'28.98"W to 38° 38'53.03"N // 104°47'4.02"W)	~30 Gallons	Camo netting wrapped around the hydraulics of an M978 fueler and damaged the hydraulic line	Route 5	No	Unknown	Unknown	Yes	SSG Ferrer	No
Recycle Bin All Site Content		18-011	18-011 - 2018-04-19T18_00_00-06_00	5/7/2018 7:42 AM	Florence, Brian L CTR USA IMCOM		Building 8030 (38° 45'11.98"N // 104°46'52.01"W)	55 Gallons	An operator of a fork lift punctured the drum at its base and fluid spilled onto the hard stand. POL products were being stored outside and not in secondary containment, which is not in line with Army policy	SSA hard stand, storage area, and adjacent storm drain.	Yes	Initially the unit used 4 x bags of dry sweep to clean up the spill, however the initial attack was insufficient.	Additional Soldiers and dry sweep were mobilized on 20 ARP 18 to clean up the hard stand with support from Nate Rutledge, the unit's ECAT assessor. The clean up was complete by 1400.	Yes	SSG Whitney Ervin	No

Attachment 10 – Garrison Commander’s Policy Letter #17



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

GC Policy #17

DEC 16 2016

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 11 - 2018 Construction Activities

Name	Project Team (PM & PE / QA)	Permittee	NOI #	NOI Coverage Date	Owner
PCMS Wash Rack	PE: John Buchanan, USACE QA: Brian Crutcher	Hartland / Mass JV	COR10F004	Active (30 MAR 17)	USACE-N
Special Operations Forces Language Lab	PM: Jimmy Harding, USACE PE: Stephanie Webb QA: Trudy Templeton	Medvolt LLC;	COR10F005	Active (4 APR 17)	USACE-N
Candlewood Suites (IHG) (Phase I/Phase II)	PM: Jeff Jafarzadeh, DPW ENG QA: Shannon Steiner	Rest Easy LLC	COR10F006	Active (20 APR 17)	DPW
FY16 Post Wide Erosion Repair	PM: PE: Johnny Nguyen, USACE QA: Trudy Templeton, USACE	Medvolt LLC;	COR10F009	Active (4 MAY 17)	DPW
Postwide Electrical Repairs	PE: Matt Hutchings, USACE QA: Trudy Templeton, USACE	Medvolt LLC;	COR10F00A	Active (4 MAY 17)	USACE-N
Sanitary Sewer System Upgrade (5000 Area)	PE: John Buchanan, USACE QA: Joe Evans	Medvolt LLC;	COR10F00B	Active (4 MAY 17)	DPW
BAAF Assault BN Maintenance Hangar	PM: Jeff Tess PE: Sachkia Hamilton, USACE QA: Don Townsend	David Boland, Inc;	COR10F00E	Active (8 MAY 17)	USACE-S
Cherokee Village (Phase I)	PM: Jerry Stafford, DPW Housing QA: Jason Hughes	Balfour Beatty;	COR10F00F	Active (9 MAY 17)	BBC
Special Operations Forces Battalion Operations Facility (SOF BOF)	PM: Jimmy Harding, USACE PE: Doug Foster, USACE PE: Andrew McPherson QC: Chip Kossow, USACE)	Medvolt	COR10F00O	Active (16 MAY 17)	USACE-N
Medvolt took over		Medvolt	COR10F03S		
Special Operations Forces Regional Support Element (SOF RSE)	PM: Jimmy Harding, USACE PE: Doug Foster QA: Chip Kossow	Medvolt	COR10F00O	Active (16 MAY 17)	USACE-N
		Medvolt	COR10F03S		
Railroad Bridge Repairs (Off Post at Fountain Creek)	PE: Ashley Patz, USACE QA: Joe Evans	Hartland/Mass Joint Venture	COR10F013	Active (29 MAY 17)	USACE-N
10 SFG Sanitary Sewer Repairs	PM: Chris Neuzil, USACE PE: Ashley Patz, USACE QA: Tony Soliz, USACE	Hartland/Mass Joint Venture	COR10F014	Active (29 MAY 17)	USACE-N

Postwide Bridge Repairs	PE: John Buchanan, USACE QA: Joe Evans)	Hartland/Mass Joint Venture	COR10F015	Active (29 MAY 17)	USACE-N
BAAF Rotary Wing Taxiway / Gate 19	PM: PE :James Farmer, USACE QA: Joey Howard, USACE	American West Construction	COR10F016	Active (29 MAY 17)	USACE-S
SOF Group Support Building	PM: Jimmy Harding, USACE PE: QA: Joe Evans, USACE	Bryan Construction	COR10F018	Active (30 MAY 17)	USACE-N
BAAF UAS Hangar	PM: Jimmy Harding, USACE PE: Jake Wiegman QA: Dan Morak	David Boland, Inc;	COR10F01F	Active (31 MAY 17)	USACE-S
Butts Road Paving	PM/PE: Warren Wade QA: Lionel Montoya	Medvolt LLC;	COR10F02P	Active (30 NOV 17)	DPW
Shadow UAS Range	PM: Jeff Tessin, USACE PE: Greg Sipes, USACE QA: Don Townsend	Medvolt LLC;	COR10F02R	Active (11 DEC 17)	USACE-S
BAAF Attack BN Maintenance Hangar-9604	PM: PE :James Farmer, USACE QA: Dan Morak	Straub Construction, Inc.	COR10F02T	Active (12 JAN 18)	USACE-S
Chilled Water Line Phase 2	PE: Andrew McPherson QA: Mike Henderson	John Bowmanm Inc	COR10F030	Active (22 FEB 18)	DPW
Ft Carson Housing_Ute Hill_Phase II	PM: Jerry Stafford, DPW Housing QA: Jason Hughes	Balfour Beatty;	COR10F031	Active (1 MAR 18)	BBC
CMSC Trap and Skeet Range	PM: Mark Hunsicker	Aberdeen Construction	COR10F033	Active (1 MAR 18)	DPW
FY17 Post-Wide Erosion Control	PM: Mark Hunsicker	John Bowmanm Inc	COR10F037	Active (5 APR 18)	DPW
Benham and Blair Qaud Renovation	PM: Mark Hunsicker QA: Joe Evans, USACE	John Bowman Inc.	COR10F038	Active (6 APR 18)	DPW
Iron Horse Park Repairs	PM: Warren Wade QA: Robert Hammond	JE Hurley	COR10F03D	Active (27 APR 18)	DPW
High Voltage Electricity Range	PM: Dennis Owens QA: Brian Cross, DPW-Utilities	Wheeler Electric Inc.	COR10F03H	Active (24 May 18)	USAF
Obstacle Course Iron Horse Park	PE/PM: Mark Hunsicker QA: Lionel Montoya	Olgoonik Diversified Services	COR10F03I	Active (1 JUN 18)	
UAS Launch & Recovery Site Improvements	PE/PM: Warren Wade (warren.l.wade6.civ@mail.mil) QA: Tony Hagg	Medvolt LLC;	COR10F03K	Active (11 JUL 18)	

