# STORMWATER MANAGEMENT PLAN
# FORT CARSON, COLORADO

**JANUARY 2016**

**REVISED DECEMBER 2017**

**EFFECTIVE DATES OF THE FORT CARSON MS4 PERMIT NO. COR042001**

**1 January 2016 to 31 December 2020**

Fort Carson Directorate of Public Works, Environmental Division

Fort Carson, Colorado


*Original Prepared by:*

HDR

9781 S. Meridian Blvd

Englewood CO 80112

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## SUMMARY OF CHANGES

Pursuant to Section 2.1 of the Fort Carson Municipal Separate Stormwater Sewer System (MS4) Permit (COR042001), the Fort Carson Stormwater Management Plan was reviewed and updated in December 2017.

The following list documents the changes made to the document during the update:

- Corrected grammatical errors globally in the document
- Updated climate information in Section 2.2.
- Updated impaired waterways list Table 2.1
- Updated CDPHE basic water quality standards in Table 2.2
- Updated measureable goals for all Stormwater Control Measures (SCMs) and moved the tables to Appendix B.
- Added a list of the trackers used to document SCMs on SharePoint in Section 4.1
- Moved the elements of the annual report from Section 4.2 to Appendix F
- Updated the installation maps for watersheds and impaired waterways
- Added Garrison Commander's Policy Letter #17 (revised in September 2016) to Appendix D
- Added the construction inspection procedures to Appendix E
- Added the updated Delegation of Authority memorandum for MS4 permit actions to Appendix G.

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# LIST OF ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| ADACG | Arrival and Departure Airfield Control Group |
| BMP | Best Management Practice |
| CDPHE | Colorado Department of Public Health and Environment |
| CFR | Code of Federal Regulations |
| CGP | Construction General Permit |
| COR | contracting officer representative |
| CWA | Clean Water Act |
| DPW | Directorate of Public Works |
| ECAT | Environmental Compliance Assessment Team |
| EPO | Environmental Protection Officer |
| GC | Garrison Commander |
| GI | green infrastructure |
| GIS | Geographic Information System |
| IDDE | Illicit Discharge Detection and Elimination |
| INRMP | Integrated Natural Resources Management Plan |
| LID | low impact development |
| mg/L | milligram per liter |
| MS4 | Municipal Separate Storm Sewer System |
| MSGP | Multi-Sector General Permit |
| NEPA | National Environmental Policy Act |
| NOAA | National Oceanic and Atmospheric Administration |
| NOT | Notice of Termination |
| NPDES | National Pollutant Discharge Elimination System |
| O&M | Operations and Maintenance |
| OWS | oil/water separator |
| PCMS | Piñon Canyon Maneuver Site |
| POL | petroleum, oil, and lubricant |
| RFP | Request for Proposal |
| SCM | Stormwater Control Measures |
| SOW | Scope of Work |
| SPCCP | Spill Prevention Control and Countermeasures Plan |
| SWMP | Stormwater Management Plan |
| SWPPP | Stormwater Pollution Prevention Plan |
| TM | Technical Manual |
| USEPA | U.S. Environmental Protection Agency |

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# 1 INTRODUCTION

This Stormwater Management Plan (SWMP) describes the procedures Fort Carson implements to comply with requirements of the United States Environmental Protection Agency (USEPA) permit number COR042001(Appendix A). This permit provides authorization to discharge stormwater runoff from Fort Carson's Municipal Separate Storm Sewer System (MS4).

This permit does not authorize stormwater discharges associated with industrial activities as defined in 40 Code of Federal Regulation (CFR) § 122.26(b)(14)(i)-(ix) and (xi) or discharges associated with construction activity as defined in 40 CFR § 122.26(b)(14)(x) or 40 CFR § 122.26(b)(15). Piñon Canyon Maneuver Site (PCMS), an off-site training location associated with Fort Carson, is not covered under this permit.

## 1.1 Background

The Clean Water Act (CWA) requires facilities to reduce, minimize, or eliminate sources of pollution exposed to stormwater runoff. The goals of the CWA are to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. The CWA provides the statutory basis from the National Pollutant Discharge Elimination System (NPDES) permit program and the basic structure for regulating the discharge of pollutants from point sources to the waters of the United States. Section 402 of the CWA specifically required USEPA to develop and implement the NPDES program.

In November 1990, the USEPA implemented the NPDES Phase I stormwater regulations. The Phase I regulations required medium and large MS4s, communities of 100,000 people or more within urbanized areas, to obtain NPDES permits to discharge stormwater runoff to the environment. In 1999, the USEPA initiated Phase II, which required small MS4s (populations of less than 100,000 people within an urbanized area) to obtain NPDES permits to discharge stormwater runoff. The purpose of the Phase II stormwater regulations is to provide a flexible approach for reducing environmental harm caused by stormwater discharges that were not previously regulated.

Fort Carson received a NPDES permit for its non-standard small MS4 in compliance with the provisions of the USEPA NPDES MS4 Phase II requirements. This permit required Fort Carson

to comply with the same requirements as other, traditional MS4s such as a city or town. While successful in controlling pollutant discharges associated with MS4 stormwater, the small MS4 permit contained requirements and provisions more appropriate to a traditional MS4, not a military installation such as Fort Carson. Coordination with USEPA regarding lessons learned from the implementation and execution of the initial permit resulted in the issuance of the individual permit that currently applies to Fort Carson. The individual permit contains requirements specific to Fort Carson that provide practical and achievable controls to municipal stormwater pollution.

This SWMP describes management practices for the control of pollutants in discharges from the MS4. The management practices prescribed by the permit are divided into six stormwater control measures (SCM). For each SCM, the SWMP details how each is implemented and measured. The six SCM are:

- SCM-1: Public Education and Outreach on Stormwater Impacts (Section 3.1)
- SCM-2: Public Involvement/Participation (Section 3.2)
- SCM-3: Illicit Discharge Detection and Elimination (Section 3.3)
- SCM-4: Construction Site Stormwater Runoff Control (Section 3.4)
- SCM-5: Post-construction Stormwater Management for New Development and Redevelopment (Section 3.5)
- SCM-6: Pollution Prevention and Good Housekeeping (Section 3.6)

The annual report tracks the progress of the SWMP implementation, and is due to the USEPA on April 1 of each year of permit coverage. Fort Carson conducts an annual review of the SWMP in conjunction with the annual report preparation.

# 2 SITE DESCRIPTION

## 2.1 General

Fort Carson is an active duty United States Army installation located in southern Colorado which occupies approximately 220 square miles. It is bounded on the northeast by Interstate Highway 25 and on the north by Colorado State Highway 83 (Academy Boulevard). The northern portion of the west boundary is adjacent to Colorado State Highway 115. The southern boundary is approximately 10 miles north of and parallel to U.S. Highway 50 in Pueblo County. The majority of the Installation is located in El Paso County with two small areas in the southwestern portion located in Fremont and Pueblo Counties. The approximate longitude and latitude of the facility are 104° 49' 00" and 38° 36' 00".

The primary mission of Fort Carson is the training and preparation of all assigned and attached units to ensure combat-readiness. The cantonment area on the north end of the property contains military family housing, retail and food services in addition to military functions. This area is mostly developed with the exception of parks, limited open space, and landscaped/vegetated areas around buildings. Principal industrial operations include repair and maintenance of vehicles and aircraFort Training areas make up the large area south of the cantonment and are predominantly undeveloped with the exception of a few support buildings.

The MS4 permitted area includes all areas within the exterior boundaries of Fort Carson, and is shown on Figure 1 in the Apppendix. Figure 2 displays the watersheds within the cantonment area.

## 2.2 Climate

Fort Carson's climate is characterized as mid-latitude semi-arid with hot summers, cold winters, and light rainfall. Climate data is available for Colorado Springs (www.weather.gov/pub/climateCosPrecipitationRecords). Annual precipitation varies greatly with a maximum annual total in excess of 27.58 inches (in) 1999 and a minimum annual total of 6.07 inches in 1939. The annual precipitation 30-year average is 16.21 inches. The annual all-time average is 15.22 inches, since data recording began in 1895. The majority of the precipitation that falls at Fort Carson is typically between April and August.

## 2.3 Receiving Waters

Fort Carson is located in the Fountain Creek and Upper Arkansas River watersheds. Fountain Creek discharges into the Arkansas River just south of Fort Carson within the city of Pueblo.

The cantonment area at Fort Carson drains to one of four watersheds on Installation including B Ditch, Clover Ditch, Infantry Creek, and Rock Creek. These four drainages all discharge into Fountain Creek off- Installation. Figure 2 in the figures section shows the Fort Carson cantonment watersheds.

The Fort Carson streams are identified by the Colorado Department of Public Health and Environment (CDPHE) as warm water, Class 2 Tier for Aquatic Life uses. As of the 2016 reporting year, ten streams are listed as impaired (303D) for recreation: primary contact, with the cause of impairment being *Escherichia coli*. Most of these tributaries are located within the cantonment area and in the northeast portion of the installation. These ten tributaries to Fountain Creek are in the impairment category 5, which means that the water is impaired and a total maximum daily loads (TMDL) are required. While no TMDLs have been established in the Fountain Creek Watershed, the Permit Statement of Basis indicates that the permit may be reopened and modified prior to its expiration date to include waste load allocations or specific control measures for municipal stormwater point source discharges in the event a TMDL is issued.

Additional details regarding impairments may be found in Water Quality Commission Reports and Plans with links to the Integrated Water Quality Monitoring and Assessment Report 2016 and Regulation # 93 at https://www.colorado.gov/pacific/cdphe/wqcc-reports-and-plans. Table 2.1 provides a summary of Fort Carson Installation impaired waters. A map of the impaired waterways is provided in Figure 3 in the figures section.

**Table 2.1 – Impaired Waterways on Fort Carson**

| Waterbody Identification Number (WBID) | Name | 303 D Impairment | Monitoring and Evaluation (ME) |
|---|---|---|---|
| COARFO04 | B-Ditch | E. coli | |
| COARFO04 | Infantry Creek | E. coli | FeTrec (Total Recoverable Iron) in section COARFO05_A |
| COARFO04 | Rock Creek | E. coli | |
| COARFO04 | Clover Ditch | E. coli | |
| COARFO04 | Little Fountain Creek | E. coli | SeD dissolved selenium in section COARFO04_C |
| COARFO02a | Fountain Creek | E. coli | FeTrec (Total Recoverable Iron). Assigned ambient based chronic selenium standard of 8.0ug/L (page 77 of Reg. 93) |
| COARFO04 | Sand Canyon Creek | E. coli | |
| COARFO04 | Crooked Canyon Creek | E. coli | |
| COARFO04 | County Line Creek | E. coli | |
| COARMA04a | Wildhorse Creek | E. coli | NO2 (Nitrogen dioxide) |

Surface water quality standards are set by the Colorado Department of Public Health and Environment (CDPHE) Water Quality Control Commission for the Fort Carson Installation Streams. A summary of parameters excerpted from CDPHE Water Quality Control Commission Regulation No. 31- The Basic Standards and Methodologies for Surface Water 5 CCR 1002-31 is included in Table 2.2.

**Table 2.2 – CDPHE Basic Standards and Methodologies for Surface Water (Excerpted from 5 CCR 1002-31)**

| Radionuclide Standards (ug/L) (pg 31) | Selected Organic Chemicals-water supply (ug/L) (pg 32-41) | Physical and Biological (pg 50) | Inorganics (pg 54) | Metals-aquatic life, acute (pg 57-58) | Nutrients for warm rivers and streams (pg. 66) |
|---|---|---|---|---|---|
| Americium 241≤ 0.15 | Acetone ≤ 6300 | Dissolved Oxygen ≤ 3.0-7.0 mg/L | Ammonia=generally 10 PPM or less | Arsenic ≤ 340 ug/L | Phosphorous ≤ 170 ug/L |
| Cesium 134 ≤ 80 | Biphenyl ≤ 4.4 | pH 6.5-9.0 | total residual chlorine ≤ 0.019 | Chromium VI ≤ 16 ug/L | Nitrogen ≤ 2,010 ug/L |
| Plutonium 239 & 240 ≤ 0.15 | Chlorobenzene ≤ 100 | e-coli≤ 126 CFU's /100 mL | cyanide ≤ 0.005 mg/L | Selenium ≤ 18.4 ug/L | Chlorophyll ≤ 150 mg/m |
| Strontium 90 ≤ 8 | DDT ≤ 0.1 | temperature for Tier 2 waters (Apr-Oct=18.3 - 24.3 °C) (Nov.-Mar 9.0-13 °C) | Fluoride<=N/A | | |
| Thorium 230 & 232 ≤ 60 | Fluorene (PAH) ≤ 280 | | Nitrate=case by case basis | | |
| Tritium ≤ 20,000 | Glyphosate ≤ 700 | | Nitrite= case by case basis | | |
| | Phenol ≤ 2,100 | | Sulfide H2S ≤ 0.002 | | |
| | Vinyl Chloride ≤ 0.023-2.0 | | Sulfate≤ 250 mg/L (pg 43) | | |

For additional information on surface water quality parameters, refer to CDPHE Regulation # 31 at http://www.sos.state.co.us/CCR/GenerateRulePdf.do?ruleVersionId=7050

## 2.4 Other Programs Supporting the MS4

Fort Carson is subject to environmental requirements like large MS4s. Other programs supporting these requirements at Fort Carson provide a benefit to the MS4 program goals. Programs most applicable to the MS4 compliance include the Multi-Sector General Permit (MSGP) for industrial stormwater discharges and associated Stormwater Pollution Prevention Plan (SWPPP), the construction stormwater program, and the Spill Prevention, Control and Countermeasures Plan (SPCCP).

Industrial stormwater discharges at Fort Carson are regulated by the MSGP. The SWPPP is the compliance document for this permit, and provides control measures to reduce pollution from the industrial sites. The primary industrial activity at Fort Carson involves Sector P facilities such as

Motor Pool maintenance activities, bulk refueling stations, and rail heading. Numerous auxiliary activities are present, including: Sector K-hazardous waste storage facility, Sector S-Butts airfield with hangars and clamshells, Sector N-recycle center, DLADS, and Ammo residue yard, Sector T-Waste Water Treatment Plant. All but two of these industrial sites are located within the MS4 permit boundary. Control measures required by the MSGP and prescribed by the SWPPP support MS4 illicit discharge detection and elimination and pollution prevention and good housekeeping requirements. The SWPPP is available online at: http://www.carson.army.mil/DPW/environmental/stormwater/index2.html

Fort Carson administers a construction stormwater program for land disturbance projects greater than or equal to an acre of disturbance. Construction site operators are required to develop a site specific SWPPP that provides protection against erosion and sediment transport, and impacts from potential pollutants. Construction sites are routinely inspected (as detailed in Section 3.4 of this SWMP), and must be properly stabilized prior to project closeout. This program supports the MS4 construction site stormwater runoff control requirements.

A facility-wide SPCCP directs spill prevention and response measures at Fort Carson. Controls implemented through the SPCCP address significant sources of potential pollutants, and prevent stormwater from coming into contact with such materials. This program supports MS4 public education and outreach and illicit discharge detection and elimination requirements. The SPCCP is available upon request.

