



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8

1595 Wynkoop Street  
DENVER, CO 80202-1129  
Phone 800-227-8917  
<http://www.epa.gov/region08>

OCT 05 2010

Ref: 8P-W-WW

Janet Kieler  
CDPHE/Water Quality Control Division  
Mailcode: WQCD-WQP-B2  
4300 Cherry Creek Drive S  
Denver, CO 80246-1530

Re: Request for 401 Certification of  
National Pollutant Discharge Elimination  
System (NPDES) Permits CO-R042003 and  
CO-R042004

Dear Ms. Kieler:

The Environmental Protection Agency (EPA) will be publishing a public notice of our intention to issue a NPDES permit for the Buckley Air Force Base to discharge stormwater from its Municipal Separate Storm Sewer System (MS4) to East Toll Gate Creek, Murphy Creek, and Granby Ditch (COSPUS16c), and a public notice of our intention to issue a NPDES permit for the Denver Federal Center to discharge stormwater from its MS4 to McIntyre Gulch (COSPUS16c).

Enclosed are the public notice versions of the draft permits and the draft permit statements of basis. These permits authorize pollutant discharges where EPA is the permitting authority and are limited to municipal stormwater discharges from the Buckley Air Force Base and Denver Federal Center MS4s.

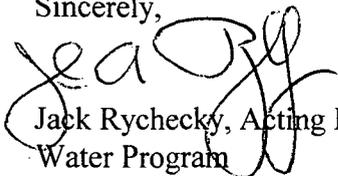
Section 401 of the Clean Water Act provides that an application for a NPDES permit must be accompanied by a certification from the State in which the subject discharge originates, and that such discharges will comply with applicable provisions of Sections 301, 303, 306, and 307 of the Act. Accordingly, we are requesting certifications for pollutant discharges authorized under these permits from the Buckley Air Force Base and Denver Federal Center MS4s. EPA cannot issue or deny the draft permit until the certifying agency has granted or denied certification under 40 CFR §124.55, or waived its right to certify.

EPA-BAFB-0000599

We would appreciate receiving your certifications, or waiver thereof, by November 30, 2010. Failure to issue or deny certification within a specified reasonable time, not to exceed 60 days, will be considered by EPA to be a waiver of the certification requirement according to 40 CFR §122.44.

If you have any questions with regard to the draft permit or fact sheet, please contact Amy Clark of my staff at 303-312-7014.

Sincerely,

A handwritten signature in black ink, appearing to read "Jack Rychecky". The signature is stylized and overlaps the printed name below it.

Jack Rychecky, Acting Director  
Water Program

Enclosures

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"), except as provided in Part 1.3 of this permit,

**United States Department of the Air Force, 460<sup>th</sup> Space Wing**

hereinafter "permittee", is authorized to discharge from all municipal separate storm sewer outfalls existing as of the effective date of this permit

to receiving waters which include East Tollgate Creek, Murphy Creek, Granby Ditch, and other associated waters of the United States within the exterior boundaries of Buckley Air Force Base, located at 39° 42' 30" N and 104° 45' 30" W in Aurora, Colorado,

in accordance with the conditions and requirements set forth herein.

This permit shall become effective **to be determined upon issuance**

This permit and the authorization to discharge shall expire at midnight, **to be determined upon issuance**

Signed this        day of

\_\_\_\_\_  
Authorized Permitting Official

Stephen S. Tuber, 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 boundary of Buckley Air Force Base, except for the privatized housing area currently leased to Hunt Housing. Hunt Housing, LLC, and its successors shall be solely responsible for the sanitary sewer and storm systems under its operation and control. However, this permit does contain requirements for Buckley Air Force Base to provide public education and outreach materials within the privatized housing area(s) located within Buckley Air Force Base but not operated by the Air Force.