AIPBC Range Route 7 & Route 9 off CO Hwy 115	PE: Greg Sipes, USACE	HHI Corporation	COR10F03N	Active 2 OCT 18	
Battlefield Weather Facility		Faith Enterprises INC.	COR10F03Z	Active 15 FEB 19	
ASOS Expansion - ASOC		HHI Corporation	COR10F03R	Active 14 DEC 18	
Ammo Supply Point		HHI Corporation	COR10F03W	Active 1 FEB 19	
16-503 BURKE NEW EC DAM 2	ALANIZ ASSOCIATES CORP	Low Erosivity Waiver	COR10F02N	3-Nov-17	
BAAF CAB Projects (Overall Permit)	Resident Engineer: Jacob Wiegmann	Omaha District Army Corps of Engineers	COR10F01C	Active (31 MAY 17)	USACE-S
Digital Multipurpose Training Range	Resident Engineer: Heather Duncan	Omaha District Army Corps of Engineers	COR10F01G	Active (31 MAY 17)	USACE-N

Attachment 12 – Construction General Permit Inspection Form

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:

Nature Of Project Other:

Construction Stage:

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

Construction Stage Other:

Name Of Receiving Waters:

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

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 2017 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

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

5. Final Stabilization

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

6. Site Review

Site Description:

Discharge of Sediment:

Discharge of Pollutants:

Are BMPs maintained adequately to prevent discharge:

Notes

Attachments

 File Attachment

Attachment 13 – Construction General Notice of Termination Inspection Form



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

Attachment 14 – Pollution Prevention Poster

Stormwater Pollution Prevention

What causes stormwater pollution?

Routine activities have the potential to pollute stormwater if not conducted properly. These include:

- Vehicle/equipment fueling and fuel storage
- Improper vehicle/equipment washing
- Vehicle/equipment storage, and parking for those awaiting maintenance, and maintenance
- Spills or leaks from storage of parts, equipment, POL, scrap metals, scrap wood/wood chips/pallets, antifreeze and used antifreeze, used oil, solvents, tires, roll-offs, and recycling bins



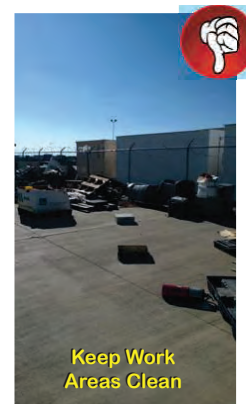
Stormwater Pollutants:

- POLs
- Antifreeze
- Metals
- Cleaning products
- Trash
- Paint/stain/finishing products
- Solvent
- Sediment

Your site will be inspected:

Site inspections are a requirement of Fort Carson's Stormwater Permits. Your site will be inspected at least quarterly by ECAT and/or Fort Carson Stormwater Program staff. Inspectors will conduct a walk through looking at areas where industrial materials or activities are/could be in contact with stormwater, outfalls, and downstream areas to assess the potential for stormwater pollution and compliance with the SWPPP.

Penalties for knowingly violating stormwater regulations (e.g. dumping oil down the drain) can include fines and/or imprisonment.



Minimize Exposure

- DO:
- o Store materials indoors or cover those stored outdoors when not in use
 - o Store materials and equipment in a place where spills or leaks would be easily contained
 - o Drain fluids from equipment/vehicles when they are expected to be unused for a period of time
 - o Wash equipment and vehicles on wash racks or designated wash areas
 - o Conduct work indoors when possible
 - o Use drip pans under parked vehicles/equipment

What You Can Do

Good Housekeeping

- DO:
- o Keep the work area clean and tidy
 - o Keep dumpster and other container lids closed
 - o Routinely conduct "Police Calls" (clean up site by picking up and throwing away trash, and sweeping dirt)
 - o Look out for erosion
 - o Sweep up tracked dirt

- DO NOT:
- o Do not sweep dirt or any other materials into outside drains



Maintenance

- DO:
- o Conduct maintenance indoors when possible
 - o Use drip pans, portable containments, or other effective means of containing leaks spills if outdoor maintenance is necessary
 - o Use dry cleaning methods first

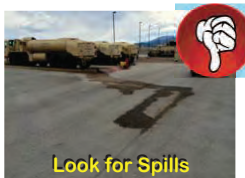
- DO NOT:
- o Do not power wash outside dirty surfaces to clean them



Fueling

- DO:
- o Keep stormwater cutoff/diverter valves closed
 - o Utilize secondary containment for mobile fuel tankers or other portable fueling equipment whenever possible

- DO NOT:
- o Do not discharge collected rainwater from secondary containment without first properly inspecting for sheen and using absorbent pads to collect floating POL



Spills and Leaks

Spills and leaks are a potential source of stormwater pollution. The Spill Prevention Control and Countermeasures Plan (SPCCP) and the spill guidance poster provide guidance for spill pollution prevention.