# 3 EFFLUENT LIMITS AND MONITORING REQUIREMENTS

Fort Carson complies with the MS4 Permit requirements through existing programs, policies, and procedures. Program goals provide direction and focus on program improvement. The sections below provide a program overview and highlight stormwater program efforts that contribute to SCM requirements. The summary table in Appendix B documents how the stormwater program complies with permit requirements over the permit term.

## 3.1 Public Education and Outreach on Stormwater Impacts

Fort Carson maintains an ongoing public education and outreach program, including training and dissemination of educational materials.

Environmental Protection Officer (EPO) training is the primary environmental training mechanism for military units on the installation. EPOs are the individuals within each military unit responsible for knowing and following environmental rules and regulations. EPOs are trained by the stormwater program and are responsible for training their respective unit on stormwater protection. Other groups on Installation such as civilian employees, contractors, and tenants are also trained with respect to their duties/activities and how they relate to potential stormwater pollutants. Construction contractors are also offered a class in stormwater management and the expectations of the Fort Carson stormwater program. The training covers BMP's, permitting, SWPPP authoring, and pollution prevention. Attendees receive a certification for the class that goes into the SWPPP notebook.

Training events, both formal and informal, provide opportunities for the stormwater program to educate the public on important stormwater issues. Formal training events have previously included a course focused on the inspection and maintenance of post-construction, low impact development best management practices (BMPs). Informal training occurs during stormwater outreach activities (such as Earth Day or Make a Difference Day) when program representatives have the opportunity to interact with the public and discuss stormwater-related topics. Passive training is also provided by stormdrain stenciling with messages such as, "No dumping, drains to river."

Training events also provide an opportunity to distribute educational materials, such as the stormwater awareness brochure. The brochure along with other educational materials including community outreach emails and the resident's guide provide a mechanism for the program to distribute simple, key messages to a large portion of the public.

## 3.2 Public Involvement/Participation

Fort Carson involves the public in the stormwater program and encourages participation by hosting stormwater related events and providing stormwater related information.

Past events held by the stormwater program have included Make a Difference Day and Installation Clean-up Days. These events engage the Fort Carson public and provide an opportunity for applied learning at potentially impacted areas. Make a Difference Day typically involves volunteer staff working in conjunction with stormwater program representatives to clean up trash in drainage areas within the cantonment area. The stormwater program utilizes this event to educate volunteers about how the pollution they are seeing impacts water quality, and what can be done to prevent it. Installation Clean-up Days involve military units pursuing Good Housekeeping practices in their assigned work areas and surrounding areas.

The stormwater program also engages the public by making stormwater related documents (this SWMP and related Annual Reports) and public notices available for the public's review. This informs the public about the stormwater program's goals and progress towards those goals.

## 3.3 Illicit Discharge Detection and Elimination

An illicit discharge is any discharge to the MS4 that is not composed entirely of stormwater. Permitted discharges include:

- Discharges authorized by a separate NPDES permit
- Discharges in compliance with instructions of an On-Scene-Coordinator pursuant to 40 CFR part 300 or 33 CFR 153.10(e)
- Water line flushing
- Landscape irrigation

- Diverted stream flows
- Rising ground waters
- Uncontaminated ground water infiltration
- Uncontaminated pumped ground water
- Discharges from potable water sources
- Foundation drains
- Air conditioning condensate
- Irrigation water
- Springs
- Water from crawl space pumps
- Footing drains
- Lawn watering
- Individual residential car washing
- Flows from riparian habitats and wetlands
- Dechlorinated swimming pool discharges
- Street wash water
- Power washing where no chemicals are used
- Roof drains
- Fire hydrant flushings
- Non-storm water discharges resulting from a spill which are the result of an unusual and severe weather event where reasonable and prudent measures have been taken to minimize the impact of such discharge
- Emergency discharges required to prevent imminent threat to human health or severe property damage, provided that reasonable and prudent measures have been taken to minimize the impact of such discharges, and

- Discharges or flows from fire-fighting activities

Fort Carson's illicit discharge detection and elimination efforts include prevention and prohibition of specific discharges, field screening, and investigation procedures.

Deliberate dumping into the stormwater system is illegal under the federal CWA, and is therefore enforceable and punishable by Fort Carson law enforcement officers and outside entities. Additionally, Fort Carson Garrison Commander (GC) Policy #17 requires compliance with SWMP requirements relating to elimination of illicit discharges. GC Policy #17 is included as Appendix C to the SWMP. This policy serves as an internal regulatory mechanism for enforcement, if needed. The SPCCP guides the response actions to unintentional spills or leaks. Storm drain stenciling as well as hazardous waste collection efforts work towards prevention of illicit discharges, in addition to the prohibitory mechanisms.

Fort Carson conducts annual dry weather field screening at the four major cantonment drainages within Fort Carson (B-Ditch, Clover Ditch, Infantry Creek, and Rock Creek) to investigate for illicit discharges. Qualified personnel physically inspect the drainages looking for illicit discharge pipes, seeps, or other suspect flows. Tools to help personnel identify potentially illicit discharges include field test kits to determine chemical characteristics (such as pH or nutrients) and the storm sewer map, which shows base infrastructure in addition to other items required by the permit. This map is maintained by the Fort Carson GIS. Field personnel utilize this map for source tracking the discharge.

Fort Carson conducts various types of system investigations including: collection system surveys, oil water separator surveys, sanitary sewer inflow and infiltration surveys, and smoke tests. These surveys investigate system connections and functionality; and provide another mechanism for identifying potential illicit discharges and cross connections.

Fort Carson includes contact information for the stormwater program on the program's website for public reporting of (non-emergency) potentially illicit discharges as another means of illicit discharge identification in addition to the field screening efforts. 911 is used to report emergency situations involving spills and leaks over five (5) gallons in volume. The spill line is for spills less than five (5) gallons in volume.

Fort Carson investigates potential illicit discharges within 15 days of detection and takes action to eliminate the source within 45 days. The USEPA is notified if elimination efforts are expected to extend past 45 days. The stormwater program utilizes a spreadsheet on SharePoint to track field screening, illicit discharges, and restoration efforts.

## 3.4 Construction Site Stormwater Runoff Control

Construction site stormwater runoff at Fort Carson is managed through on site control of erosion and sediment, project reviews prior to ground disturbances, active site inspections, and required project close outs with the stormwater program.

The EPA requires Construction General Permit (CGP) coverage for construction sites disturbing greater than 1 acre of soil. This requirement is enforced contractually and by GC Policy #17 which requires compliance with the CGP. The Fort Carson Stormwater Program also requires sites with less than 1 acre disturbance to implement BMPs to control sediment and prevent erosion, though no formal permitting is necessary.

Fort Carson reviews projects prior to ground disturbance to ensure erosion and sediment controls are included in the project plan and appear to be sufficient. The review includes a National Environmental Protection Act (NEPA) clearance of the Scope of Work (SOW) prior to the project approval, and a review and acceptance of the site-specific SWPPP, and review and acceptance of the Environmental Protection Plan (EPP). The SOW review ensures the contract includes requirements to follow the CGP and control sediment and erosion from the construction site. This process allows the contract to be used as an enforcement mechanism if sites do not comply with CGP requirements and installation specifications. Approved review forms are required to be included in the on-site SWPPP.

Construction site inspections are conducted at active construction sites every 7 days by qualified personnel. Post-construction sites that are undergoing revegetation/stabilization are inspected every 30 days by qualified personnel. Directorate of Public Works audits all active and post construction sites on a quarterly basis to ensure the inspections conducted by others are in compliance with Fort Carson policy and the CGP requirements. The Fort Carson construction inspection procedures and inspection form is included in Appendix D.

Fort Carson requires contractors file a Fort Carson specific Notice of Termination (NOT) through the stormwater program prior to submission of NOT with the USEPA. The Fort Carson NOT is included as Appendix D. This process ensures the site has stabilized to 70% of predevelopment vegetative cover, and the contractor fulfills administrative close out requirements.

## 3.5 Post-Construction Stormwater Management for New Development and Redevelopment

Post-construction BMPs are installed to prevent or minimize water quality impacts on new and re-development projects. Fort Carson follows the Army Low Impact Development (LID) Guidance to implement such requirements.

Post-construction BMPs are selected by the design engineer based on project design and site characteristics. Various types of BMPs are utilized to achieve predevelopment runoff conditions. BMPs typical to Fort Carson include infiltration basins, bioretention basins, vegetated swales, sand filters, and permeable pavers; however, alternatives may be considered as site conditions dictate. Fort Carson implements similar BMP features to prevent or minimize water quality impacts if predevelopment hydrology requirements are impracticable, while fulfilling recordkeeping required by the Permit, and procedures in Army LID Guidance.

Procedures discussed in the construction site stormwater control section also support the implementation of post-construction controls. NEPA reviews discussed in Section 3.4 ensure post-construction BMPs are addressed in contract SOWs and are considered in site design. Contract SOW reviews also ensure contractors submit project as-builts upon project completion prior to the stormwater program signing the NOT.

Construction contractors are responsible for post-construction BMP maintenance for one year from the date of turnover to Fort Carson. The Fort Carson maintenance contractor tracks BMPs and turnover dates in the event a BMP is not fully operational. Maintenance on these BMPs is conducted by the Fort Carson maintenance contractor after the one year warranty period. Outlet structures of post-construction BMPs are included in the routine preventative maintenance schedule. Post-construction BMPs are also inspected annually by the stormwater program.

These inspections or other identification of unacceptable conditions can trigger maintenance outside of the preventative maintenance schedule via work order, if needed.

## 3.6 Pollution Prevention and Good Housekeeping

Operations and Maintenance (O&M) of base infrastructure is primarily conducted by the base maintenance contractor. They are responsible for maintenance of streets, parking lots, their maintenance/storage yards, waste transfer stations, their maintenance shops, snow disposal, and salt/sand storage. The base maintenance contractor conducts maintenance per preventative maintenance schedules, and via work or service orders. Street sweeping and storm drain cleanout are examples of maintenance performed on a set schedule. Emergency road repairs or cleanout of a post-construction BMP after a large rain event are examples of maintenance performed via work or service order.

Vehicle and equipment maintenance in military areas (such as motor pools) is conducted by military units. Maintenance schedules are determined by Technical Manuals (TMs). These areas are also included in the Fort Carson MSGP program, which prescribes good housekeeping control measures.

Fort Carson provides various types of stormwater training to the groups involved in maintenance. This training may include formal training events (e.g. EPO training), refresher training, informal meetings with stormwater program staff, or training specific to job activities.

## 3.7 Measurable Goal Summary

The permit requirements are primarily achieved through the Stormwater programs procedures. To achieve these requirements, goals were created to provide direction and continued focus on program improvement. These program's measureable goals are summarized by SCM in Appendix B.

# 4 RECORDKEEPING AND REPORTING

## 4.1 Recordkeeping

Section 3.1.1 of the permit requires the retention of the following records:

- All calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation,
- Copies of all reports and documents required by this permit,
- A copy of the NPDES permit, and
- Records of all data used to complete the application for the permit.

These records must be retained for a period of at least three years from the date of the sample, measurement, report, or application; or for the term of the applicable permit, whichever is longer. This period may be extended by request of the USEPA at any time. Records only need to be submitted to USEPA when requested.

Recordkeeping required by SCMs are retained in tracking documents maintained on the internal SharePoint site. The trackers maintained in SharePoint include:

- Outreach and Education / Public Involvement and Particiaton Activities (SCM 1/SCM 2)
- Illicit Discharge Reports (SCM 3)
- Illicit Discharge Detection and Elimination System (IDDES) (SCM 3)
- Multi-sector General Permit Inspections and Visual Assessments (SCM 3/SCM 6)
- Construction General Permit Inspections (SCM 4)
- Low Impact Development Feature Inspections (SCM 5)

The permit requires a description of this SWMP (including a copy of the permit language) to be retained at a location accessible to USEPA. Fort Carson complies with this by maintaining this SWMP at the DPW Environmental Office, and providing a copy of the SWMP on the Fort Carson website.

## 4.2 Annual Report

Annual reports must be submitted to USEPA by April 1 of each year in the permit term. The first report under the permit was submitted on March 28, 2017.

Annual reports detail information required by the permit, including general and SCM-specific information. The requirements for the annual report are included in Appendix F:

## 4.3 Planned Changes

Separate from annual reporting requirements, Fort Carson must give notice to USEPA as soon as possible of any planned physical alterations or additions to the permit. Such notice is required only in the following circumstances:

- The alteration or addition could significantly change the nature or increase the quantity of pollutant discharged. This notification applies to pollutants which are not subject to effluent limitations in the permit
- There are any planned substantial changes to the existing sewage sludge facilities, the manner of its operation, or to current sewage sludge management practices of storage and disposal. The permittee shall give the Director notice of any planned changes at least 30 days prior to their implementation
- The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source.

# 5 STORMWATER PROGRAM REPRESENTATIVES

The Stormwater Program Manager is the primary contact for issues and questions regarding this SWMP and the program. The Stormwater Program Manager can be reached via phone at 719-526-1679 or via email at usarmy.carson.imcom-central.list.dpw-ed-storm-water@mail.mil.

The Stormwater Pollution Prevention Team is comprised of other individuals with stormwater-related responsibilities. These individuals are shown in the table below:

**Table 5.1: Stormwater Pollution Prevention Team**

| Staff Titles | Individual Responsibilities |
|---|---|
| Stormwater Program Manager | Program management and oversight; final reviewer and approver for management plan (SWMP, Industrial SWPPP) development, implementation, and modifications; reviewing sampling and inspection reports; water quality data interpretation; coordination with other team members and other departments.<br><br>Stormwater Program Manager is the primary contact for the USEPA, and has the delegated signature authority to sign inspection forms and discharge monitoring reports. |
| Stormwater Technician | Facility inspections, visual sampling, coordination between other departments |
| Environmental Compliance Assessment Team (ECAT) | Facility inspections, coordination with motor pool facility managers, addressing corrective actions |
| Stormwater Team (various consultants) | Water quality sampling, program support, illicit discharge survey |
| Arrival and Departure Airfield Control Group (ADACG) Environmental Coordinator | Point of contact for ADACG. Document and control petroleum, oil, and lubricants (POLs) stored and used at ADACG. Maintain and use the Industrial SWPPP to guide daily activities. Perform inspections and report any issues concerning environmental activities. |
| Bulk Refueling Facility Environmental Coordinator | Point of contact for Bulk Refueling Facilities. Document and control POLs stored and used. Maintain and use the Industrial SWPPP to guide daily activities. Perform inspections and report any issues concerning environmental activities. |
| Environmental Team Lead, PCMS | Point of contact for PCMS. Conduct facility inspections, quarterly visual sampling, and provide updated information for Industrial SWPPP. |

Signature authority for all reports and associated information requested by the USEPA for stormwater permits, with the exception of the permit applications themselves, has been delegated by the GC to the Director of Public Works on September 30, 2016. The memorandum is effective until superseded or rescinded, and is included as Appendix G to this SWMP.