### 1.2. Discharges Authorized Under This Permit

1.2.1. During the effective dates of this permit, the permittee is authorized to discharge stormwater from the following areas, under the conditions of this permit:

1.2.1.1. All portions of the MS4 within the exterior boundaries of Buckley Air Force Base.

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. Non-Stormwater Discharges. 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 Discharges. 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 occurring during emergency situations.
- 1.3.3. Stormwater Discharges Associated with Industrial Activity. This permit does not authorize stormwater discharges associated with industrial activity as defined in 40CFR §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).
- 1.3.5. Discharges that are causing or contributing to an exceedance of applicable numeric or narrative water quality standards. EPA will notify the permittee if its MS4 discharges are likely to cause or contribute to a water quality impairment, or whose discharges contribute directly or indirectly to a 303(d) listed waterbody. If EPA determines that discharges from the MS4 are causing or contributing to a water quality impairment, the permittee's stormwater management plan (SWMP) must include a section describing how the program will control the discharge of the pollutants of concern and ensure discharges from the MS4 will not cause or contribute to instream exceedances of the water quality standards. This documentation must specifically identify measures and Best Management Practices (BMPs) that will collectively control the discharge of the pollutants of concern. The permittee may be required to provide additional information to EPA to determine whether its discharge is causing or contributing to a water quality impairment.
- 1.3.6. Discharges of pollutants into waters which a Total Maximum Daily Load (TMDL) has been either established or approved by EPA unless the discharge is consistent with that TMDL. The permittee must incorporate any conditions and requirements applicable to discharges from the MS4 into the Stormwater Management Program in order to remain eligible for permit coverage. EPA will notify the permittee if a TMDL has been developed that specifies a wasteload allocation (WLA) for discharges from the MS4. The notification will require the MS4 operator to assess and document whether the WLA is being met through implementation of existing stormwater control measures or if additional control measures are necessary. The notification may also include requirements to describe and document an implementation schedule for controls, calculations, and monitoring or other proof that show that the WLA is being met. This may involve an iterative process of controls and evaluation. All documentation related to these requirements must be included as part of the records for the SWMP.
- 1.3.7. Discharges that do not comply with Colorado's anti-degradation policy for water quality standards. Colorado's anti-degradation policy can be obtained from the Colorado Department of Public Health and Environment or from its web site: <http://www.cdphe.state.co.us/op/regs/waterqualityregs.asp> (The anti-degradation rules are contained within Regulation 31 - Basic Standards and Methodologies for Surface Water).
- 1.3.8. Discharges and discharge-related activities that affect endangered species. Coverage under this permit is available only if the permittee's stormwater discharges, allowable non-storm water discharges, and discharge-related activities are not likely to:

- Jeopardize the continued existence of any species that are listed as endangered or threatened ("listed") under the Endangered Species Act (ESA) or result in the adverse modification or destruction of habitat that is designated as critical under the ESA ("critical habitat"); or
- Cause a prohibited "take" of endangered or threatened species (as defined under Section 3 of the ESA and 50 CFR 17.3), unless such takes are authorized under sections 7 or 10 of the ESA.

"Discharge-related activities" include: activities which cause, contribute to, or result in stormwater point source pollutant discharges; and measures to control stormwater discharges, including the citing, construction, and operation of Best Management Practices (BMPs) to control, reduce, or prevent stormwater pollution.

1.3.9. Discharges that Affect Historical Properties. Coverage under this permit is available only if the permittee's stormwater discharges, allowable non-stormwater discharges, and discharge-related activities are:

- Not likely to affect a property that is listed or is eligible for listing on the National Register of Historic Places as maintained by the Secretary of the Interior; or
- In compliance with a written agreement with the State Historic Preservation Officer (SHPO) that outlines all measures the permittee will undertake to mitigate or prevent adverse effect to the historic property.