A list of ways to prevent stormwater pollution can be found in the Fort Carson SWPPP. The SWPPP is available at the Stormwater Program Manager's office, or online at: <http://www.carson.army.mil/organizations/dpw.html#three>

Contact the Fort Carson Stormwater Program Manager at usarmy.carson.imcom-central.list.dpw-ed-storm-water@mail.mil or 719-526-1697 for more information or guidance



Attachment 15 – Winter Maintenance Best Management Practices



FORT CARSON STORMWATER PROGRAM

BEST MANAGEMENT PRACTICES

WINTER MAINTENANCE



Overview. Snow and ice on roads, parking lots, drive-ways, and sidewalks can create hazardous conditions for people and property. Snow and ice removal is best done non-chemically with plows and shovels but, the results are not always adequate to ensure safety. Chemical ice melters (typically chloride salts) and/or sanding is often part of a comprehensive strategy to keep streets and parking lots clear.

Impacts of Salt and Sand. Salt and sand have traditionally been perceived as the cheapest and most effective materials for de-icing driving and walking surfaces; however, the use of salt and sand degrade water quality.

Effects from salt:

- Deplete the oxygen supply needed by aquatic animals and plants;
- Leach into the ground and change soil composition, making it hard for plants to survive;
- Contaminate groundwater and surface waters; and,
- Deteriorate paved surfaces, buildings, infrastructures, and the environment.

Affects from sand:





- Bury the aquatic floor life, fill in habitats, and cloud the water;
- Cause premature deterioration of floor surfaces as it is tracked into buildings;
- Lose its effectiveness after becoming embedded in snow and ice;
- Enter catch basins, storm drains, and surface waters if it is not swept up each spring; and,
- Contribute to clogged storm drains, which can cause flooding.

Best Management Practices

Snow & Ice Removal



- Use mechanical means before applying salt/sand, when-ever possible.

<p>Salt Application</p> 	<ul style="list-style-type: none">• Follow manufacturer's instructions and use only enough to break the ice/pavement bond.• Calibrate salt spreaders to ensure proper application.• Do not apply on vegetation or near waterways.
<p>Sand Application</p> 	<ul style="list-style-type: none">• Use only enough to provide traction on slippery areas.• Sweep up excess sand after snowmelt.• Sweep streets and curbs to remove excess material after storm events
<p>Snow & Ice Disposal</p> 	<ul style="list-style-type: none">• Do not dispose of snow and ice in wetlands, creeks, or other waterways or directly on top of storm drains.• Do not place snow on top of Low Impact Development (LID) features (like rain gardens)
<p>Pollution Prevention</p> 	<ul style="list-style-type: none">• Inspect salt storage structures and make necessary repairs• Store all deicing materials under cover.

Attachment 16 - Base Operations Stormwater Work



COMPLETED SERVICE ORDER REPORT

1/31/201

Report Period: 1/1/2018 -- to -- 12/31/2018

Pri	W/O #	Shop	Received Completed	Description	Total Loaded Cost
2	924716	5300	6/20/2018 6/21/2018	<p>BLDG 3900 DITCH LINE - REMOVE SEDIMENT FROM AROUND SAMPLER - SEE NOTES & ATTACHED</p> <p>STABILIZE EMBANKMENT, OULET AREA & ALL AREAS AOUND SAMPLER WITH RIP-RAP OR 6" DIAMETER ROCK OR WHATEVER SEEMS REASONABLE TO PREVENT SAMPLER FROM GETTING COVERED WITH SEDIMENT & BURIED EVERY QUARTER</p> <p>6/21 adam and bob headed to site / haa</p> <p>AWL 6/21 went to 3900 , called POC, as she is not on site till next week, we will request down grade to get exact location of proposed work. a NEPA permit will have to be applied for due to work being performed in a Waterway of the U.S.</p> <p>6/21 emailed A approval for dg / haa</p>	
	936321	5300	8/13/2018 8/14/2018	<p>BLDG 2082 - 1ST SPACE - STORM DRAIN CLOGGED - CALL POC FOR ACCESS BEFORE 0900</p> <p>NOTIFIED HEATHER @ 2:53 8/13/18 - JDW</p> <p>8/13 talked to bob / haa</p> <p>SF 08/14/2018 09:59:13 -- Tried to contact POC but number listed was wrong, called MSC Heather and was advised to call work control. Lead Adam called work control and was able to retrieve correct number. He contacted POC to have motorpool opened. Waiting for motorpool to get opened, called POC for direction regarding the work order. He was unavailable and sent a soldier to help. Discussed washout issue causing a security</p> <p>SF 08/14/2018 10:03:30 -- issue but did not know which storm drain was clogged in refernce to our workorder. Walked motorpool and checked drains. They were clean. There is a swell on the north west corner that holds water but nothing to do with a clogged drain. Drove outside of motorpool and found an inlet southwest of motorpool at Magrath and Yano that had grass clippings built up which could be a clogged drain the POC</p> <p>S 08/14/2018 10:06:08 -- is talking about. Cleaned inlet off and the inside pipe is clean. After accessing all drains connected to building 2082 found all drains and inlets are not a problem.</p>	
Total Service Orders for Priority 2: 2					
3	879700	5300	11/30/2017 1/19/2018	<p>RANGE 105 CULVERT AND DITCH MANITENANCE</p> <p>RLM 12/7/17 premarked and did dig permit</p> <p>RLM 12/20/17 piced up dig permit we'll start ASP.</p> <p>Bob 12/28/17 Took Anthony Simo down to rande showed him what needs to be done</p> <p>Bob 12/29/17 Anthony Started on ditch work and informed me the culvert is smashed and needs replaced</p> <p>RLM 1/2-1/5/18 filled in low areas on tank trail and removed culvert across route.</p> <p>RLM 1/8/18 Anthony simo used 160 ton of material from clean fill to raise the tank trail.</p> <p>NON CWR ACTIVITY 1/5/2018 RP</p> <p>1/9 graded road , backfill ditch had 1 truck with on load of dirt from the clean fill/ Anthony simo</p> <p>1/10 brought road up with 7 loads of dirt from clean fill 15 tons each - 2 loads 18"-24" rip rap 21 tons - Anthony s</p> <p>1/11 installed culvet pipe and backfilled 19 loads at 15 tons of clean fill dirt- Anthony simo</p> <p>1/12 graded road and finished backfilling culvert brought in 8 loads of clean fill - 15 tons each - 120 tons- Anthony simo</p> <p>ASIMO 01/16/2018 14:42:49 -- backfilled and graded road ...also shaped outlet of culvert built burm and removed excess</p>	