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# FIGURES

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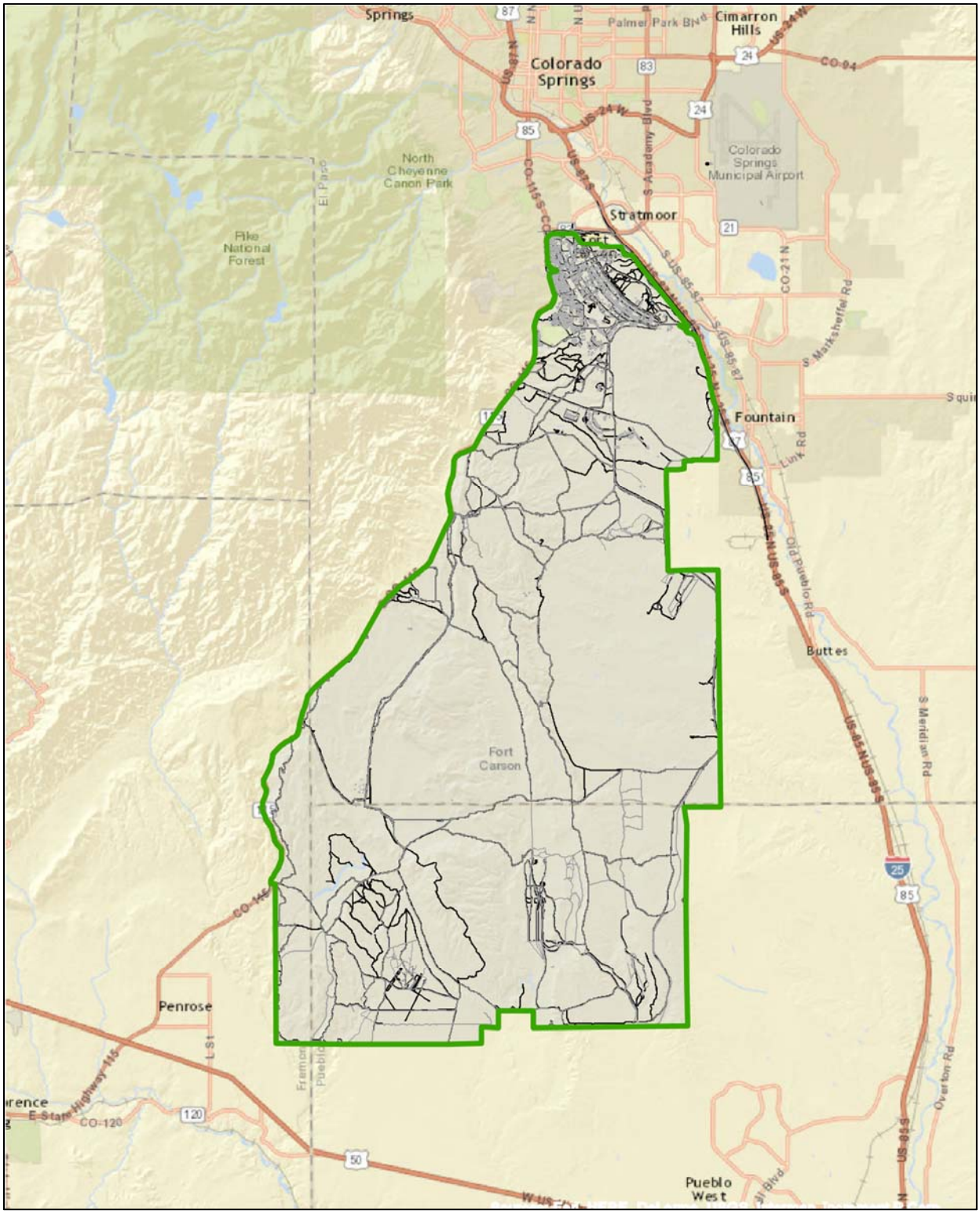


**Figure 1 - Fort Carson Site Map**

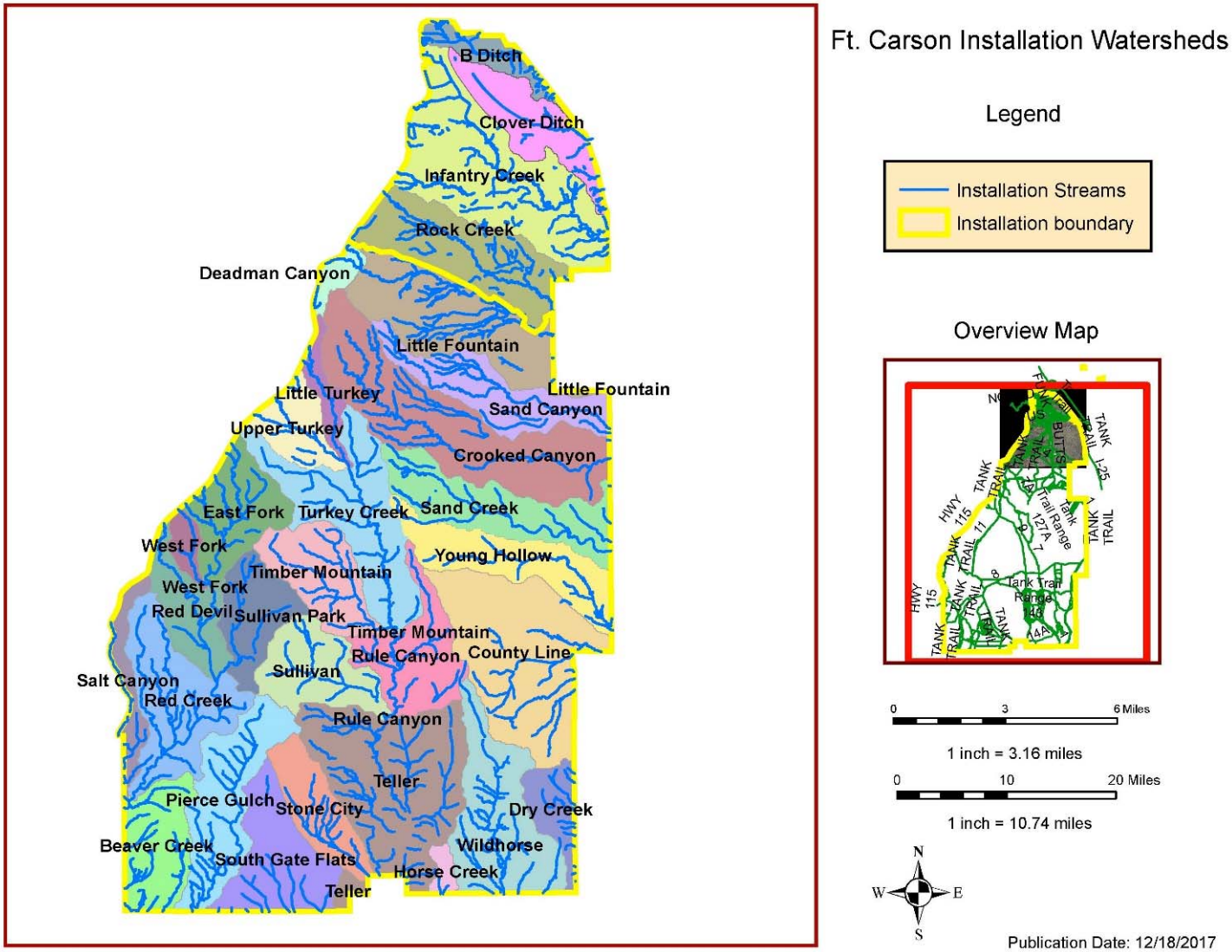


**Figure 2 - Fort Carson Installation Watershed Map**

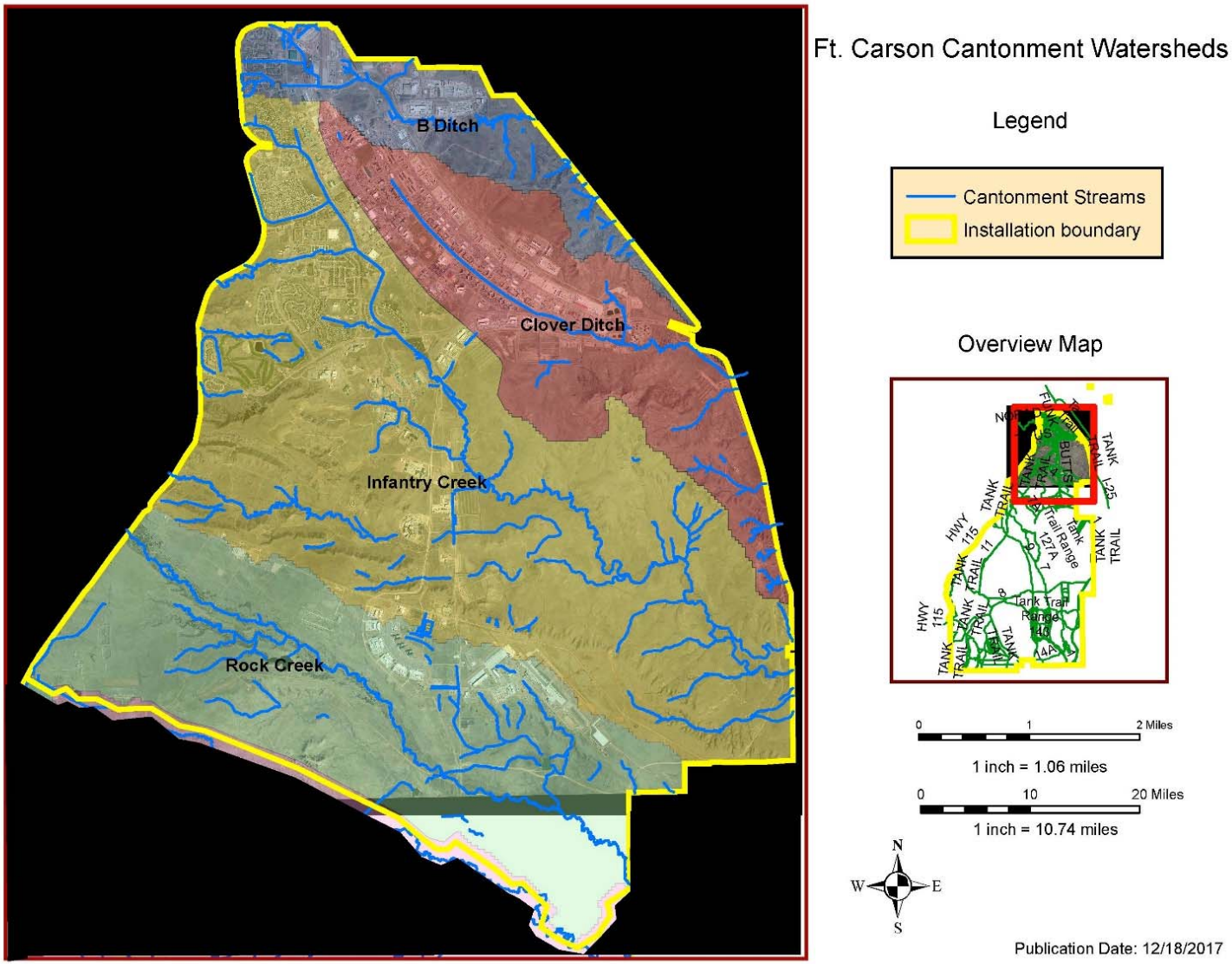


**Figure 3 – Fort Carson Cantonment Watershed Map**

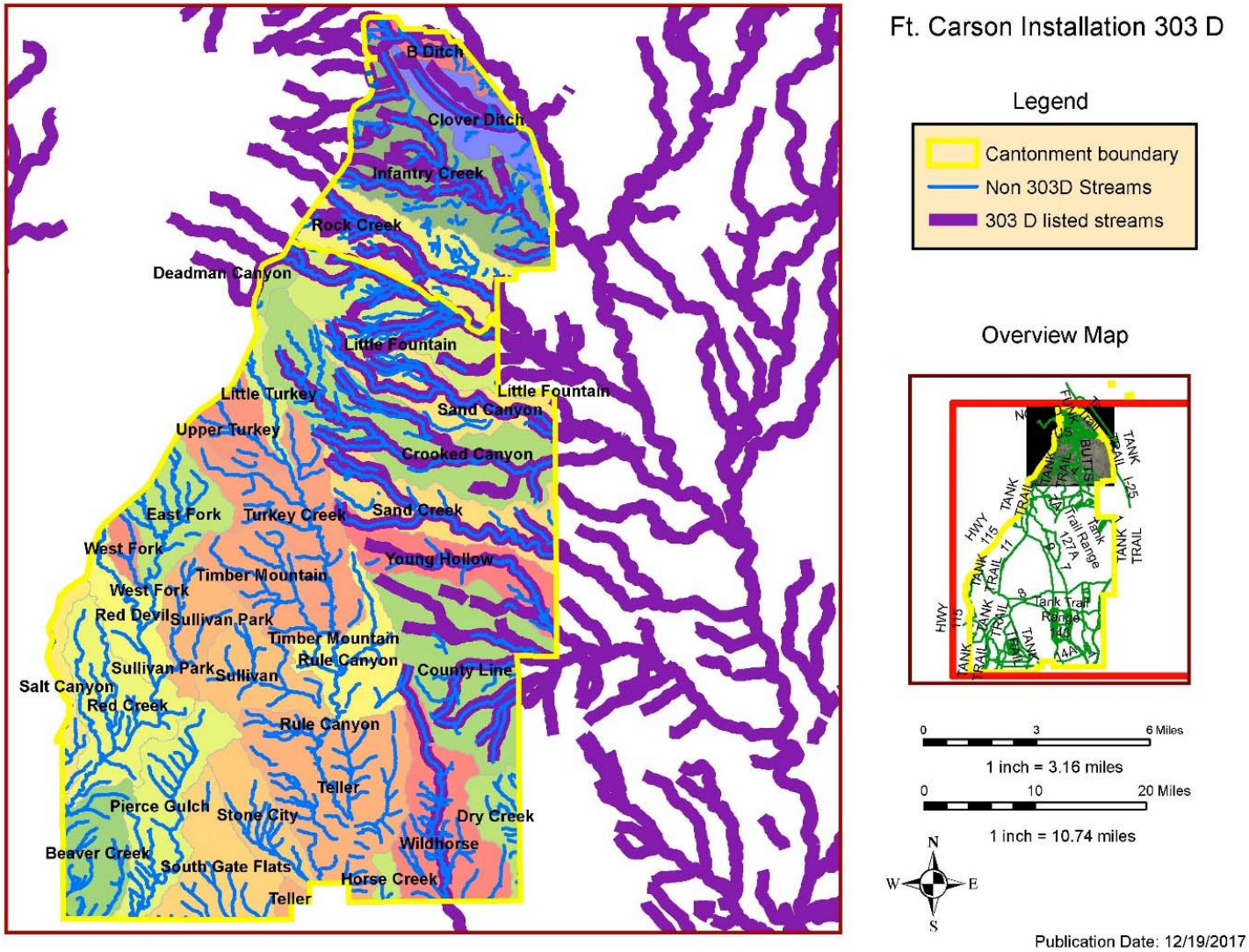


**Figure 4 - Fort Carson Installation 303D Listed Stream Map**

# APPENDICES

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# APPENDIX A

Fort Carson MS4 Permit No. COR042001, (1 January 2016)

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 WYNKOOP STREET
DENVER, COLORADO 80202-1129

AUTHORIZATION TO DISCHARGE UNDER THE
**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. § 1251 et seq; "the Act"),

**Fort Carson**

hereinafter "permittee", is authorized to discharge from all municipal separate storm sewer system outfalls

to receiving waters which include B-Ditch, Clover Ditch, Infantry Creek, Rock Creek, and other waters of the United States within the exterior boundaries of Fort Carson in El Paso County, Colorado, latitude 38.7434°N, and longitude 104.7879°W

in accordance with discharge point(s), effluent limitations, monitoring requirements and other conditions set forth herein. Authorization for discharge is limited to those outfalls specifically listed in the permit.