## 2. STORMWATER MANAGEMENT PLAN (SWMP)

### 2.1. General Requirements

- 2.1.1. The permittee must continue to develop, implement, and enforce a SWMP. The SWMP must include management practices, control techniques, system design, engineering methods, and other provisions the permittee or EPA determines appropriate for the control of pollutants in discharges from the MS4.
- 2.1.2. The permittee must fully implement the SWMP; including meeting its measurable goals. Implementation should take place in approximate equal intervals throughout the permit and progress will be tracked in the annual report (see Part 3.3).
- 2.1.3. The SWMP must include each of the minimum control measures of Parts 2.2-2.7.
- 2.1.4. The permittee must conduct an annual review of the SWMP in conjunction with preparation of the annual report required under Part 3.3.
- 2.1.5. EPA may request documentation of the minimum control measures as required by the SWMP. EPA may review and subsequently notify the permittee that changes to the SWMP are necessary to:
  - Address discharges from the MS4 that are causing or contributing to water quality impacts;
  - Include more stringent requirements necessary to comply with new Federal or State statutory or regulatory requirements;
  - Include other conditions deemed necessary by the EPA to comply with water quality standards, ESA related requirements, and/or other goals and requirements of the Clean Water Act (CWA); and/or
  - Address the SWMP requirements of the permit, if EPA determines that the permittee's current SWMP does not meet permit requirements.

- 2.1.5.1. EPA may request changes in writing and can require including a schedule to develop and implement the changes. The request will offer the permittee the opportunity to propose alternative program changes to meet the objectives of the requested modification.
- 2.1.6. Transfer of Ownership, Operational Authority, or Responsibility for SWMP Implementation. The permittee must implement the SWMP 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, unless deemed longer by the permitting authority, 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.
- 2.1.7. If EPA notifies the permittee that changes are necessary to ensure that stormwater discharges are not causing or contributing to a violation of water quality standards, the notification will offer the permittee an opportunity to propose alternative program changes to meet the objectives of the requested modification. Following this opportunity, the permittee must implement any required changes according to the schedule set by EPA.
- 2.2. Public Education and Outreach on Stormwater Impacts. The permittee must:
  - 2.2.1. Continue an education and outreach program for Buckley AFB which targets project managers, contractors, tenants, residents, 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, residents, 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. For new residents in on-base housing, update new resident packets or provide information through alternative sources to educate new residents with information on household hazardous waste collection and disposal and information on the potential impacts of stormwater runoff;
  - 2.2.4. Provide and document training to appropriate 460<sup>th</sup> Space Wing personnel, for example, environmental, engineering and planning staff, and contracting officers to communicate the specific requirements for post-construction control as specified in this permit. Such training will be made available to tenant unit personnel, within the context of current contracts or inter-service support agreements; and
  - 2.2.5. Document education and outreach activities, including documents created for distribution and a training schedule which notes the dates that trainings occurred and the target audiences reached.
  - 2.2.6. The annual report (See Part 3.3) must document the following information related to public education and outreach:
    - 2.2.6.1. A description of the methods, frequency, type, and target audience of stormwater outreach performed during the permit term;
    - 2.2.6.2. A copy or representation of public outreach materials provided to the target audience(s);
    - 2.2.6.3. An estimation of the number of people expected to be reached by the program over each year of the permit term; and

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

2.3. Public Involvement and Participation. The permittee must:

- 2.3.1. Comply with applicable public notice requirements when implementing a public involvement and participation program;
- 2.3.2. Make all relevant annual reports available on the permittee web site or provide links to all relevant annual reports posted on the EPA Region 8 web site in a locally available publication;
- 2.3.3. Maintain a log of public participation and outreach activities performed;
- 2.3.4. Document efforts to meet at least annually with the City of Aurora to discuss development, maintenance, and new discharges to East Toll Gate Creek; and
- 2.3.5. Document volunteer activities to actively engage residents and personnel at Buckley Air Force Base in understanding water resources and how their activities can affect water quality.
- 2.3.6. The annual report (See Part 3.3) 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;
  - 2.3.6.2. Documentation of any volunteer activities conducted to help actively engage residents and personnel at Buckley AFB in understanding water resources and how their activities can affect water quality; and
  - 2.3.6.3. The name or title of the person(s) responsible for coordination and implementation of the storm water public education and outreach program.