Pri	W/O #	Shop	Received Completed	Description	Total Loaded Cost
3				material ASIMO 01/16/2018 14:47:21 -- backfilled and graded road...also shaped outlet of culvert built berm and removed excess material A01/16/2018 15:14:00 -- recieved 45 ton contractor dirt from cleanfill and 7 ton of BFR's from stockpile A01/16/2018 15:15:40 -- 15 ton dirt from cleanfill and 7 ton of BFR's A 01/17/2018 14:55:38 -- installed rock chks and graded entrance ramp to parking lot A 01/18/2018 14:43:03 -- installed remaining rock chcks and rip rap around inlet...installed bfrs along side of ramp had 75 ton of dirt from cleanfill A 01/19/2018 14:08:11 -- finished hand work and raked...cleaned site and hauled equipment off site...job completed	
887439	5200	1/5/2018		MONTHLY CHECK AND CLEAN IRRIGATION DITCHES	
		1/29/2018	J	01/29/2018 08:01:21 -- checked and cleaned irrigation ditches	
891189	5200	1/24/2018		REMOVE DEAD TREES FROM BEHIND 1554 BARREKS IN I- DITCH	
		3/8/2018	A	1/29/17 NEPA PERMIT WAS PUT IN A 2/5/18 EMAILED DAVEY TO FIND OUT ON STATUS OF NEPA FORM. A 2/8/18 RECIEVED NEPA WILL START 2/12/18. A UNABLE TO WORK DUE TO SNOW. E02/01/2005 23:02:44 -- pulled dead trees that were fallen over already then cut dead trees on east side of ditch pulled trees to top of ditch E02/26/2018 15:14:24 -- removed 112 russian olives along east side chipped piles along top of ditch 35% complete NON CWR ACTIVITY RP 2-27-2018 E 02/27/2018 15:10:14 -- removed 38 russian olives from west side of ditch piled in ditch will pull from ditch tomorrow E 02/28/2018 14:47:26 -- pulled trees out of ditch to top of ditch line bucked up bigger trees stacked wood chipped up brush piles left to chip coned off area blew off fire lane 50% complet will continue tomorrow E 03/01/2018 15:29:04 -- removed 38 russian olives pulled to top of ditch chipped along top of ditch pulled trees to top E 03/02/2018 15:19:25 -- chipped brush along the top was pulled off to do mso rock job at 6237 3/5 REMOVED DEAD PINE TREE, TRIMMED 6 TREES ALONG WESTSIDE OF I DITCH PREPPED DEBRIS TREES FOR WOOD CHIPPER- JDS 3/6 pole saw- trimmed 19 tres on the westside of I ditch , all trimming of trrs completed. chipped - all piles of branches and debris - 4 remaining piles 40% of westside I ditch policed - trash removal - removed 1 stump -jds 3/7 WEST SIDE ON I DITCH COMPLETE 30 % COMPLETE OMN EAST SIDE OF I DITCH - JDS E03/08/2018 15:12:26 -- finish picking up trash out of ditch job complete	
894090	5220	2/2/2018		MONTHLY CHECK AND CLEAN IRRIGATION DITCHES	
		3/6/2018	AJ	UNABLE TO WORK DUE TO SNOW.	
900131	5300	3/1/2018		(NON-CWR) DIG SUPPORT - EROSION AT STP IN DITCH- MOVE FENCE	
		3/8/2018	3/1	BLANE APPROVED CWR ALONG 03/01/2018 15:27:12 -- travel to site . 03/08/2018 15:22:32 -- t . 03/08/2018 15:23:09 -- traveled to and from site RLM 3/20/18 JB finished job. used 1 roll off and hauled 1 load of post to roll off at clean fill.	
900132	5300	3/1/2018		(CONSTRUTCTION WAGE RATE) DIG SUPPORT - EROSION AT STP IN DITCH- MOVE FENCE	