This permit shall become effective January 1, 2016

This permit and the authorization to discharge shall expire at midnight, December 31, 2020

Signed this 2nd day of December, 2015

Authorized Permitting Official

Darcy O'Connor
Acting Assistant Regional Administrator
Office of Partnerships and Regulatory Assistance

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# 1. COVERAGE UNDER THIS PERMIT

1.1. Permit Area. This permit covers all areas of the municipal separate storm sewer system (MS4) within the exterior boundaries of Fort Carson.

1.2. Discharges Authorized Under This Permit.

1.2.1. The permittee is authorized to discharge stormwater from all portions of the MS4 within the exterior boundaries of Fort Carson.

1.2.2. This permit also authorizes the discharge of stormwater commingled with flows contributed by process wastewater, non-process wastewater, and stormwater associated with industrial activity, provided that the stormwater is commingled only with those discharges set forth in **Part 1.3** of this permit.

1.3. Limitations on Permit Coverage.

1.3.1. The permittee must prohibit all types of non-stormwater discharges into its MS4, except for allowable non-stormwater discharges described in **Part 1.3.2**.

1.3.2. Allowable Non-Stormwater Discharages. The following sources of non-stormwater discharges are allowed to be discharged into the MS4 unless the permittee determines they are significant contributors of pollutants. If the permittee identifies any of the following categories as a significant contributor of pollutants, the permittee must include the category as an illicit discharge (see **Part 2.4**).

- Discharges authorized by a separate NPDES permit;
- Discharges in compliance with instructions of an On-Scene-Coordinator pursuant to 40 CFR part 300 or 33 CFR 153.10(e);
- Water line flushing;
- Landscape irrigation;
- Diverted stream flows;
- Rising ground waters;
- Uncontaminated ground water infiltration;
- Uncontaminated pumped ground water;
- Discharges from potable water sources;
- Foundation drains;
- Air conditioning condensate;
- Irrigation water;
- Springs;
- Water from crawl space pumps;
- Footing drains;
- Lawn watering;
- Individual residential car washing;
- Flows from riparian habitats and wetlands;
- Dechlorinated swimming pool discharges;
- Street wash water;
- Power washing where no chemicals are used;

- Roof drains;
- Fire hydrant flushings;
- Non-storm water discharges resulting from a spill which are the result of an unusual and severe weather event where reasonable and prudent measures have been taken to minimize the impact of such discharge;
- Emergency discharges required to prevent imminent threat to human health or severe property damage, provided that reasonable and prudent measures have been taken to minimize the impact of such discharges; and
- Discharges or flows from fire fighting activities.

1.3.3. Stormwater Discharges Associated with Industrial Activity. This permit does not authorize stormwater discharges associated with industrial activity as defined in 40 CFR § 122.26(b)(14)(i)-(ix) and (xi).

1.3.4. Stormwater Discharges Associated with Construction Activity. This permit does not authorize stormwater discharges associated with construction activity as defined in 40 CFR § 122.26(b)(14)(x) or 40 CFR § 122.26(b)(15).

1.4. Changes to MS4 Area of Responsibility. The permittee must implement the Effluent Limits and Monitoring Requirements in **Part 2** on all new areas added to the permittee's MS4 (or for which the permittee becomes responsible for implementation of storm water quality controls) as expeditiously as practicable, but not later than one year from addition of the new areas. Implementation may be accomplished in a phased manner to allow additional time for controls that cannot be implemented immediately.

## 2. EFFLUENT LIMITS & MONITORING REQUIREMENTS

2.1. Stormwater Management Plan. The permittee must maintain a Stormwater Management Plan (SWMP). The SWMP must describe how the permittee will comply with each of the requirements in **Parts 2.2-2.7.** The SWMP can include citations of documents and electronic records (e.g., manuals, guidance, procedures, electronic management systems, intergovernmental agreements) used to comply with permit requirements. It is not required that the SWMP repeat information included in the cited documents or information systems, but the SWMP must include the names of the most recent versions of the cited documents or information systems and the locations where the supporting documentation is maintained.

2.1.1. SWMP Availability. The SWMP must be immediately available to EPA. It does not need to be stored or maintained in hardcopy format, but it must be available immediately for printout upon request. Alternatively, the SWMP can be maintained and available for printout as a summary of activities managed through an electronic data management system so long as the data management system can be made available for review sufficient to determine compliance with the terms of this permit..

2.1.2. Annual SWMP Review. The permittee must conduct an annual review of the SWMP in conjunction with preparation of the annual report required under **Part 3.2** and update the document with the most current information.

2.2. Public Education and Outreach on Stormwater Impacts. The permittee must:

2.2.1 Continue to implement an education and outreach program for Fort Carson which 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;

2.2.2 At a minimum, 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;

2.2.3 Provide and document training to appropriate planning staff, project managers, contracting officers and other parties as applicable to learn about Low Impact Development (LID) practices, green infrastructure practices, and to communicate the specific requirements for post-construction control and the associated Stormwater Control Measures (SCMs) laid out within the SWMP;

2.2.4 Provide a stormwater awareness brochure and track its distribution;

2.2.5 Ensure, to the extent feasible, that any new resident guides include terms for occupancy which relate to household waste management, pet policy, lawn watering, petroleum management, fertilizer/pesticide management, and car washing;

2.2.6 At a minimum, produce and disseminate informational material to inform employees and contractors working on site of proper hazardous waste collection processes. These materials should be updated and distributed as necessary throughout the duration of the permit; and

2.2.7 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.

2.2.8 The annual report (**See Part 3.2**) must document the following information related to public education and outreach:

2.2.8.1 A description of the methods, frequency, type, and target audience of stormwater outreach performed during the permit term;

2.2.8.2 A copy or representation of public outreach materials provided to the target audience(s);

2.2.8.3 An estimation of the number of people expected to be reached by the program over each year of the permit term; and

2.2.8.4 The name or title of the person(s) responsible for coordination and implementation of the stormwater public education and outreach program.

2.3 <u>Public Involvement/Participation</u>. The permittee must:

2.3.1 Comply with applicable State and local public notice requirements when implementing a public involvement/participation program;

2.3.2 Make all relevant Annual Reports available on the permittee web site or on another platform which is available to the public in an electronic format;

2.3.3 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;

2.3.4 Maintain a log of public participation and outreach activities performed in the permittee's SWMP;

2.3.5 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).

2.3.6 The annual report (**See Part 3.2**) must document the following information related to public involvement/participation:

2.3.6.1 Documentation of any events or other activities to clean up MS4 receiving waters; and

2.3.6.2 Documentation of any volunteer activities conducted to help actively engage residents and personnel at Fort Carson in understanding water resources and how their activities can affect water quality.

2.4 Illicit Discharge Detection and Elimination. An illicit discharge is any discharge to a municipal separate storm sewer that is not composed entirely of stormwater. Exceptions are described in **Part 1.3.2**. The permittee must:

2.4.1 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;

2.4.2 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;

2.4.3 Provide a mechanism for reporting of illicit discharges and provide this number on the Fort Carson stormwater web site and any outreach materials as appropriate;

2.4.4 Investigate any illicit discharge within fifteen (15) days of its detection, and shall take action to eliminate the source of the discharge within forty five (45) days of its detection (or obtain permission from EPA for such longer periods as may be necessary in particular instances);

2.4.5 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;

2.4.6 Develop and maintain an Illicit Discharge Detection and Elimination (IDDE) tracking mechanism which tracks dry weather screening efforts and the location and any remediation efforts to address identified illicit discharges;

2.4.7 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;

2.4.8 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;

2.4.9 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.

2.4.10 The annual report (See **Part 3.2)** must document the following information related to illicit discharge detection and elimination:

2.4.10.1 A description of the program used to detect and eliminate illicit discharges into the MS4s, including procedures for detection, identification of sources, and removal of non-stormwater discharges from the storm sewer system;

2.4.10.2 A description of the location and method of dry weather screening performed;

2.4.10.3 A description of illicit discharges located and all actions taken to eliminate sources of illicit discharges;

2.4.10.4 A description of training materials used and the frequency at which training was provided to the target audience(s) on how to respond to reports of illicit discharges;

2.4.10.5 A description or citation of the established ordinance or other regulatory mechanism used to prohibit illicit discharges into the MS4;

2.4.10.6 A copy or excerpt from the information management system used to track illicit discharges;

2.4.10.7 A description of the categories of non-stormwater discharges evaluated as potentially being significant contributors of pollutants to the MS4 **(see Part 1.3.2)** and any local controls placed on these discharges;

2.4.10.8 A description of household hazardous waste collection events conducted by the MS4 if any, or a description of alternative household hazardous waste disposal options

offered by nearby civilian jurisdictions for use by MS4 residents;

2.4.10.9 A description of the activities taken to inventory and investigate interior floor drains in buildings for evidence of cross-connections between the storm and sanitary sewer systems; and

2.4.10.10 For the Year 1 annual report (due on April 1, 2017 for activities between January 1, 2016 and December 31, 2016), provide an inventory of industrial areas that discharge into the permittee's MS4 or to waters of the United States within the Air Force Academy. This inventory must include the location of the activity, the location of its outfall and corresponding receiving water, and the NPDES permit status for its stormwater discharge.

2.5 Construction Site Stormwater Runoff Control. The permittee must:

2.5.1 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 EPA 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;

2.5.2 Use an ordinance or other regulatory mechanism available under the legal authorities of Fort Carson to require erosion and sediment controls and sanctions to ensure compliance with the terms of the NPDES General Permit for Stormwater Discharges for Construction Activity in Colorado, COR12000F (Construction General Permit). This shall include working with contract officers to determine methods for stopping work or penalizing contractors who violate the terms of the aforementioned construction stormwater permit;

2.5.3 Maintain a list of policies and procedures which can be used to enforce construction site compliance within Fort Carson independent of EPA staff directly enforcing the CGP;

2.5.4 Implement procedures for site plan review which incorporate consideration of potential water quality impacts;

2.5.5 Implement procedures for receipt and consideration of information, including complaints of construction site non-compliance, submitted by the public;

2.5.6 Review the Scope of Work 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;

2.5.7 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;

2.5.8 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**; and

2.5.9 Maintain and utilize a Notice of Termination (NOT) form or alternative process for Fort Carson independent of the CGP NOT form and have Fort Carson staff inspect all construction sites prior to termination to ensure final stabilization of the site has been met at all areas of the site utilizing vegetative stabilization.

2.5.10 The annual report (See **Part 3.2)** must document the following information related to construction site stormwater runoff control:

2.5.10.1 A description of "regulated construction activities" which occurred at Fort Carson during the term of this permit;

2.5.10.2 A description or citation of the established ordinance or other regulatory mechanism used to require erosion and sediment controls;

2.5.10.3 A description of the sanctions and enforcement mechanisms Fort Carson uses to ensure that all "regulated construction activities" are in compliance with the terms of the Construction General Permit. This should include a description of any methods developed for Fort Carson staff to stop work on construction sites in non-compliance independent of contracting procedures;

2.5.10.4 A description of any sanctions and/or enforcement actions levied by Fort Carson against construction site operators to require compliance with the Construction Site Stormwater Control Program;

2.5.10.5 A description of the procedures for site plan review, including the review of pre-construction site plans, which incorporate consideration of potential water quality impacts and applicable contract language;

2.5.10.6 A description of the procedures for receipt and consideration of information submitted by the public;

2.5.10.7 A description of the procedures for site inspection, including how sites will be prioritized for inspection, including documentation of the frequency of site inspections and methods for prioritizing site inspections; and

2.5.10.8 The name or title of the person(s) responsible for coordination and implementation of the construction site runoff control program.

2.6. <u>Post-Construction Stormwater Management for New Development and Redevelopment</u>. The permittee must:

2.6.1. 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 best management practices (BMPs) appropriate for Fort Carson;

2.6.2. 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;

2.6.3. 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.

2.6.3.1. Impracticability Determinations. Reasons for impracticability in Part **2.6.2** include:

- Low soil infiltration capacity;
- Shallow depth to bedrock;
- Downgradient erosion;
- High groundwater table;
- High potential for groundwater contamination;
- Flooding;
- Existing underground facilities or utilities;
- Insufficient space due to the small size of the site;
- Conflicts with requirements of State or local law that impact the use of stormwater controls;
- Safety considerations; and
- Other operational or design considerations specific to the military function of Fort Carson

2.6.4. The following information regarding any project for which it is deemed by the permittee to be impracticable during an annual reporting period must be documented and included in the corresponding annual report:

- Name, location, and identifying project description;
- The reason(s) for making the impracticability determination;
- Any information developed or relied upon to support the impracticability determination (e.g., feasibility analyses, geologic studies, groundwater data, etc.); and
- A description of other stormwater control measures implemented to meet the requirements of **Part 2.6.3**.

2.6.5. When updated, include hydrologic performance specifications and information related to the design and maintenance of permanent stormwater control measures in natural resource plans;

2.6.6. Include post-construction BMP “as-builts” for all newly installed permanent stormwater control measures in a georeferenced data management system;

2.6.7. Ensure that all newly installed post-construction stormwater control measures are working as designed prior to closing out contracts;

2.6.8. Upon closeout of new construction projects, include maintenance requirements for newly installed permanent post-construction stormwater control measures into a long-term maintenance plan (e.g., the recurring work program); and

2.6.9. Ensure that permanent post-construction stormwater control measures are included in any applicable warranty reviews.

2.6.10. The annual report (See **Part 3.2**) must document the following information related to post-construction site stormwater runoff control:

2.6.10.1. A description of any impracticability determinations made during the reporting period, including the information required by **Part 2.6.4**.

2.6.10.2. A description of the review procedures and the assumptions provided to ensure the long-term operation and maintenance of permanent stormwater control measures, including an excerpt from any data management system that includes maintenance requirements and schedules for permanent stormwater control measures installed during the year;

2.6.10.3. A description of the process used to ensure that all Fort Carson scopes of work initiated after the effective date of the permit contain language which requires the installation of permanent stormwater control measures and an excerpt of applicable scopes of work language;

2.6.10.4. A description of any activities to include requirements or planning for permanent stormwater control measures in the natural resource plan; and

2.6.10.5. The name or title of the person(s) responsible for coordination and implementation of the post-construction stormwater management program.