2.4. Illicit Discharge Detection and Elimination. An illicit discharge is any discharge to a MS4 that is not composed entirely of stormwater. Exceptions are described in Part 1.3.2. The permittee must:

- 2.4.1. Implement a program 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, and 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 any outreach materials as appropriate;
- 2.4.4. Investigate any illicit discharge within fifteen (15) days of its detection, and 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 information system which tracks dry weather screening efforts, illicit discharge reports, and the location and any remediation efforts to address identified illicit discharges;

- 2.4.6. Conduct dry weather screening annually at each of the major outfalls for the presence of non-stormwater discharges and to determine if there are significant erosion issues which need to be addressed. If an illicit discharge is detected, an assessment of that discharge shall be made. For example, sampling could include field tests of selected chemical parameters as indicators of discharge sources where dry weather flows are detected. Screening level tests may utilize less expensive "field test kits" using test methods not approved by EPA under 40 CFR Part 136, provided the manufacturer's published detection ranges are adequate for the illicit discharge detection purposes;
- 2.4.7. Address the categories of non-stormwater discharges or flows listed in Part 1.3.2 and require local controls or conditions on these discharges as necessary to ensure that they are not significant contributors of pollutants to the small MS4. If the permittee identifies any of these non-stormwater discharges as a significant contributor of pollutants, the permittee must include the category as an illicit discharge and implement a plan of action to minimize or eliminate the illicit discharge as soon as practicable;
- 2.4.8. Update the complete storm sewer system map in the Buckley AFB GIS prior to the end of year three of the permit; and
- 2.4.9. The annual report (See Part 3.3) must document the following information related to illicit discharge detection and elimination:
  - 2.4.9.1. A description of the program used to detect and eliminate illicit discharges into the MS4; including procedures for detection, identification of sources, and removal of non-stormwater discharges from the storm sewer system;
  - 2.4.9.2. A description of the location and method of dry weather screening performed;
  - 2.4.9.3. A description of illicit discharges located and all actions taken to eliminate sources of illicit discharges;
  - 2.4.9.4. 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;
  - 2.4.9.5. A description or citation of the established ordinance or other regulatory mechanism used to prohibit illicit discharges into the MS4;
  - 2.4.9.6. A copy or excerpt from the information management system used to track illicit discharges;
  - 2.4.9.7. A description of the categories of non-stormwater discharges evaluated as potentially being significant contributors of pollutants to the MS4 and any local controls placed on these discharges; and
  - 2.4.9.8. A description of the schedule and/or progress in creating a complete storm sewer map in the Buckley AFB GIS.
- 2.5. Construction Site Stormwater Runoff Control. The permittee must:
  - 2.5.1. Develop, implement, and enforce a program to reduce pollutants in stormwater runoff from construction activities;
  - 2.5.2. Use an ordinance or other mechanism available under the legal authorities of the permittee to require erosion and sediment controls with sanctions for compliance to ensure compliance with the terms of the NPDES General Permit for Stormwater Discharges for Construction Activity in Colorado,

COR10000F (i.e., the Construction General Permit or "CGP");