Pri	W/O #	Shop	Received Completed	Description	Total Loaded Cost
3			3/1/2018	ALONG 03/01/2018 15:28:55 -- drill 48 holes for cody, asses site , dig permit and jsa 3/8 dig permit , jsa, pulled 29 post - jeff . 03/08/2018 15:21:09 -- traveled to and from site RLM 3/20/18 Joe Boggs pulled 10 remaining post and loaded all post and concrete, finied job.	
900395	5220		3/2/2018	MONTHLY CHECK AND CLEAN IRRIGATION DITCHES	
			3/14/2018	J 03/08/2018 09:35:11 -- check aclean irrigation ditches nd	
906907	5220		3/30/2018	MONTHLY CHECK AND CLEAN IRRIGATION DITCHES	
			4/20/2018	. 04/20/2018 09:02:33 -- check and clean irrigation ditches	
908942	5200		4/10/2018	IRON HORSE PARK - DRAINAGE DITCH IN AREA 1 CLOGGED WITH LEAVES	
			4/19/2018	RLM 4/12/18 G04/19/2018 15:21:00 -- filled 33 bags of leaves. ditch clean and complete.	
915318	5220		5/4/2018	MONTHLY CHECK AND CLEAN IRRIGATION DITCHES	
			5/31/2018	JL05/31/2018 12:29:07 -- checked and cleaned ditches	
921012	5220		6/1/2018	MONTHLY CHECK AND CLEAN IRRIGATION DITCHES	
			6/29/2018	J06/29/2018 11:52:19 -- check ditches	
921608	5300		6/5/2018	CDC BLDG 6058- NORTH SIDE BLDG- DRAINAGE DITCH CLOGGED MAINTENANCE -STANDING WATER	
			7/30/2018	6/13 WO WAS UNDER THE WRONG SHOP. TRANSFERED TO HEAVY FROM GROUNDS - LJR 6/14 BOB BLUNT GOING TO LOOK AT JOB - LJR 6/15 AWL Bob and Adam looked at this on 6/15, looked at issue on north ditch. the sod is higher than the flow line by 12" . we need to call Don Philips to get guidance on Storm water. AWL 6/18 talked to Don Philips , we will start this the week of 7/9/2018 with proper shop cordination with grounds. Called and informed POC when the work would be started and the possible timeline for completion. need to find out if CWR will apply..... 6/28 AWL marked area and submitted dig permit 7/17 AWL recieved dig permit , scheduled with Alvin to remove sod 7/18 AWL received call from Mindy , asked if we would not start any work in her area till 7/24 due to an inspection from the state of Colorado . 7/25 AWL due to rains the last few days this has been further delayed, more heavy rain is in the forcast till 8/3. 7/30 AWL per Don Philips we are closeing this and reschueling till the fall due to weather conditions. we will track this and in form the POC	
924453	5300		6/19/2018	BLDG 1829 CLEAN OUT DITCH LINE RESTORE FLOW	
			7/25/2018	AWL this will be started on 6/20 . 06/20/2018 14:38:25 -- Changed bucket out on machine and walked ditch line . 06/22/2018 07:03:01 -- Vactor crew exposed gas line Hand dug out the ends of 5 culverts . 06/22/2018 13:03:00 -- didn't work job do to fule delivery . 06/25/2018 15:21:10 -- Shot in 1st section of south ditch, dug out stations, started connecting stations . 06/26/2018 15:31:47 -- dug on south ditch . 06/27/2018 15:23:02 -- dug on south ditch had to put tracks back on machine . 06/28/2018 15:38:48 -- worked light towers for Iron Horse Independence Day celebration in morning	

Pri	W/O #	Shop	Received Completed	Description	Total Loaded Cost
3				dug on south ditch in afternoon	
				6/29/2018 NON CWR ACTIVITY RP	
				JM 06/29/2018 15:25:14 -- dug out outlet and lined with 6 1/2 ton of rip rap	
				started digging on next section of south ditch	
				JMI 07/02/2018 15:14:22 -- Did not work due to fuel delivery / light towers / trip tickets	
				J 07/03/2018 15:30:26 -- dug on middle south ditch	
				7/4-7/6 operator on vacation	
				. 07/09/2018 15:30:12 -- Submitted dig permits for extensions	
				Serviced excavator	
				Laid out ditch and shot elevations	
				Dug out excess rock from in front of culvert outlet and placed on banks	
				J 07/10/2018 15:28:54 -- dug on south ditch between corner and westmost drive way	
				JM 07/11/2018 15:34:56 -- laid out and shot elevation on south section of west ditch	
				cleared 4 culvert ends of rocks so that vactor crew could jetrod 2 culverts	
				. 07/13/2018 07:52:48 -- did not work on 7/12 due to waiting for dig permit extensions to be finalized	
				. 07/13/2018 15:07:08 -- Turned in dig permit for additional work to be done	
				Straightened bent culvert ends	
				. 07/13/2018 15:08:28 -- Excavator taken by mistake, had to replace with another	
				Ran fuel to BAAF fire department	
				J 07/16/2018 15:27:01 -- dug on west ditch along Wetzel between south corner and drive way	
				J07/17/2018 14:56:59 -- Dug out rest of ditch section on west side between corner and south drive way	
				Laid out and shot elevation on west side ditch section between two drive ways, started digging out	
				Lost time due to safety class	
				7/18 AWL this is Maintance activity	
				JM 07/18/2018 15:22:30 -- Dug on west side ditch section between two drive ways	
				J 07/19/2018 15:22:39 -- Dug on west side ditch section between two drive ways	
				J07/20/2018 15:23:25 -- Roaded front broom sweeper to job site, swept parking lot adjacent to ditch, roaded machine back to 8200.	
				Also had to do grill delivery, propane refill, and vehicle shuttling	
				J 07/23/2018 15:30:33 -- Dug out rock from around the drop inlet on the east end of south rock ditch	
				Picked up electric hammer drill from supply	
				Started hammering out concrete from around pipe	
				7/23 AWL checked jobsite, JSA	
				JM 07/24/2018 15:34:50 -- Hammered out rest of concrete from around culvert	
				Pulled drop inlet box and got it up on top of bank	
				J07/25/2018 14:52:37 -- Install rip rap around culvert inlet and red rocked top side of ditch, 3.5 tons	
925915	5300	6/26/2018		BLDG 3490 RESTORE FLOW AND DITCH LINE ALONG SPECKER ST	
		7/16/2018		6/27 AWL marked area and submitted dig permit	
				ASIMO 07/11/2018 15:26:07 -- moved equipment to job and started removing silt and debris	
				ASIMO 07/12/2018 13:55:54 -- removed remaining debris and graded to restore flow in ditchline...reinstalled rip rap rock	