2.7. Pollution Prevention and Good Housekeeping. The permittee must:

2.7.1. 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;

2.7.2. Provide deicing training to minimize the use of and runoff from chemical deicers and traction aggregates;

2.7.3. Implement a schedule for cleanout of storm sewer inlets in a manner which 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;

2.7.4. Implement a schedule for sweeping streets in a manner which 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; and

2.7.5. Consider the need for and application of cover to prevent airborne deposition of particulates from storage piles at the municipal materials storage yard.

2.7.7. The annual report (See **Part 3.2)** must document the following information related to pollution prevention and good housekeeping for municipal operations:

2.7.7.1. A description of the operation and maintenance program intended to prevent or reduce pollutant runoff from municipal operations including a list of each of the activities evaluated under this program and a description of the controls for reducing or eliminating the discharge of pollutants from streets, roads, highways, parking lots, maintenance and storage yards, waste transfer stations, fleet or maintenance shops with outdoor storage areas, snow disposal areas, and salt/sand storage locations;

2.7.7.2. A description of the contents and frequency of the training program (see **Part 2.7.1**) for municipal personnel and a list of the personnel or positions trained during the term of the permit; and

2.7.7.3. A description of the evaluation performed on the street cleaning operations, catch basin cleaning operations, and street sanding/salt practices and any measures taken as a result of the evaluation to minimize negative impacts to water quality.

## 3. RECORDKEEPING AND ANNUAL REPORTS

### 3.1. Recordkeeping.

3.1.1. The permittee must retain records of all monitoring information, including, all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports and documents required by this permit, a copy of the NPDES permit, and records of all data used to complete the application for this permit for a period of at least three years from the date of the sample, measurement, report or application, or for the term of this permit, whichever is longer. This period may be extended by request of the EPA at any time.

3.1.2. The permittee must submit the records referred to in **Part 3.1.1** to EPA only when specifically asked to do so. The permittee must retain a description of the SWMP required by this permit (including a copy of the permit language) at a location accessible to the EPA. The permittee must make records, including the application and the description of the SWMP, available to the public if requested to do so in writing.

### 3.2. Annual Report.

3.2.1. The permittee must submit an annual report to EPA for each year of the permit term. The first report is due April 1, 2016, and must cover the activities during the period beginning on the effective date of the permit through December 31, 2015. Each subsequent annual report is due on April 1 of each year following 2016 for the remainder of the permit term. Reports must be signed in accordance with the signatory requirements in **Part 5.7.** Reports may be posted on the EPA Region 8 web site. Therefore, parts of the annual report which cannot be publicly available should be marked as "confidential" or "for official use only." Reports must be submitted to EPA at the following address:

U.S. EPA, Region 8
Policy, Information Management & Environmental Justice Program (8ENF-PJ)
Attention: Director
1595 Wynkoop Street
Denver, Colorado 80202-1129

3.2.2 The annual reports must, at a minimum, include:

- The requirements which specify what must be included in the annual report for each of the minimum measures in **Parts 2.2-2.7**;

- A description of all construction activities constructed or proposed to be constructed which disturb equal to or greater than one acre of land during the reporting period;

- Documentation of any public notices and/or meetings held to meet the conditions in **Part 2.3.1**;

- A description of any changes to the illicit discharge detection and elimination program including description of illicit discharges which were either addressed or eliminated in the past year;

- For sites disturbing equal to or greater than one acre of land, documentation of the inspection process and frequency of construction site inspections as well as a summary of findings from inspections conducted during the reporting period;

- A short summary of the progress towards meeting the goal of reducing pollutant discharges from the Fort Carson MS4. This should include any successes made during the reporting period, a general assessment of the appropriateness of stormwater controls and progress towards meeting measurable goals for each of the minimum control measures in **Parts 2.2-2.7**, results of information collected and analyzed such as monitoring data during the reporting period, and a summary of the storm water activities planned during the next reporting cycle;

- A description of any changes made to the SWMP as a result of the annual review required by **Part 2.1.2**; and

- A description of concerns with permit compliance moving forward, and if applicable, input on how the MS4 permitting process could be made more effective in meeting the goals of protecting water quality.

4. COMPLIANCE RESPONSIBILITIES

4.1. Duty to Comply. The permittee must comply with all conditions of this permit. Any failure to comply with the permit may constitute a violation of the Clean Water Act and may be grounds for enforcement action, including, but not limited to permit termination, revocation and reissuance, modification, or denial of a permit renewal application. The permittee shall give the director advance notice of any planned changes at the permitted facility that will change any discharge from the facility, or of any activity that may result in failure to comply with permit conditions.

4.2. Penalties for Violations of Permit Conditions. The Clean Water Act provides for specified civil and criminal monetary penalties for violations of its provisions. However, the Federal Civil Penalties Inflation Adjustment Act of 1990, as amended by the Debt Collection Improvement Act of 1996, requires EPA to adjust the civil monetary penalties for inflation on a periodic basis. EPA previously adjusted its civil monetary penalties on December 31, 1996 (61 Fed.

Reg. 69359-69365), with technical corrections and additions published on March 20, 1997 (62 Fed. Reg. 13514-13517), June 27, 1997 (62 Fed. Reg. 35037-35041), February 13, 2004 (69 Fed. Reg. 7121-7127) and December 11, 2008 (73 Fed. Reg. 75340-75346). On November 6, 2013 (78 Fed. Reg. 66643-66648) EPA once again adjusted its civil monetary penalties. The civil and criminal penalties, as of December 6, 2013, for violations of the Act (including permit conditions) are given below:

4.2.1. Any person who violates Section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under Section 402, or any requirement imposed in a pretreatment program approved under Section 402(a) (3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed $37,500 per day for each violation.

4.2.2. Any person who *negligently* violates Sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under Section 402 of the Act, or any requirement imposed in a pretreatment program approved under Section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment for not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment for not more than 2 years, or both.

4.2.3. Any person who *knowingly* violates Section 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under Section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment for not more than 6 years, or both.

4.2.4. Any person who *knowingly* violates Section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under Section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment for not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment for not more than 30 years, or both. An organization, as defined in Section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions.

4.2.5. Any person may be assessed an administrative penalty by the Administrator for violating Section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Where an administrative enforcement action is brought for a Class I civil penalty, the assessed penalty may not exceed $16,000 per violation, with a maximum amount not to exceed $37,500. Where an administrative enforcement action is brought for a Class II civil penalty,

the assessed penalty may not exceed $16,000 per day for each day during which the violation continues, with the maximum amount not to exceed $187,500.

4.3. Need to Halt or Reduce Activity not a Defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

4.4. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

4.5. Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit. However, the permittee shall operate, at a minimum, one complete set of each main line unit treatment process whether or not this process is needed to achieve permit effluent compliance.

5. GENERAL REQUIREMENTS

5.1. Planned Changes. The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

5.1.1. The alteration or addition could significantly change the nature or increase the quantity of pollutant discharged. This notification applies to pollutants which are not subject to effluent limitations in the permit; or,

5.1.2. There are any planned substantial changes to the existing sewage sludge facilities, the manner of its operation, or to current sewage sludge management practices of storage and disposal. The permittee shall give the Director notice of any planned changes at least 30 days prior to their implementation.

5.1.3. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source.

5.2. Anticipated Noncompliance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

5.3. Permit Actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

5.4. Duty to Reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. The application should be submitted at least 180 days before the expiration date of this permit.

5.5. Duty to Provide Information. The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

5.6. Other Information. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Director, it shall promptly submit such facts or information.

5.7. Signatory Requirements. All applications, reports or information submitted to the Director shall be signed and certified.

5.7.1. All permit applications shall be signed by either a principal executive officer or ranking elected official.

5.7.2. All reports required by the permit and other information requested by the Director shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

5.7.2.1. The authorization is made in writing by a person described above and submitted to the Director; and,

5.7.2.2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

5.7.3. Changes to authorization. If an authorization under **Part 5.7.2** is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of **Part 5.7.2** must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.

5.7.4. Certification. Any person signing a document under this section shall make the following 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."

5.8. Penalties for Falsification of Reports. The Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both.

5.9. Availability of Reports. Except for data determined to be confidential under 40 CFR Part 2, Subpart B, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Director. As required by the Act, permit applications, permits and effluent data shall not be considered confidential.

5.10. Oil and Hazardous Substance Liability. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Act.

5.11. Property Rights. The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, tribal or local laws or regulations.

5.12. Severability. The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

5.13. Transfers. This permit may be automatically transferred to a new permittee if:

5.13.1. The current permittee notifies the Director at least 30 days in advance of the proposed transfer date;

5.13.2. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and,

5.13.3. The Director does not notify the existing permittee and the proposed new permittee of his or her intent to modify, or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in **Part 5.13.2**.

5.14. State Laws. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the Act.

5.15. Reopener Provision. This permit may be reopened and modified (following proper administrative procedures) to include the appropriate effluent limitations (and compliance schedule, if necessary), or other appropriate requirements if one or more of the following events occurs:

5.15.1. Water Quality Standards: The water quality standards of the receiving water(s) to which the permittee discharges are modified in such a manner as to require different effluent limits than contained in this permit.

5.15.2. Wasteload Allocation: A wasteload allocation is developed and approved by the State of Colorado and/or EPA for incorporation in this permit.

5.15.3. Water Quality Management Plan: A revision to the current water quality management plan is approved and adopted which calls for different effluent limitations than contained in this permit.

6. DEFINTIONS

All definitions contained in Section 502 of the Act and 40 CFR 122 shall apply to this permit and are incorporated herein by reference. For convenience, simplified explanations of some regulatory/statutory definitions have been provided but, in the event of a conflict, the definition found in the Statute or Regulation takes precedence.

*Best Management Practices (BMPs)* means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

*Bypass* means the intentional diversion of waste streams from any portion of a treatment facility.

*Construction Activity* refers to ground surface disturbing and associated activities, which include, but are not limited to, clearing, grading, excavation, demolition, installation of new or improved haul roads and access roads, staging areas, stockpiling of rill materials, and borrow areas. Construction does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of the facility.

*Control Measure* as used in this permit, refers to any Best Management Practice or other method used to prevent or reduce the discharge of pollutants to waters of the United States.

*CWA* or *The Act* means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub.L. 92-500, as amended Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483 and Pub. L. 97-117, 33 U.S.C. 1251 et.seq.

*Director* means the Regional Administrator of EPA Region 8 or an authorized representative.

*Discharge*, when used without a qualifier, refers to “discharge of a pollutant” as defined at 40 CFR 122.2.

*Discharge-related Activities* include: activities which cause, contribute to, or result in storm water point source pollutant discharges and measures to control storm water discharges, including the siting, construction, and operation of best management practices to control, reduce or prevent storm water pollution.

*EPA* means the EPA Regional Administrator or an authorized representative.

*Green Infrastructure* is an approach that communities can choose to maintain healthy waters, and provide other benefits such as stormwater management, flood mitigation, air quality management, by weaving natural processes into the built environment. "Green Infrastructure" generally refers to systems and practices that use or mimic natural processes to infiltrate, evapotranspirate (the return of water to the atmosphere either through evaporation or by plants), or reuse stormwater or runoff on the site when it is generated.

*Low Impact Development (LID)* is an approach to land development (or re-development) that works with nature to manage stormwater as close to its source as possible. LID employs principles such as preserving and recreating natural landscape features, minimizing effective imperviousness to create functional and appealing site drainage that treat stormwater as a resource rather than a waste product. There are many practices that have been used to adhere to these principles such as bioretention facilities, rain gardens, vegetated rooftops, rain barrels, and permeable pavements.

*MS4* means "*municipal separate storm sewer system*" and is used to refer to either a Large, Medium, or Small Municipal Separate Storm Sewer System. The term, as used within the context of this permit, refers to small MS4s (see definition below) and includes systems operated by a variety of public entities (e.g., military facilities, prisons, and systems operated by other levels of government).

*Municipal Separate Storm Sewer* means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man made channels, or storm drains): (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States; (ii) Designed or used for collecting or conveying storm water; (iii) Which is not a combined sewer; and (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

*NOT* means Notice of Termination to be covered under EPA's Construction General Permit.

*Outfall* means a point source (defined below) at the point where a municipal separate storm sewer discharges to waters of the United States and does not include open conveyances connecting two municipal separate storm sewers or pipes, tunnels, or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States.

*Point Source* means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

*Post-construction stormwater control measures* are permanent control measures designed to retain, detain, infiltrate, or treat stormwater discharges from newly developed impervious surfaces.

*Severe property damage* means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural

resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

*Small Municipal Separate Storm Sewer System* is defined at 40 CFR 122.26(b)(16) and refers to all separate storm sewers that are owned or operated by the United States, a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States, but is not defined as "large"' or "medium" municipal separate storm sewer system. This term includes systems similar to separate storm sewer systems in municipalities such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas such as individual buildings.

*Stormwater* is defined at 40 CFR 122.26(b)(13) and means storm water runoff, snow melt runoff, and surface runoff and drainage.

*Storm Water Management Plan (SWMP)* refers to a comprehensive plan which describes how the permittee manages the quality of storm water discharged from the municipal separate storm sewer system.

*Upset* means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

*Water Quality Capture Volume (WQCV)* is the volume of runoff that is to be treated for water quality purposes as part of the design, construction, and maintenance of post-construction stormwater control measures. The WQCV is a specific term used by the Urban Drainage and Flood Control District and varies depending on local rainfall data.

*Water Quality Standards* are provisions of State or Federal law that consist of a designated use or uses for the waters of the United States, water quality criteria for such waters based upon such uses, and an antidegradation policy to protect high-quality waters. Water quality standards protect the public health or welfare, enhance the quality of water and serve the purposes of the Act.