- 2.5.3. Provide information on construction site BMPs with criteria for maintenance and installation. This may reference or incorporate documents which define how to install and maintain BMPs such as the Urban Drainage and Flood Control District Criteria Manual;
- 2.5.4. Implement procedures for site plan review which incorporate consideration of potential water quality impacts, and review the Scope of Work for Buckley AFB projects to ensure that effective construction stormwater BMPs are proposed;
- 2.5.5. Maintain a list of policies and procedures which can be used to enforce construction site compliance within Buckley AFB independent of EPA staff directly enforcing the CGP;
- 2.5.6. Implement an inspection plan and keep a copy of that plan which provides inspection triggers, a priority for order of inspections, and a required timeframe upon which construction sites must be inspected by Buckley AFB. All construction sites within Buckley AFB must be inspected at a minimum semi-annually, and all sites must be inspected prior to construction stormwater permit termination to verify that 70% vegetative cover has been met on all areas of the site;
- 2.5.7. Maintain a site inspection form for use by Buckley AFB stormwater managers at sites;
- 2.5.8. Provide training to contracting officials which perform daily QAEs (Quality Assurance Evaluations) annually regarding the maintenance and installation of BMPs for construction stormwater control and the terms of the construction stormwater permit; and
- 2.5.9. Upon the closeout for construction projects where there has been documented non-compliance with the construction stormwater permit, provide information to the appropriate contracting authority for their action to document incidences of non-compliance;
- 2.5.10. The annual report (See Part 3.3) must document the following information related to construction site stormwater runoff control:
  - 2.5.10.1. A description of construction activities which disturbed greater than or equal to one acre of land at Buckley AFB 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 Buckley AFB uses to ensure that construction activities disturbing equal to or greater than one acre of land are in compliance with the terms of the CGP. This should include a description of any methods developed for Buckley AFB staff to stop work on construction sites in non-compliance independent of contracting procedures;
  - 2.5.10.4. 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;
  - 2.5.10.5. A description of the procedures for receipt and consideration of information submitted by the public;
  - 2.5.10.6. 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;

- 2.5.10.7. Documentation of annual training provided to contracting officials, including those who perform Quality Assurance Evaluations (QAEs), regarding the maintenance and installation of BMPs for construction stormwater control and the terms of the construction stormwater permit; 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. Post-construction Stormwater Management for New Development and Redevelopment. The permittee must:
- 2.6.1. Develop Form 1391 Military Construction Project Data Sheets or other equivalent documents for all new construction projects disturbing 1+ acre to include a requirement to design for and provide funding for the installation of permanent post-construction stormwater control measures designed to retain, detain, infiltrate, or treat runoff from newly developed impervious surfaces in a manner which mimics pre-development hydrology. A line item needs to be included in every new proposal (e.g., Department of Defense Form 1391) to ensure that performance-based or design-based post-construction stormwater requirements for new developments and re-developments are provided. This should include a line item for costs associated with the installation and design of permanent stormwater control measures which presumptively meet the performance-based or design-based runoff criteria;
  - 2.6.2. Prior to the end of year 3 of the permit, incorporate LID designs provided for use in Simplified Acquisition Base Engineering Requirements (SABER) or other equivalent projects for the design and maintenance of new parking lots exceeding one acre in size such that they will significantly reduce, retain, and treat stormwater onsite;
  - 2.6.3. As part of the design review process for new construction projects disturbing equal to or greater than one acre, review all projects to ensure that they include permanent post-construction stormwater control measures designed to retain, detain, infiltrate, or treat runoff from newly developed impervious surfaces in a manner which mimics pre-development hydrology;
  - 2.6.4. When updated, include hydrologic performance specifications and information related to the design and maintenance of permanent stormwater control measures in natural resource plans;
  - 2.6.5. Include post-construction BMP "as-builts" for all newly installed permanent stormwater control measures in a georeferenced data management system;
  - 2.6.6. Ensure that all newly installed post-construction stormwater control measures are working as designed prior to closing out contracts;
  - 2.6.7. 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
  - 2.6.8. Ensure that permanent post-construction stormwater control measures are included in any applicable warranty reviews.
  - 2.6.9. The annual report (See Part 3.3) must document the following information related to post-construction site stormwater runoff control:
    - 2.6.9.1. A description of the program to ensure that hydrologic endpoints are evaluated for new development and re-development projects as required in Part 2.6.1 and the mechanism used to

review the adequacy of permanent stormwater control measures;

- 2.6.9.2. 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;
- 2.6.9.3. A description of the process used to ensure that all Buckley AFB contracts initiated after the effective date of the permit contain language which requires the installation of permanent stormwater control measures and an excerpt of applicable contract language;
- 2.6.9.4. A description of any activities to include requirements or planning for permanent stormwater control measures in the natural resource plan; and
- 2.6.9.5. 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 for Municipal Operations. The permittee must:

- 2.7.1. Provide and document annual training for operators at all fleet maintenance facilities and civil engineering shops covering the topics of stormwater runoff impacts and controls and the maintenance of onsite pollution control measures. These trainings can be provided to a single point of contact for each facility for further distribution;
- 2.7.2. Consider deicing training if available to minimize the use of and runoff from chemical deicers and traction aggregates;
- 2.7.3. Evaluate options for consolidated areas to wash large equipment where practicable;
- 2.7.4. Develop and implement a schedule for cleanout of storm sewer inlets in a manner which prevents significant deposition of sediment or other debris to receiving waters;
- 2.7.5. Develop and 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;
- 2.7.6. Include in recurring work contracts (e.g., the recurring work program (RWP)), specifications for maintenance of instream BMPs (e.g., sediment basins, drop structures, trash racks); and
- 2.7.7. Include maintenance activities for all permanent stormwater control measures in the Integrated Wastewater Information Management System (IWIMS) or another suitable application when turned over (as-builts, specifications, etc.) to the 460<sup>th</sup> Civil Engineer Squadron.
- 2.7.8. The annual report (See Part 3.3) must document the following information related to pollution prevention and good housekeeping for municipal operations:
  - 2.7.8.1. 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;
  - 2.7.8.2. 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; and

- 2.7.8.3. A description of how maintenance activities are tracked for permanent stormwater control measures.

### 3. MONITORING, RECORDKEEPING AND REPORTING

#### 3.1. Monitoring. The permittee must:

- 3.1.1. Not later than the end of year three of the permit term, develop a program to evaluate the water quality in East Tollgate Creek, and if deemed necessary by the permittee, Granby Ditch, as it both enters Buckley AFB and leaves Buckley AFB. This program shall at a minimum include evaluations of streambank stabilization, and water quality. The water quality monitoring program may include indicators such as chemical monitoring, assessment of macroinvertebrates or other aquatic life, or watershed assessment of river stability and sediment supply, provided that the monitoring program provides meaningful data to evaluate the effectiveness of the stormwater management program. The permittee is responsible for evaluating data for analysis of trends; and
- 3.1.2. Send a description of the water quality monitoring program to EPA with the Annual Report for year 3 of this permit term. Programs will be assessed by EPA Region 8 to determine whether the program meets the goals of this permit and whether the data is being collected and reported in compliance with EPA test procedures approved under 40 CFR Part 136.

#### 3.2. Recordkeeping

- 3.2.1. 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 required by this permit, copies of Discharge Monitoring Reports (DMRs), 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.
- 3.2.2. The permittee must submit the records referred to in Part 3.2.1 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.

#### 3.3. Annual Reports.

The permittee must submit an annual report to EPA for each year of the permit term. The first report is due April 1, 2011, and must cover the activities during the period beginning on the effective date of the permit through December 31, 2010. Each subsequent annual report is due on April 1 of each year following 2009 for the remainder of the permit term. Reports must be signed in accordance with the signatory requirements in Part 4.7. 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:

Stormwater Coordinator (8P-W-WW)  
Small MS4 Annual Report  
US EPA Region 8  
1595 Wynkoop Street  
Denver, CO 80202-1129