Pri	W/O #	Shop	Received Completed	Description	Total Loaded Cost
3				chk...cleaned site and hauled equipment back to yard A 07/16/2018 08:42:12 -- hauled equipment off site completed job	
926792	5300	6/28/2018	7/17/2018	INSUFFICIENT HRS FOR CWR RP	
		7/18/2018		REPLACING RIP RAP IN DITCH AT STROM DRAIN OUTLET AT BARKLEY AND CHRISTY STREETS AWL 6/28 marked area 7/6 awl submitted dig permit 7/0 awl we have NEPA permit for this RBA07/13/2018 15:17:35 -- started the job after lunch and had 2 tuck loads hauled in and i put then over the side into the hole looks like i will need another 3-4 truck loads to fill it R07/16/2018 15:06:56 -- got to site pretrip equipment had 2 loads of rock dirt from clean fill hauled to site and put that along with the half truck that was here in the hole then put 41 ton of 12" rip rap hauled to site and put that in after that had 1 load of smaller rock from clean fill hauled in to fill in the gaps on the bigger rock. need to clean up site tomorrow 100 ton 2-12 rip rap delivered to site 7/17AWL on hold due to supporting cathodic dig @ 1085,1084,1082 &1081 will resume on 7/18 in the afternoon R 07/18/2018 14:53:39 -- went to the job and finished cleaning and smoothing the job site	
			7/26/2018	NON CWR ACTIVITY RP	
929623	5300	7/13/2018	6/29/2018	MONTHLY CHECK AND CLEAN IRRIGATION DITCHES	
		7/27/2018		. 07/27/2018 11:44:11 -- to muddy to get to ditches bug muesum checked and cleaned	
		7/13/2018		DRAINAGE REPAIR IN I DITCH AT BLDG 2700	
		7/13/2018		RB 07/13/2018 15:27:35 -- had 2 loads of rock hauled in from the clean fill and put the rock around the drain pipe and filled in the hole extended the rock slide and filled around the pipe to make it look good RB 07/18/2018 10:12:57 -- forgot to close out	
930765	5300	7/19/2018		Maintanence DITCH LINE TO RESTORE PORPER FLOW AT BLDG 1392	
		8/8/2018		7/19 AWL marked area for dig permit 7/20 AWL submitted dig permit 7/24 AWL received permit AS07/30/2018 15:14:56 -- layed out ditchline and established flowline while waiting for equipment to arrive...started cutting ditchlie to re-establish flow...had vac truck support to pothole h2o...had plmbrs raise x3 valve boxes so that we can backfill sink hole...removed x1 sign and reported to sign shop to reinstall after job complete A 07/31/2018 15:00:26 -- continued cutting ditchline to restore flow line...vactor truck support jet rodded culvert thru sidewalk and pot holed water line and exposed AS08/01/2018 15:02:09 -- cont cutting ditchline to restore flowline... AS 08/02/2018 14:52:30 -- cont cutting ditchline to restore flowline AS 08/03/2018 14:36:00 -- cont cutting ditchline to restore flowline and graded...reformed and graded side of hill ASIMO 08/06/2018 14:38:17 -- graded ditchline to restore flowline and graded and cleaned site AS 08/07/2018 14:30:15 -- repair erosion from storm and cont cutting ditchline to restore flowline and graded and cleaned site	
			8/8/2018	WILL CHECK W/BOB REGARDING SO RP	

Pri	W/O #	Shop	Received Completed	Description	Total Loaded Cost
3				ASIMO 08/08/2018 14:56:12 -- cleared remaining silt from drain....fine graded and cleaned site...job completed....hauling equipment off	
931731	5300		7/26/2018	8/16/2018 EMAILED R&G TO VERIFY NOT CWR RP	
			7/27/2018	BLDG 1500 - SOLDIERS MEMEORIAL - PARKING LOT FLOODED - STORM DRAIN CLOGGED	
				7/27- stephine and zach- cleaned off storm drain inlet in parking lot. clogged due to grass clippings left behind from mowers and building up and clogging inlet	
933124	5310		7/27/2018	BLDG 6215 REPLACE DITCH WITH ASPHALT	
			8/14/2018	. 08/02/2018 14:45:34 -- went to job to see what was need to do the job, not sure what they are wanting to do over there so i will have to get bob and make sure we do what is wanted	
				8/3 awl - marked area and submitted dig permit	
				. 08/03/2018 13:32:27 -- moved the rock from the area that i needed to cut the curb, used a demo saw to cut the concrete curb out and had to use a sledge hammer to remove the cub because the saw does not cut all the way through picked up concrete and swept up the sidewalk. i also used a laser level to shot grade on the drain that needs to be done. . 08/13/2018 15:02:57 -- reshot grade on drain and mapped out what i need to do, dug out the drain in the dirt side so that the water will drain when i put the asphalt back in. hauled off dirt and then dugout the concrete and the asphalt cleaned up site alittle the ran out of time. will finish preping the patch and cleaning tomorrow and pave it tomorrow. . 08/14/2018 13:21:03 -- got to job site and finished preping and cleaning up the site. waited for my roller to be delivered, it took a little whilecalled for asphalt and when it showed up i paved a 13.5x14 at 3" deep i put down 4 tons of asphalt and 1 gal of tac, dumped water on it to make sure it drained across the asphalt it works perfect just alittle water on concrete curb because it is a carry curb and not a spill 1	
933628	5300		7/31/2018	8/16/2018 INSUFFICIENT HRS FOR CWR RP	
			9/18/2018	DITCH MAINTENANCE- RANGE CONTROL - RANGE 145 - MAIN ENTRANCE TO RANGE - CULVERT FILLED WITH MUD AND DEBRIS AND WILL NOT DRAIN	
				9/4 PREPPED STORM DRAIN TRUCK FILLED UP WITH FUEL, PICKED UP RANGE PASS AND DROVE TO RANGE 145 WENT OVER JSA AND BEGAN WORK VACTORED OUT EAST END TO LOCATE AND EXPOSE CULVERT OPENED IT UP TO ALLOW OPERATOR TO CLEAN OUT DITCH MOVED TOWEST END OF CULVERT AND JET RODDED PIPE RAN HOSE THROUGH A FEW TIMES UNTIL CLEAN MARKED DITCH FOR DIG PERMIT AND SUBMITTED TO DIG PERMITS - STEPHANIE	
				. 09/07/2018 08:17:53 -- Waiting on dig permit.	
				. 09/14/2018 15:25:25 -- clean out ditch line back monday	
				. 09/17/2018 15:16:12 -- put check dams in ditch line hall off excess dirt hall in riprap 14 tons back tomorrow	
				9/17- jacob- delivered 14 ton 2-12 rip rap	
				9/18/2018 NON CWR ACTIVITY RP	
				. 09/18/2018 11:30:34 -- clean up had labor support yesterday and today	
933994	5300		8/3/2018	DITCH MAINTENANCE BY BLDG 2030 - VICTORY LOOP - DIG DIRT OUT TO RESTORE PROPER STREET FLOW FROM STREET TO DRAIN	
			8/27/2018	8/3 awl marked area and submitted dig permit.	
				RSALAZAR 08/06/2018 10:29:14 -- Measured area where concrete needs to be installed to drain,called Adam Long to see if he had put in a dig permit,need to ask Alvin if they can cut grass from street to drain.	