# APPENDIX B

Measureable Goal Summary

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**Table B.1: SCM 1 – Public Education and Outreach on Stormwater Impacts Goals Summary**

| Permit Section | Requirement Summary | Implementation | Goal | Implementation Timeframe |
|---|---|---|---|---|
| 2.2.1 | Continue to 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. | Fort Carson's public education and outreach program includes employee training, education and outreach events, and the distribution of educational materials; and targets project managers, contractors, tenants, and environmental staff as described in the items listed below. | Present stormwater education during the 100% of Environmental Protection Officer (EPO) courses during the year.<br><br>Conduct at least eight (8) construction stormwater training events per year. | Ongoing.<br><br>Annually. |
| 2.2.2 | At a minimum, 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. | The Fort Carson stormwater awareness brochure includes the required information. The brochure is distributed whenever possible, typically at contractor CGP training, EPO training, Earth Day, and other educational opportunities.<br><br>Military personnel are also briefed on preventing stormwater pollution during their in brief to the installation (Day 0 inprocessing). | Track distribution of brochures at outreach events<br><br>Review the brochure annually and update as necessary.<br><br>Keep the public website updated with current materials. Post update materials within 30 days of changes.<br><br>Post stormwater pollution prevention posters at each 100% of the industrial activity sites inspected as part of the MSGP | Log distribution with 24 hours of the event.<br><br>Annually.<br><br>Within 30 days, as needed.<br><br>Ongoing. Included as an inspection item on the quarterly MSGP inspection form. |

**Table B.1: SCM 1 – Public Education and Outreach on Stormwater Impacts Goals Summary**

| Permit Section | Requirement Summary | Implementation | Goal | Implementation Timeframe |
|---|---|---|---|---|
| 2.2.3 | 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. | Conduct post-construction BMP inspection and maintenance training intended to educate ECAT, base maintenance contractors, and Fort Carson Stormwater Team members about recognizing and maintaining LID BMPs.<br><br>Train EPOs on an awareness level regarding structural LID and GI control measures as part of their environmental training.<br><br>Conduct informal training to designers and contractors regarding site design and the utilization of LID control measures during project reviews. | Present an LID overview and maintenance class to the base operations contractor and ECAT personnel annually.<br><br>Present stormwater education during the 100% of Environmental Protection Officer (EPO) courses during the year.<br><br>Conduct design review/training as needed to correspond to new project schedule. | Annually.<br><br>Annually.<br><br>As needed. |
| 2.2.4 | Provide a stormwater awareness brochure and track its distribution. | Distribute the Fort Carson stormwater awareness at public outreach events, typically at contractor CGP training, EPO training, Earth Day, and other educational opportunities. | Track distribution of brochures at outreach events<br><br>Review the brochure annually and update as needed. | Log distribution with 24 hours of the event.<br><br>Annually/As needed. |
| 2.2.5 | 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. | Produce a resident guide which contains information regarding household waste management, pet policy, lawn watering, petroleum management, fertilizer/pesticide management, and car washing. Issue to new residents upon move-in. | Provide a resident guide to all new residents upon move in.<br><br>Review portions of the resident guide relevant to the stormwater program annually<br><br>Update guide and disseminate new information to the housing office and existing residents. | Ongoing.<br><br>Annually<br><br>As needed. |

**Table B.1: SCM 1 – Public Education and Outreach on Stormwater Impacts Goals Summary**

| Permit Section | Requirement Summary | Implementation | Goal | Implementation Timeframe |
|---|---|---|---|---|
| 2.2.6 | 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. | Include the hazardous waste collection process in EPO training. EPOs communicate these procedures to their respective units.<br><br>Inform residents of the hazardous waste collection process via the community outreach email, the stormwater brochure, and the resident guide.<br><br>Provided contractors information the hazardous waste collection process on during the contracting process. | Present hazardous waste collection education during the 100% of Environmental Protection Officer (EPO) courses during the year.<br><br>Provide a resident guide to all new residents upon move in.<br><br>Ensure all projects address hazardous waste handling and collection processes as part of the project review process.<br><br>Review the hazardous waste collection education annually and update as needed. | Annually.<br><br>Ongoing.<br><br>Ongoing.<br><br>Annually/As needed. |
| 2.2.7 | 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. | Track activities and corresponding documents and training schedule | Document all education and outreach activities on the tracker on the SW SharePoint site.<br><br>Post training schedules and training materials to the SW SharePoint site. | Within 24 hours of the event or activity.<br><br>Within 24 hours of the event or activity. |
| 2.2.8 | Document the required information related to public education and outreach as detailed in Permit Section 2.2.8 | Completed required documentation for the Annual Report as detailed in Section 4.2 of the SWMP. | Complete Annual Report and submit to USEPA. | Before April 1 annually. |

**Table B.2: SCM 2 – Public Involvement/Participation Goal Summary**

| Permit Section | Requirement Summary | Implementation | Goal | Implementation Timeframe |
|---|---|---|---|---|
| 2.3.1 | Comply with applicable state and local public notice requirements when implementing a public involvement/participation program. | Advertise public involvement/participation events on the Fort Carson stormwater program website as a means of notification. Use other public notices processes, including those associated with the NEPA process and stormwater permits.<br><br>Document non-NEPA related notifications in stormwater program's tracker spreadsheet. | Notify the public about all stormwater related involvement and participation activities.<br><br>Coordinate with NEPA program regarding their separate tracking of NEPA public notices. | Notify public 30 days prior to event.<br><br>As needed. |
| 2.3.2 | 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. | Post annual stormwater reports to the Fort Carson public-facing stormwater program website. | Post all Annual Reports to website. | Annually, no later than 30 days after the submission of Annual Report to USEPA. |
| 2.3.3 | 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. | Participate in Make A Difference Day national volunteer day of service. Use the opportunity as a hands-on educational opportunity by relating the items encountered in the field to stormwater pollution prevention goals<br><br>Participate in Installation Clean-up Days, typically held in April and October. Participate in planning to involve military units cleaning up their assigned work area and surrounding areas. | Conduct one Make A Difference Day project to clean up trash in drainage areas and engage with residents<br><br>Participate in semi-annual Installation Clean-up Days, as practicable. | Annually in October<br><br>Annually in April and October |
| 2.3.4 | Maintain a log of public participation and outreach activities performed in the permittee's SWMP. | Public participation and outreach activities are logged in the stormwater program's tracker spreadsheet, which is available upon request. | Document participation and outreach activities in tracker spreadsheet. | Within 24 hours of the event or activity. |

**Table B.2: SCM 2 – Public Involvement/Participation Goal Summary**

| Permit Section | Requirement Summary | Implementation | Goal | Implementation Timeframe |
|---|---|---|---|---|
| 2.3.5 | 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). | Maintain the Fort Carson SWMP and permit information on the Fort Carson public-facing stormwater program website. | Review the SWMP annually and update as needed.<br><br>Post the most current SWMP and permit on the Fort Carson stormwater program website. Post update materials within 30 days of changes. | Annually/As needed.<br><br>Within 30 days, as needed. |
| 2.3.6 | Document the required information related to public involvement/participation as detailed in Permit Section 2.3.6. | Completed required documentation for the Annual Report as detailed in Section 4.2 of the SWMP. | Complete Annual Report and submit to USEPA. | Before April 1 annually. |

**Table B.3: SCM 3 – Illicit Discharge Detection and Elimination Goal Summary**

| Permit Section | Requirement Summary | Implementation | Goal | Implementation Timeframe |
|---|---|---|---|---|
| 2.4.1 | 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. | Conduct illicit discharge detection and elimination procedures, specifically those for detection and removal of illicit sources and prohibition of illegal dumping, are described by the goals below.<br><br>Conduct Oil-Water Separator (OWS) surveys to investigate the discharges from these systems, ensuring that they were to either to the industrial or sanitary sewer,<br><br>Conduct cross-connection surveys to investigate potentially illicit discharges, when suspect discharges are identified. | Rapidly detect and eliminate known or reported illicit discharges of non-stormwater discharges.<br><br>Inspect 100% of OWS annually to verify proper operation and maintenance.<br><br>Conduct cross-connection surveys when suspect discharges are identified. | Control illicit discharge source within 24 hours; Complete repairs within 45 days.<br><br>Annually.<br><br>As needed. Conduct survey within 15 days. Control illicit discharge source within 24 hours; Complete repairs within 45 days. |
| 2.4.2 | 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 has also developed GC Policy #17 to address non-stormwater discharges on Fort Carson. The policy requires installation staff, tenants, activities, contracting offices, and contractors to comply with SWMP requirements that address elimination of illicit discharges, construction site runoff control, and post-construction site runoff control. | Enforce the provisions of GC Policy #17 when violations of the policy are identified or reported.<br><br>Review GC Policy annually, and update as needed. | Implement enforcement activities as needed.<br><br>Annually/As needed. |
| 2.4.3 | Provide a mechanism for reporting of illicit discharges and provide this number on the Fort Carson stormwater website and any outreach materials as appropriate. | Illicit discharges are reported by the public via the stormwater program phone number (526-0973) and email address, which are posted on the Fort Carson stormwater program website. | Maintain contact information on stormwater program website.<br><br>Provide illicit discharge and spill reporting procedures to 100% of EPO and Construction SW training classes. | Ongoing.<br><br>Ongoing. |

**Table B.3: SCM 3 – Illicit Discharge Detection and Elimination Goal Summary**

| Permit Section | Requirement Summary | Implementation | Goal | Implementation Timeframe |
|---|---|---|---|---|
| 2.4.4 | 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). | Inspect Illicit discharges within 15 days of detection. Inspection may include field testing or field investigation using maps to trace the storm sewer line up gradient to identify the source of the discharge.<br><br>Take actions to eliminate the source of the discharge within 45 days of detection. These actions are specific to the discharge and the source. If particular instances do not allow Fort Carson to comply with this timeframe, the USEPA will be notified to request permission for an extension. | Conduct illicit discharge detection and elimination actions within 15 days of identification.<br><br>Submit illicit discharge reports on the Fort Carson SharePoint site. | Within 15 days of identification. Remove illicit discharges within 45 days of observation.<br><br>Within 24 hours of actions taken. |
| 2.4.5 | 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. | Maintain a storm sewer system map using Geospatial Information Systems (GIS) that includes the information required by the permit. This map is maintained electronically through the Fort Carson GIS section. | Document 100% of known illicit discharges on the GIS spill map. Link the spill information in the MSGP facility maps. | Provide spill information to the GIS section within 24 hours of a spill report being generated. |
| 2.4.6 | 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. | Execute dry weather screening and track IDDE information using a spreadsheet on the Fort Carson SharePoint site. | Conduct dry weather screening at B-Ditch, Clover Ditch, Infantry Creek, and Rock Creek.<br><br>Track results of dry weather screening on an IDDE tracker on SharePoint. | Annually<br><br>Ongoing. |

**Table B.3: SCM 3 – Illicit Discharge Detection and Elimination Goal Summary**

| Permit Section | Requirement Summary | Implementation | Goal | Implementation Timeframe |
|---|---|---|---|---|
| 2.4.7 | 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. | Dry weather field screenings are performed at B-Ditch, Clover Ditch, Infantry Creek, and Rock Creek at Fort Carson. These are conducted by qualified personnel walking the drainages, looking for illicit discharge pipes, seeps, and other suspect flows. Field test kits, such as those for pH and nutrients, are used in an attempt to classify discharges. Confirmed illicit discharges are addressed as required by the Permit. Other notable items are compiled into a report and evaluated by the Stormwater Program Manager for follow up as appropriate. | Conduct dry weather screening at B-Ditch, Clover Ditch, Infantry Creek, and Rock Creek.<br><br>Track results of dry weather screening on an IDDE tracker on SharePoint. | Annually.<br><br>Ongoing. |
| 2.4.8 | 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. | Hold an annual event (typically on or around Earth Day) where residents can bring household hazardous wastes to a collection point on-post. Advertise the event through installation media. Coordinate with the El Paso County disposal facility.<br><br>Provide information to Fort Carson residents on the household hazardous waste disposal procedures through the El Paso County Household Hazardous Waste Facility located at 3255 Akers Drive in Colorado Springs. This facility is open regularly during the week and accepts household hazardous waste for no charge (for El Paso County Residents). | Conduct one household hazardous waste collection event per year. Document household hazardous waste collection event, and the general types of waste that are collected.<br><br>Maintain El Paso County Household Hazardous Waste Facility information on stormwater program website and brochure. Update as needed. | Annually.<br><br>Ongoing / As needed. |

**Table B.3: SCM 3 – Illicit Discharge Detection and Elimination Goal Summary**

| Permit Section | Requirement Summary | Implementation | Goal | Implementation Timeframe |
|---|---|---|---|---|
| 2.4.9 | 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. | Many storm drains have been stenciled over the course of previous permit terms. Most new construction projects, in particular the Butts Army Airfield facilities, contain precast or pre-stenciled storm drains. | Inventory storm drains needing stenciling and track in spreadsheet. Update as needed.<br><br>Stencil storm drains not already stenciled in industrial and residential areas as practicable. Stencil approximately 25% of storm drains each permit year resulting in 100% by permit 2019. | Create storm drain stencil tracker by the end of 2016.<br><br>Annually through 2019. |
| 2.4.10 | Document the required information related to IDDE as detailed in Permit Section 2.4.10. | Completed required documentation for the Annual Report as detailed in Section 4.2 of the SWMP. | Complete Annual Report and submit to USEPA. | Before April 1 annually. |

**Table B.4: SCM 4 – Construction Site Stormwater Runoff Control Goal Summary**

| Permit Section | Requirement Summary | Implementation | Goal | Implementation Timeframe |
|---|---|---|---|---|
| 2.5.1 | Require all contractors having a potential of disturbing one or more acres of land within the interior 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 of the MS4 permit. | Enforce the provisions of the USEPA Construction general permit and the Installation MS4 permit. Ensure Construction contractors are aware of the requirement to obtain permit coverage for their construction sites through contractual requirement. Coordinate with DPW-Engineering and USACE project managers, as required.<br><br>Monitor sites disturbing less than one acre to verify the implement BMPs to prevent erosion and control sediment. Coordinate with DPW-Engineering project managers, as required.<br><br>Fort Carson conducts quarterly inspections of construction sites with NDPES permits to check compliance with permit requirements. Results are reported to the project management team and constructors. | Review SOW during NEPA reviews for requirements to include erosion and sediment controls and comply with applicable stormwater requirements. NEPA reviews are tracked by the NEPA program.<br><br>Complete a review of Stormwater Pollution Prevention Plans (SWPPPs) of 100% of projects disturbing over 1 acre of soil prior to the constructor submitting for a NPDES permit.<br><br>Complete a review of Environmental Protection Plans (EPPs) of 100% of projects disturbing under 1 acre of soil prior to the commencement of construction. | As needed based on project schedules.<br><br>As needed based on project schedules.<br><br>As needed based on project schedules. |
| 2.5.2 | Use an ordinance or other regulatory mechanism available under the legal authorities of Fort Carson to require erosion and sediment controls and sanctions to ensure compliance with the terms of the NPDES General Permit for Stormwater Discharges for Construction Activity in Colorado, COR12000F (Construction General Permit). This shall include working with contract officers to determine methods for stopping work or penalizing contractors who violate the terms of the aforementioned construction stormwater permit. | GC Policy #17 provides a mechanism to enforce this requirement. This policy requires compliance with this SWMP and the CGP when applicable, and includes potential sanctions for non-compliance including contractual repercussions or termination, implications for future contract awards, and stop work orders.<br><br>GC Policy #17 provides an enforcement mechanism for compliance that includes contractual repercussions or termination, implications for future contract awards, and stop work orders. | Enforce the provisions of GC Policy #17 when violations of the policy are identified or reported.<br><br>Review GC Policy annually, and update as needed. | Implement enforcement activities as needed.<br><br>Annually/As needed. |

**Table B.4: SCM 4 – Construction Site Stormwater Runoff Control Goal Summary**

| Permit Section | Requirement Summary | Implementation | Goal | Implementation Timeframe |
|---|---|---|---|---|
| 2.5.3 | 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. | Maintain the following policies and procedures for construction site compliance:<br>- Construction site inspection procedures<br>- Construction site spill response<br>- Construction dewatering guidance<br>- Construction Site Stormwater Management Policy (GC Policy #17)<br><br>Contract language is also used to enforce compliance as they direct compliance with applicable stormwater requirements. | Maintain current policies and procedures. Review the policy list and associate policies annually, and update as needed. | Annually/As needed. |
| 2.5.4 | Implement procedures for site plan review that incorporate consideration of potential water quality impacts. | Construction projects undergo an internal NEPA review prior to construction which provides the stormwater program an opportunity to preliminarily review the project during planning phase.<br><br>Fort Carson requires contractors to submit a construction SWPPP for review prior to ground-disturbing activities. This process allows for consideration of potential water quality impacts of the project. | Review construction projects during the planning phase (these reviews tracked by NEPA and integrate reviews by the Stormwater Program).<br><br>Complete a review of Stormwater Pollution Prevention Plans (SWPPPs) of 100% of projects disturbing over 1 acre of soil prior to the constructor submitting for a NPDES permit. | As needed based on project schedules.<br><br>As needed based on project schedules. |

**Table B.4: SCM 4 – Construction Site Stormwater Runoff Control Goal Summary**

| Permit Section | Requirement Summary | Implementation | Goal | Implementation Timeframe |
|---|---|---|---|---|
| 2.5.5 | Implement procedures for receipt and consideration of information, including complaints of construction site non-compliance, submitted by the public. | The Fort Carson stormwater program website includes phone and email contact information for the Stormwater Program Manager. This provides a mechanism for the public to provide input (including complaints) to the stormwater program regarding construction sites. Additionally, the 2017 CPG requires a public information sign be posted at the project site. | Maintain stormwater program contact information on program website.<br><br>Ensure project sites post their public information signs. Include this is part of the construction inspection.<br><br>Document input received from the public and Fort Carson's response. | Ongoing.<br><br>Ongoing.<br><br>As needed. |
| 2.5.6 | 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. | SOWs are reviewed during the NEPA review process to ensure stormwater requirements are addressed.<br>Fort Carson requires contractors to submit a construction SWPPP for review prior to ground-disturbing activities. This process allows for consideration of control measures to ensure environmental and regulatory compliance of the site.<br>Small projects that may not require a site specific SWPPP must still provide NEPA documentation prior to applying for a dig permit. The NEPA document outlines the requirement to follow this SWMP and use BMPs to control sediment and erosion. | Review construction projects during the planning phase (these reviews tracked by NEPA and integrate reviews by the Stormwater Program).<br><br>Complete a review of Stormwater Pollution Prevention Plans (SWPPPs) of 100% of projects disturbing over 1 acre of soil prior to the constructor submitting for a NPDES permit. | As needed based on project schedules.<br><br>As needed based on project schedules. |

**Table B.4: SCM 4 – Construction Site Stormwater Runoff Control Goal Summary**

| Permit Section | Requirement Summary | Implementation | Goal | Implementation Timeframe |
|---|---|---|---|---|
| 2.5.7 | Implement an inspection plan and keep a copy of that plan in the SWMP which provides inspection triggers and a required timeframe upon which construction sites must be inspected by Fort Carson staff. All sites within this plan must be inspected at a minimum quarterly. | The construction site inspection plan consists of the following: Review site and operator information and documentation, SWPPP Report, SWPPP Site Map/Plan Set, and inspection history; and conduct a site walk to evaluate structural and non-structural BMPs, and site stabilization (as appropriate). This information is documented in the site inspection form, which is maintained electronically on the internal SharePoint site. | Conduct inspection of 100% of permitted construction site on a quarterly basis.<br><br>Conduct inspections of construction sites based resulting from public complaints or observed poor performance.<br><br>Review inspection procedures annually, and update if necessary. | Quarterly.<br><br>Within seven (7) days of the complaint or incident of poor performance<br><br>Annually/As needed. |
| 2.5.8 | 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. | The construction site inspection form is included in Appendix D of this SWMP. | Maintain inspection form in SWMP appendix.<br><br>Review inspection procedures annually, and update if necessary. | Ongoing<br><br>Annually/As needed. |
| 2.5.9 | 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. | Fort Carson requires the following prior to a contractor submitting an NOT through USEPA: Submittal of a Fort Carson NOT form; compliance with Army LID Guidance requirements; removal of temporary BMPs; proper installation, as-built drawings, and O&M plan for post-construction BMPs; and final stabilization with 70% predevelopment vegetative cover. The Fort Carson NOT is included in Appendix D of this SWMP. | Maintain inspection form in SWMP appendix.<br><br>Review NOT inspection procedures annually, and update if necessary. | Ongoing<br><br>Annually/As needed. |
| 2.5.10 | Document the required information related to construction site stormwater runoff controls as detailed in Permit Section 2.5.10. | Completed required documentation for the Annual Report as detailed in Section 4.2 of the SWMP. | Complete Annual Report and submit to USEPA. | Before April 1 annually. |

**Table B.5: SCM 5 – Post-Construction Stormwater Management for New Development and Redevelopment**

| Permit Section | Requirement Summary | Implementation | Goal | Implementation Timeframe |
|---|---|---|---|---|
| 2.6.1 | 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 requirements to include post-construction stormwater control measures and follow the Army LID guidance to the maximum extent practicable are included in contractual SOWs. SOWs are reviewed during NEPA reviews to ensure this information is included.<br><br>The stormwater program reviews site designs and coordinates with designers to ensure Army LID guidance is implemented. | Review SOWs during NEPA reviews for compliance with requirements pertaining post-construction stormwater controls. (e.g. EISA Requirements)<br><br>Document project reviews relating to implementation of Army LID guidance. | As needed based on project design schedules.<br><br>As needed based on project design schedules. |
| 2.6.2 | For purposes of this permit, such BMPs shall be selected based on their ability to maintain onsite predevelopment runoff conditions and be implemented onsite, except to the extent it is impracticable to do so. Reasons for impracticability are included in the Permit Section 2.6.3.1. | Engineers and designers employ a variety of post-construction BMPs to maintain predevelopment runoff conditions. Infiltration basins, bioretention basins, vegetated swales, sand filters, permeable pavers and other BMPs may be utilized as site conditions dictate. Document design decisions using the US Army LID Design toolkit spreadsheet and Maintaining Hydrology on Army Construction Projects Worksheet. | Work with engineers and designers to select post-construction BMPs based on ability to maintain predevelopment runoff conditions unless impracticable.<br><br>Receive the US Army LID Design toolkit spreadsheet and Maintaining Hydrology on Army Construction Projects Worksheet as part of the design review process. | As needed based on project design schedules.<br><br>As needed based on project design schedules. |
| 2.6.3 | 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. | Alternative control measures are determined on a site-specific basis when it is impracticable to maintain predevelopment runoff conditions. These measures may include LID features applied elsewhere even if they are not able to fully maintain predevelopment hydrology, or alternative BMPs appropriate for given conditions. | Install and maintain alternative stormwater control measures to prevent or minimize water quality impacts in runoff from new or redevelopment sites when BMPs to maintain predevelopment runoff conditions are not practicable. | As needed based on project schedules. |

**Table B.5: SCM 5 – Post-Construction Stormwater Management for New Development and Redevelopment**

| Permit Section | Requirement Summary | Implementation | Goal | Implementation Timeframe |
|---|---|---|---|---|
| 2.6.4 | The following information regarding any project for which it is deemed by the permittee to be impracticable during an annual reporting period must be documented and included in the corresponding Annual Report:<br>• Name, location, and identifying project description;<br>• The reason(s) for making the impracticability determination;<br>• Any information developed or relied upon to support the impracticability determination (e.g., feasibility analyses, geologic studies, groundwater data, etc.); and<br>• A description of other stormwater control measures implemented to meet the requirements of Part 2.6.3. | Required documentation for projects deemed impracticable to maintain predevelopment hydrology is kept in the Stormwater Program's project files, which is maintained on the internal SharePoint site.<br><br>Fort Carson follows the Army LID guidance with respect to post-construction BMP impractability. | Project engineers and designers document the impractability for BMPs to maintain predevelopment runoff conditions. | As needed based on project design schedules. |
| 2.6.5 | When updated, include hydrologic performance specifications and information related to the design and maintenance of permanent stormwater control measures in natural resource plans. | The permanent stormwater control measures that currently have design specifications include those designed by the Army, and proprietary BMPs that have manufacturer specifications. | Include hydrologic performance specifications and information related to design and maintenance of permanent stormwater control measures in the Integrated Natural Resource Management Plan (INRMP) upon next plan update. The INRMP is scheduled for update in 2020. | Include specifications in next INRMP update (expected in 2020). |
| 2.6.6 | Include post-construction BMP "as-builts" for all newly installed permanent stormwater control measures in a georeferenced data management system. | Contractors submit "as-builts" for permanent stormwater control measures as part of the construction site closeout process. This information is retained by the stormwater program in a georeferenced data management system. | Receive 100% of "as-built" information from constructors.<br><br>Include the "as built" information in the Fort Carson database maintained by the GIS office. | Update information within 60 days of submittal.<br><br>Update information within 60 days of submittal. |

**Table B.5: SCM 5 – Post-Construction Stormwater Management for New Development and Redevelopment**

| Permit Section | Requirement Summary | Implementation | Goal | Implementation Timeframe |
|---|---|---|---|---|
| 2.6.7 | Ensure that all newly installed post-construction stormwater control measures are working as designed prior to closing out contracts. | Post-construction stormwater control measures are inspected as part of the construction site closeout process, and must be fully operational prior to the NOT being approved. | Inspect 100% of newly installed post-construction stormwater control measures prior to approving the construction NOT. | As needed to correspond with project schedules. |
| 2.6.8 | Upon closeout of new construction projects, include maintenance requirements for newly installed permanent post-construction stormwater control measures into a long-term maintenance plan (e.g., the recurring work program). | The outlet structures of post-construction BMPs are included in the preventative maintenance schedule for stormwater maintenance. Scheduled maintenance is conducted by the Base Operations Contractor. Additionally, the stormwater program identifies other maintenance issues as they arise and through the annual inspection, and submits a work order to the base maintenance contractor for correction. | Include maintenance requirements for newly installed permanent post-construction stormwater control measures into the base maintenance contract (e.g., the recurring work program).<br><br>Incorporate newly constructed control measures into operation and maintenance schedule. | Annually based on the Base Operations Contractor maintenance review process.<br><br>Annually based on the Base Operations Contractor maintenance review process. |
| 2.6.9 | Ensure that permanent post-construction stormwater control measures are included in any applicable warranty reviews. | Construction contractors turn over responsibility of post-construction control measures to the stormwater program upon completed construction. The post-construction control measure is contractually under a warranty period of 1 year from the date of turnover, in which repairs must be furnished by the construction contractor. The warranty dates are tracked by the base maintenance contractor. | With the DPW Warranty Manager, include 100% of permanent post-construction stormwater control measures in applicable warranty reviews. | Ongoing. |
| 2.6.10 | Document the required information related to post-construction stormwater management as detailed in Permit Section 2.6.10. | Completed required documentation for the Annual Report as detailed in Section 4.2 of the SWMP. | Complete Annual Report and submit to USEPA. | Before April 1 annually. |

**Table B.6: SCM 6 – Pollution Prevention and Good Housekeeping Goal Summary**

| Permit Section | Requirement Summary | Implementation | Goal | Implementation Timeframe |
|---|---|---|---|---|
| 2.7.1 | 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. | Groups identified as having fleet maintenance activities include the military units, base maintenance contractor, environmental program managers, and Directorate of Public Works (DPW) fleet staff.<br><br>Training is primarily facilitated through the EPO. EPOs are assigned for each military unit, are responsible for following environmental rules and regulations, and are responsible for training their respective units on applicable environmental regulations. EPOs are trained by the Fort Carson stormwater program upon their appointment, and can request additional training as needed. ECAT members provide informal training at least annually during routine site visits.<br><br>The base maintenance contractor receives annual training from the stormwater program manager annually.<br><br>The Environmental Quality Working Group (EQWG) provides educational stormwater content to all users (including groups identified above) annually.<br><br>Environmental program managers are involved in staff meetings where the stormwater manager is able to provide training updates. | Present stormwater education during the 100% of Environmental Protection Officer (EPO) courses during the year.<br><br>Provide training to base maintenance contractor annually.<br><br>Provide stormwater content via EQWG annually.<br><br>Update Environmental Division personnel on stormwater program issues and concerns at staff meetings. | Ongoing.<br><br>Annually.<br><br>Annually.<br><br>As needed. |

**Table B.6: SCM 6 – Pollution Prevention and Good Housekeeping Goal Summary**

| Permit Section | Requirement Summary | Implementation | Goal | Implementation Timeframe |
|---|---|---|---|---|
| 2.7.2 | Provide deicing training to minimize the use of and runoff from chemical deicers and traction aggregates. | The base maintenance contractor is the only group that applies deicers (magnesium chloride and sand) to roads on the installation. Fort Carson provides stormwater related training specific to the application of deicer to the base maintenance contractor. | Provide deicing training to the base maintenance contractor to minimize the use of and runoff from chemical deicers and traction aggregates. If maintenance contractor changes during permit cycle, training will be provided to new contractor. | Provide training once per permit cycle and on the onset of deicing season. |
| 2.7.3 | 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. | Preventative maintenance on the storm sewer system is conducted by the base maintenance contractor. They are responsible for the inspection, operation and maintenance of the system by ensuring ditches and culverts are at least 75% free flowing, ponding does not occur, and cleared slopes are protected from erosion. Inlets, culverts, and storm drains are scheduled for cleanout based on a grouping determined by their location.<br><br>The base maintenance contractor also identifies storm sewer inlets requiring clean out through routine, informal inspections (i.e. drive by inspections) and complaints from the stormwater program or the public. The inlets identified as a problem are cleaned as needed. | Clean storm sewer inlets per schedule | Ongoing |
| 2.7.4 | 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. | Installation streets have been divided into 5 zones/areas. Streets within each zone are swept on a set day of the week, Monday – Friday. | Conduct street sweeping per schedule. | Ongoing |

**Table B.6: SCM 6 – Pollution Prevention and Good Housekeeping Goal Summary**

| Permit Section | Requirement Summary | Implementation | Goal | Implementation Timeframe |
|---|---|---|---|---|
| 2.7.5 | Consider the need for and application of cover to prevent airborne deposition of particulates from storage piles at the municipal materials storage yard. | The municipal materials storage yard contains stockpiled rock, gravel, road base, and other coarse materials present a potential source of pollutants. The Environmental Division conducts a site visit of the materials storage yard to determine the need for and feasibility of various types of cover to prevent airborne deposition of particulates from storage piles. | Conduct an annual site visit of the materials storage yard to determine the need for particulate control BMPs.<br><br>Consider results of the site visit and evaluate the practicability, potential for improvement, cost, and funding to determine the type and extent of cover (if any) that is needed, or develop alternative means of dust control for site. | Annually.<br><br>Implement controls as necessary pending results of evaluation. |
| 2.7.7 | Document the required information related to pollution prevention and good housekeeping as detailed in Permit Section 2.7.7. | Completed required documentation for the Annual Report as detailed in Section 4.2 of the SWMP. Additional documentation is retained as part of the MSGP inspection program. | Complete Annual Report and submit to USEPA. | Before April 1 annually. |

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# APPENDIX C

GC Policy #17

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

REPLY TO
ATTENTION OF

**GC Policy #17**

IMCR-ZA

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Enforcement of Construction Site Stormwater Management Program Policy

1. References:

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

b. Fort Carson Municipal Separate Storm Sewer System (MS4) Permit (COR042001) as defined in Clean Water Act (40 CFR 122.26).