Pri	W/O #	Shop	Received Completed	Description	Total Loaded Cost
3				<p>RSALAZAR 08/08/2018 07:39:34 -- Unable to work due to storm cleaned up. 8/15 RECIEVED DIG PERMIT WILL SCHEDULE WHEN TIME PERMITS / HAA . 08/24/2018 14:31:33 -- had mini ex delivered to job site pull back sod with mini ex dig swale put sod back load dirt in dumptruck hall off</p>	
933996	5300		8/3/2018 8/29/2018	<p>DITCH MAINENANCE - AT TITUS AND SHERIDAN BY BLDG 7493 - REMOVE SPOILS TO RETURN FLOW 8/3 awl marked area and submitted dig permit 08/27/2018 14:58:52 -- had equipment moved to job site from bldg 8200. had irrigation lines marked. started digging out drainage ditch and moved dirt that was dug out from ditch to area that can be loaded into dump truck at a later date.</p> <p>8/28/2018 NON CWR ACTIVITY RP . 08/28/2018 14:52:10 -- dug out and shaped first half of drainage ditch. have to come back and smooth out after ditch dries out. started digging out second half of drainage ditch. moved material from ditch to area that can get a dump truck in to load at a later date. . 08/29/2018 14:50:27 -- no truck support. i was truck driver and operator today. hailed in 7 tons of 36 inch rip rap. hailed 6 loads of dirt to cleanfill. dug out and shaped east end of drainage ditch. still have to smooth out entire ditch and haul away the rest of the dirt that was pulled out of ditch. . 08/30/2018 15:01:32 -- finished digging out and shaping ditch. had truck driver haul away 2 truck loads of dirt from drainage ditch. smoothed out and hand raked drainage ditch and work area around ditch. west side of drainage ditch was still wet and muddy, wasn't able to completely smooth. had equipment moved back to bldg 8200.</p>	
934423	5220		8/7/2018 8/29/2018	<p>MONTHLY CHECK AND CLEAN IRRIGATION DITCHES J 08/17/2018 12:35:36 -- weed eat ditch by bug muesum check boyscout ditch and clean 08/29/2018 15:11:25 -- finished up ditches</p>	
939271	5300		8/27/2018 9/7/2018	<p>STORM DRAIN CLEAN UP AT BLDG 6237 #933034 Bldg 6237 Your tech needs to check the storm drains around the bldg and clean if needed 200-7366</p> <p>Thanks much,</p> <p>. 08/28/2018 13:27:43 -- Went to inspect storm drains. There were too many vehicles in parking lot, will have to work during early morning schedule. . 09/07/2018 08:47:44 -- Unsure of the problem went inside and was informed person responsible for writing up the work order no longer works at building 6237. Was asked to check all drainage around building after checking all culverts are</p>	