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

3. Applicability:

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

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

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

# APPENDIX D

Construction Site Inspection Procedure and Inspection Form

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## Construction Inspection Procedures

**Requirement.** Conduct inspection of third-party construction sites with active National Pollutant Discharge Elimination System (NDPES) construction permits at least once every quarter to check compliance with the current United States Environmental Protection Agency (USEPA) Construction General Permit (CGP).

**Pre-Inspection.** Schedule an inspection through the project management team (e.g. Directorate of Public Work-Engineering Division, United States Army Corps of Engineers). Lock in the time and meet up location.

**Inspection Materials.** Bring the following materials to the inspection:

- A copy of the stormwater program construction inspection form
- A copy of the projects most recent stormwater program inspection form, if available.
- A copy of the site map from the constructor's Stormwater Pollution Prevention Plan (SWPPP).
- Field book or note taking material with pen or pencil.
- Camera.
- Personal Protective Equipment (PPE) (e.g. safety boots, high visibility vest, hard hat, eye protection).
- Business cards with current contact information.

**Administrative Review.** Review the SWPPP records to determine whether the SWPPP is being updated properly. Conduct a review of:

- Changes to the project's stormwater team
- Inspections since the last site visit
- Corrective action log
- SWPPP revision log
- Grading and stabilization log
- Site map with annotated Best Management Practices (BMPs) and potential pollution sources

**Areas to Inspect.** Site inspections must inspection the following areas:

- All areas that have been cleared, graded, or excavated and that have not yet completed stabilization.
- All stormwater controls (including pollution prevention controls) installed at the site.
- Material, waste, borrow, and equipment storage and maintenance areas.
- All areas where stormwater typically flows within the site, including drainage ways designed to divert, convey, and/or treat stormwater.
- All points of discharge from the site.
- All locations where stabilization measures have been implemented.
- Do not to inspect areas that, at the time of the inspection, are considered unsafe to inspection personnel.

**Inspection Requirements**

- Check whether all stormwater controls (i.e., erosion and sediment controls and pollution prevention controls) are properly installed, appear to be operational, and are working as intended to minimize pollutant discharges.
- Check for the presence of conditions that could lead to spills, leaks, or other accumulations of pollutants on the site.
- Identify any locations where new or modified stormwater controls are necessary to meet the requirements of the CGP.
- Check for signs of visible erosion and sedimentation (i.e., sediment deposits) that have occurred and are attributable to discharge at points of discharge and, if applicable, the banks of any waters of the U.S. flowing within or immediately adjacent to the site;
- Identify any incidents of noncompliance observed;
- If a discharge is occurring during the inspection, identify all discharge points at the site and observe and document the visual quality of the discharge. Take note of the characteristics of the stormwater discharge, including color; odor; floating, settled, or suspended solids; foam; oil sheen; and other indicators of stormwater pollutants.
- Based on the results of your inspection, inform the constructor and project management team of any necessary maintenance and/or corrective action required to maintain compliance with the CGP.

**Inspection Reports.**

- Complete an electronic inspection report on SharePoint within 24 hours of completing any site inspection using the construction inspection template.

- Provide a copy of the inspection report to the project management team for inclusion in the project file and distribution to the constructor.

- Post a copy of the report to the project file on SharePoint.

- Retain all inspection reports at least three (3) years from the date that your permit coverage expires or is terminated.

*Revised: 29 DEC 17*

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# CGP/MS4 Construction Inspection Form

Name Of Site:

Inspection Date/Time:

Inspector Name & Contact Information:
Select...

## Site Information

Nature Of Project:
- DPW: ☐
- Industrial: ☐
- Residential: ☐
- Roadway: ☐
- USACE: ☐
- Utility Linear: ☐

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)** | ☐ | ☐ | ☐ | |
| 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)** | ☐ | ☐ | ☐ | |
| 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)** | ☐ | ☐ | ☐ | |
| 1.4 Is information on receiving waters, impaired waters, and TMDLs correctly listed? **(CGP part 3)** | ☐ | ☐ | ☐ | |
| 1.5 Is there a site description **(CGP part 7.2.2)** | ☐ | ☐ | ☐ | |
| 1.6 Total area of site and total area to be disturbed in acres **(CGP part 7.2.2)** | ☐ | ☐ | ☐ | |
| 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)** | ☐ | ☐ | ☐ | |
| 1.8 Is the sequence and timing of construction included **(CGP part 7.2.2)** | ☐ | ☐ | ☐ | |
| 1.9 Is there a list of allowable non-stormwater discharges **(CGP part 1.3.d and 7.2.8)** | ☐ | ☐ | ☐ | |
| 1.10 Is the Fort Carson NEPA Record of Environmental Consideration (REC) included in the SWPPP?<br>(Operator evaluation of endangered species/historic properties) **(CGP part 7.2.14)** | ☐ | ☐ | ☐ | |
| 1.11 Does the SWPPP contain buffer documentation **(CGP part 7.2.9)** | ☐ | ☐ | ☐ | |
| 1.12 Does SWPPP include BMP descriptions and details **(CGP part 7.2.10.1)** | ☐ | ☐ | ☐ | |
| 1.13 Where the BMP is a sediment basin, are design maintenance requirements in the SWPPP **(CGP part 2.1.3.2)** | ☐ | ☐ | ☐ | |
| 1.14 Does SWPPP include a dewatering plan **(MS4 PERMIT)** | ☐ | ☐ | ☐ | |
| 1.15 Does SWPPP include **temporary** stabilization measures (descriptions and specs) **(CGP parts 2.2 and 7.2.10.3)** | ☐ | ☐ | ☐ | |
| 1.16 Does SWPPP include **permanent** stabilization measures (permanent BMPs and specs) **(CGP parts 2.2 and 7.2.10.3)** | ☐ | ☐ | ☐ | |
| 1.17 Are construction site pollutants and pollutant generating activities listed in the SWPPP **(CGP part 7.2.7)** | ☐ | ☐ | ☐ | |
| 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)** | ☐ | ☐ | ☐ | |
| 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)** | ☐ | ☐ | ☐ | |
| 1.20 Is the SWPPP amendment log current **(CGP part 7.4)** | ☐ | ☐ | ☐ | |
| 1.21 Is the SWPPP current and complete **(CGP part 7.3)** | ☐ | ☐ | ☐ | |

## 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)** | ☐ | ☐ | ☐ | |
| 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.)** | ☐ | ☐ | ☐ | |
| 2.3 Does the site map show all required features **(CGP part 7.2.6.1 a.)** | ☐ | ☐ | ☐ | |
| 2.4 Are pollutant generating activities, as described in the SWPPP on the map **(CGP part 7.2.6.7)** | ☐ | ☐ | ☐ | |
| 2.5 Are the locations of BMPs, as described in the SWPPP, on the map **(CGP part 7.2.6.8)** | ☐ | ☐ | ☐ | |
| 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)** | ☐ | ☐ | ☐ | |

## 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)** | ☐ | ☐ | ☐ | |
| 3.2 Is the delegation of authority signed by the operator in the SWPPP **(CGP part APP I.11.2.3)** | ☐ | ☐ | ☐ | |
| 3.3 Are the inspectors qualifications in the SWPPP **(CGP part 4.1.1)** | ☐ | ☐ | ☐ | |
| 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)** | ☐ | ☐ | ☐ | |
| 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)** | ☐ | ☐ | ☐ | |
| 3.7 If applicable, is weather information included in the inspection reports **(CGP part 4.1.2.2)** | ☐ | ☐ | ☐ | |
| 3.8 Were findings from last inspection addressed within 7 days **(CGP part 5.2.1)** | ☐ | ☐ | ☐ | |
| | | | | |

## 4. Best Management Practices

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

## 5. Final Stabilization

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

## 6. Site Review

Site Description:

Discharge of Sediment:

Discharge of Pollutants:

Are BMPs maintained adequately to prevent discharge:

## Notes

## Attachments

File Attachment

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# APPENDIX E

Fort Carson Notice of Termination Form

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

Date:

Project Name:

Project Location:

Permittee #1 .

NOI #

Dates of CGP Coverage:

Permittee #2:

NOI #

Dates of CGP Coverage:

Target Date for NOT filing:

NOT Inspector & personnel:

**Construction General Permit Conditions for filing NOT:**

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

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

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

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

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

**OR**



THIS IS A CONTROLLED DOCUMENT – REVISION DATE 7 MAY 2015 – PREVIOUS EDITIONS ARE OBSOLETE

☐ 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_____



**THIS IS A CONTROLLED DOCUMENT – REVISION DATE 7 MAY 2015 – PREVIOUS EDITIONS ARE OBSOLETE**

**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** | **Signature** | **Date** |
|---|---|---|
| **Fort Carson Stormwater Program** | | |



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# APPENDIX F

MS4 Annual Report Requirements

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**MS4 Annual Report Requirements**

The general information required for the Annual Report includes the following:

- A description of all construction activities constructed or proposed to be constructed which disturb equal to or greater than one acre of land during the reporting period
- Documentation of any public notices and/or meetings held to meet the conditions in Part 2.3.1
- A description of any changes to the illicit discharge detection and elimination program, including description of illicit discharges that were either addressed or eliminated in the past year
- For sites disturbing equal to or greater than one acre of land, documentation of the inspection process and frequency of construction site inspections as well as a summary of findings from inspections conducted during the reporting period
- A short summary of the progress towards meeting the goal of reducing pollutant discharges from the Fort Carson MS4. This should include any successes made during the reporting period, a general assessment of the appropriateness of stormwater controls and progress towards meeting measurable goals for each of the minimum control measures in Parts 2.2–2.7, results of information collected and analyzed such as monitoring data during the reporting period, and a summary of the storm water activities planned during the next reporting cycle
- A description of any changes made to the SWMP as a result of the annual review required by Part 2.1.2, and
- A description of concerns with permit compliance moving forward, and if applicable, input on how the MS4 permitting process could be made more effective in meeting the goals of protecting water quality

The public outreach and education information required for the Annual Report includes the following:

- A description of the methods, frequency, type, and target audience of stormwater outreach performed during the permit term
- A copy or representation of public outreach materials provided to the target audiences
- An estimation of the number of people expected to be reached by the program over each year of the permit term, and
- The name or title of the person(s) responsible for coordination and implementation of the stormwater public education and outreach program

The public involvement/participation information required for the Annual Report includes the following:

- Documentation of any events or other activities to clean up MS4 receiving waters, and
- Documentation of any volunteer activities conducted to help actively engage residents and personnel at Fort Carson in understanding water resources and how their activities can affect water quality.

The illicit discharge detection and elimination information required for the Annual Report includes the following:

- A description of the program used to detect and eliminate illicit discharges into the MS4s, including procedures for detection, identification of sources, and removal of non-stormwater discharges from the storm sewer system
- A description of the location and method of dry weather screening performed
- A description of illicit discharges located and all actions taken to eliminate sources of illicit discharges
- A description of training materials used and the frequency at which training was provided to the target audience(s) on how to respond to reports of illicit discharges
- A description or citation of the established ordinance or other regulatory mechanism used to prohibit illicit discharges into the MS4

- A copy or excerpt from the information management system used to track illicit discharges
- A description of the categories of non-stormwater discharges evaluated as potentially being significant contributors of pollutants to the MS4 (see Part 1.3.2) and any local controls placed on these discharges, and
- A description of hazardous waste collection events and summary data that generally covers what was collected
- A description of the activities taken to inventory and investigate interior floor drains in buildings for evidence of cross-connections between the storm and sanitary sewer systems, and
- An inventory of industrial areas that discharge into the permittee's MS4 or to waters of the United States within Fort Carson. This inventory must include the location of the activity, the location of its outfall and corresponding receiving water, and the NPDES permit status for its stormwater discharge

The construction site stormwater runoff control information required for the Annual Report includes the following:

- A description of "regulated construction activities" that occurred at Fort Carson during the term of this permit
- A description or citation of the established ordinance or other regulatory mechanism used to require erosion and sediment controls
- A description of the sanctions and enforcement mechanisms Fort Carson uses to ensure that all "regulated construction activities" are in compliance with the terms of the Construction General Permit. This should include a description of any methods developed for Fort Carson staff to stop work on construction sites that are in non-compliance, independent of contracting procedures
- A description of any sanctions and/or enforcement actions levied by Fort Carson against construction site operators to require compliance with the Construction Site Stormwater Control Program

- A description of the procedures for site plan review, including the review of pre-construction site plans, which incorporate consideration of potential water quality impacts and applicable contract language
- A description of the procedures for receipt and consideration of information submitted by the public
- A description of the procedures for site inspection, including how sites will be prioritized for inspection, including documentation of the frequency of site inspections and methods for prioritizing site inspections, and
- The name or title of the person(s) responsible for coordination and implementation of the construction site runoff control program

The post-construction stormwater management for new development and redevelopment information required for the Annual Report includes the following:

- A description of any impracticability determinations made during the reporting period, including the information required by the Permit Part 2.6.4
- A description of the review procedures and the assumptions provided to ensure the long-term operation and maintenance of permanent stormwater control measures, including an excerpt from any data management system that includes maintenance requirements and schedules for permanent stormwater control measures installed during the year
- A description of the process used to ensure that all Fort Carson SOWs initiated after the effective date of the permit contain language requiring the installation of permanent stormwater control measures and an excerpt of applicable SOW language
- A description of any activities to include requirements or planning for permanent stormwater control measures in the natural resource plan, and
- The name or title of the person(s) responsible for coordination and implementation of the post-construction stormwater management program

The pollution prevention and good housekeeping information required for the Annual Report includes the following:

- A description of the operation and maintenance program intended to prevent or reduce pollutant runoff from municipal operations including a list of each of the activities evaluated under this program and a description of the controls for reducing or eliminating the discharge of pollutants from streets, roads, highways, parking lots, maintenance and storage yards, waste transfer stations, fleet or maintenance shops with outdoor storage areas, snow disposal areas, and salt/sand storage locations

  A description of the contents and frequency of the training program (see Part 2.7.1) for municipal personnel and a list of the personnel or positions trained during the term of the permit

- A description of the evaluation performed on the street cleaning operations, catch basin cleaning operations, and street sanding/salt practices and any measures taken as a result of the evaluation to minimize negative impacts to water quality;

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# APPENDIX G

Delegation of Authority

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

REPLY TO
ATTENTION OF

IMCR-ZA 30 September 2016

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Delegation of Authority for Stormwater Program Documentation

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

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

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

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

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

DISTRIBUTION:
DPW
DGC

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