Pri	W/O #	Shop	Received Completed	Description	Total Loaded Cost
3				clear and all 3 drains are clean. The problem maybe due to size of the pipe carrying out the storm water on north west side of building or the down spout carrying out the roof water.	
940427	5220		8/31/2018	MONTHLY CHECK AND CLEAN IRRIGATION DITCHES	
			9/27/2018	. 09/27/2018 08:14:17 -- check and clean irrigation ditches	
				. 09/27/2018 10:14:26 -- no water at at ditches couldnt get into water point ditch	
942221	5300		9/11/2018	FILL IN HOLE N DITCH SOUTH OR ELLIS IN DITCH LINE	
			9/13/2018	. 09/13/2018 14:23:11 -- used 1 bucket of clean dirt to fill hole and smooth out area around hole.	
943975	5300		9/19/2018	BLDG 1692 DITCH MAINTENANCE	
			9/19/2018	. 09/19/2018 15:18:53 -- dig out beaver slide load in dumptruck hall off excess dirt clean up done with job	
944183	5300		9/20/2018	BLDG 2992 DITCH LINE MAINTENANCE	
			10/12/2018	9/20-awl-marked and submitted dig permit	
				9/26/-awl- received dig permit	
				. 10/01/2018 14:56:47 -- start shaping ditch line hall off excess dirt 4 dumptruck loads back tomorrow	
				10/2- awl - Pete was pulled off this for PRI 1 dig support @ bldg. 3708	
				. 10/04/2018 13:38:21 -- continue cleaning out ditch line hall off one dumptruck load of dirt back tomorrow .	
				10/05/2018 15:07:55 -- cut moore ditch line load in dumptruck hall off clean up done for the day back tuesday .	
				10/09/2018 14:49:19 -- clean up beset i could in the mudd back tomorrow	
				10/10/18 NON CWR RP	
				. 10/10/2018 14:55:23 -- cut ditch line added 4 tons of riprap delivered to job site back tomorrow	
				. 10/12/2018 14:29:54 -- finish ditch line clean up done with job had mini ex picked up hall back to yead	
944210	5300		9/20/2018	MAINTENANCE - CLEAN DITCH LINE BETWEEN 8110 AND 8200	
			10/23/2018	9/19-awl-marked area and submitted dig permit	
				. 10/03/2018 14:56:36 -- walked the mini ex from the shop to the site started on the inside of the gate. dug down and found the end of the colvert then shoveled out all the dirt and weed out of the opening. dugout the ditch so it would flow in to the colvert and wasted the dirt in the washout next to the colvert and under the fence had adam come by to descuss what he wanted done with the rest of the ditch line	
				. 10/04/2018 14:59:36 -- pretriped grader and took it to job site and started to grade some of the dirt and weeds into the ditch that needs to be filled. jake brought me out 2 loads of dirt from clean fill to put in ditch we will need to bring out more tomorrow	
				. 10/05/2018 15:00:21 -- had jake haul in 16 tons of rip rap to the job site to put around the manhole that is in the ditch. he also hauled in 5 truck loads of dirt from the clean fill to fill up the ditch and i graded them in still need 2-3 trucks of dirt to finish filling the ditch.	
				. 10/09/2018 15:09:45 -- walked to site pretripped the grader the pushed in a load of dirt that got delivered last friday then graded out the ditch and next to the colvert but it was to muddy to fine tune it	
				10/10/18 NON CWR RP	
				. 10/15/2018 14:58:53 -- got tot the job site and the gate was locked and they bypassed the fire lock so i couldnt get in to the fence called adam to see if he had a key and no. so i went back to the yard and walked a mini ex to the ditch that was outside the fence that i need to dig also got the ditch dug out but still need to use a grader to waste the dirt on the fire break	
				10/18- on hold due to asphalt work @2146 and Wilderness Road	

Pri	W/O #	Shop	Received Completed	Description	Total Loaded Cost
3				10/22/18- on hold due to water main break . 10/23/2018 15:01:38 -- went and finished the rest of the ditch out side of the gate and cleaned up the fire break where all the dirt went to. the mechanics moved all the dirt on the fire break testing a grader so i had to clean that up also. it was the dirt from my ditch	
944814	5300	9/25/2018	9/28/2018	DITCH MAINTENANCE AT BLDG 8999 . 09/25/2018 15:17:14 -- dug out first ditch behind fence. dug out to get water to drain from culvert to main ditch line. had vactor crew clean out culvert.	
				started digging out drainage ditch along oconnell. 1 labor support. . 09/26/2018 15:09:20 -- half of the drainage ditch along oconnell by bldg 8999 is dug out and smooth out for proper water drainage. had 2 truck loads of dirt hauled to cleanfill. 1 labor support. 9/27/18 NON CWR ACTIVITY RP . 09/28/2018 09:49:12 -- 9-27-18= did not work today because i was working on paint ordering and scheduling. . 09/28/2018 14:59:00 -- dug out and shaped second half of drainage ditch along oconnell. used dirt from drainage ditch to fill washout. still need to rake out ditch and around ditch, and need to add rip-rap on east side of ditch along oconnell. 10/2 dug north end of ditch , put riprap on south end by inlet 3 tons, cleaned area- job complete - ray	
945446	5600	9/26/2018	10/29/2018	REPAIR DAMAGE TO DRAINAGE DITCHES CANTONMENT AREA 10/25/18 Begin repairs to damaged drainages from troop movement. ET	
947962	5300	10/3/2018	11/23/2018	REPLACE 2 STORM DRAIN GRATES ON SPECKER AND OCCNELL 10/3 PRI 3 PR 199222 / HAA 10/11-awl-waiting on parts 10/30 po 111509 edd 11/16/ haa 11/19 tried to call LINDSAY PRECAST INC no one answered emailed purchasing to see if they could get ahold of vendor to see when parts will be in / haa 11/19 purchasing got ahold of vendor, they only made 1/2 the order one is ready for pick the other they have to make and has a 4 week lead time, est edd 12/21 haa 11/23 awl went to site replaced grates, disposed of old grates	
948518	5220	10/5/2018	10/26/2018	MONTHLY CHECK AND CLEAN IRRIGATION DITCHES . 10/26/2018 08:55:37 -- checked and clean irrigatoon ditches	
954282	5220	11/2/2018	11/29/2018	MONTHLY CHECK AND CLEAN IRRIGATION DITCHES . 11/28/2018 08:58:39 -- check and cleaned irrigation ditches	
	960338 5220	11/30/2018	12/20/2018	MONTHLY CHECK AND CLEAN IRRIGATION DITCHES . 12/20/2018 14:32:07 -- checked and clean irrigation ditches	
963197	5300	12/12/2018	12/27/2018	DITCH MAINTENANCE CONCRETE TANK TRAIL BLDG 3490 12/12/18-awl- marked area and submitted dig permit	

Pri	W/O #	Shop	Received Completed	Description	Total Loaded Cost
3				. 12/20/2018 15:04:34 -- had mini ex delivered to job site start cleaning out ditch line back monday . 12/21/2018 14:40:45 -- clean mudd and silt off of drop inlet put in dumptrucks halld off clean up done for the day back monday . 12/24/2018 14:56:47 -- load excess dirt in dumptruck hall off fill in rutts grated had sweeper clean road	
				12/26 NON CWR ACTIVITY RP	
963307	5300	12/13/2018		DITCH MAINENANCE AT ELLIS AND WARE ST NEAR BLDG 5940	
		12/28/2018		12/14/18-awl- submitted and marked dig area	
				12/26 removed the grate to clean silt and trash - restore flow line- Anthony s, martie, dustin	
Total Service Orders for Priority 3: 38					
Total Completed for Period: 40					