#### 4. STANDARD PERMIT CONDITIONS

- 4.1. Duty to Comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of CWA and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.
- 4.1.1. *Criminal Violations*.
- 4.1.1.1. *Negligent Violations*. The CWA provides that any person who *negligently* violates permit conditions implementing 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, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by 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 of not more than 2 years, or both.
- 4.1.1.2. *Knowing Violations*. The CWA provides that any person who *knowingly* violates permit conditions implementing 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 sections 402(a)(3) or 402(b)(8) of the Act, is subject to a fine of not less than \$5,000 nor more than \$50,000 per day of violation, or by 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 by imprisonment of not more than 6 years, or both.
- 4.1.1.3. *Knowing Endangerment*. The CWA provides that any person who *knowingly* violates permit conditions implementing 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, 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 not more than \$250,000 or by 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 criminal penalties of not more than \$500,000 per day of violation, or by imprisonment of 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.
- 4.1.1.4. *False Statement*. The CWA provides that any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under the Act or who knowingly falsifies, tampers with, or renders inaccurate, any monitoring device or method required to be maintained under the Act, shall upon conviction, be punished by a fine of not more than \$10,000 or by imprisonment for not more than two years, or by both. If a conviction is for a violation committed after a first conviction of such person under this paragraph, punishment shall be by a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four years, or by both. (See section 309(c)(4) of the Clean Water Act).
- 4.1.2. *Civil Penalties*. The CWA provides that any person who violates a permit condition implementing 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 sections 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.

- 4.1.3 *Administrative Penalties.* The CWA provides that any person who violates a permit condition implementing 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 sections 402(a)(3) or 402(b)(8) of the Act is subject to an administrative penalty as follows:
- 4.1.3.1. *Class I penalty.* Not to exceed \$16,000 per violation nor shall the maximum amount exceed \$37,500.
- 4.1.3.2. *Class II penalty.* Not to exceed \$16,000 per day for each day during which violation continues nor shall the maximum amount exceed \$177,500.
- 4.2. 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.
- 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 in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.
- 4.5. Duty to Provide Information. The permittee shall furnish to the EPA, within a reasonable time, any information which the EPA 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 EPA, upon request, copies of records required to be kept by this permit.
- 4.6. Other Information. If the permittee becomes aware that the permittee has failed to submit any relevant facts in the Notice of Intent or submitted incorrect information in the Notice of Intent, or in any other report to the EPA, the permittee must promptly submit such facts or information.
- 4.7. Signatory Requirements. All Notices of Intent, Notices of Termination, reports, certifications, or information submitted to the EPA, or that this permit requires be maintained by the permittee, shall be signed and certified as follows:
- 4.7.1. *Notices of Intent.* All Notices of Intent/Termination shall be signed by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes: (1) the chief executive officer of the agency, or (2) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).
- 4.7.2. *Reports and other information.* All reports required by the permit and other information requested by the EPA or authorized representative of the EPA shall be signed by a person described in Part 5.7.1 or by a duly authorized representative of that person. A person is a duly authorized representative only if:
- 4.7.2.1. The authorization is made in writing by a person described in Part 5.7.1 and submitted to the EPA; and

- 4.7.2.2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated activity, such as the position of manager, operator, superintendent, or position of equivalent responsibility for environmental matter for the regulated entity.
- 4.7.3. *Changes to authorization.* If an authorization under Part 4.7.2 is no longer accurate because a different individual or position has responsibility for the overall operation of the MS4, a new authorization satisfying the requirements of Part 5.7.2 must be submitted to the EPA prior to or together with any reports, information, or notices of intent to be signed by an authorized representative.
- 4.7.4. *Certification.* Any person signing a document under Parts 4.7.1 or 4.7.2 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 gathered and evaluated 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 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.”
- 4.8. Property Rights. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations
- 4.9. 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 and with the conditions of the permittee’s storm water management program. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by the permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
- 4.10. Inspection and Entry. The permittee shall allow the State or Regional Administrator, or authorized representative (including an authorized contractor acting as a representative of the Administrator) upon presentation of credentials and other documents as may be required by law, to:
- 4.10.1. Enter upon the permittee’s premises where a regulated activity is located or conducted or where records must be kept under the conditions of this permit;
- 4.10.2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- 4.10.3. Inspect at reasonable times, any facilities or equipment (including monitoring and control equipment) practices, or operations regulated or required under this permit; and
- 4.10.4. Sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the CWA, any substances or parameters at any location.
- 4.11. 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.

- 4.12. Permit. This permit is not transferable to any person except after notice to the EPA. The EPA may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Act.
- 4.13. Anticipated Noncompliance. The permittee shall give advance notice to the EPA of any planned changes in the permitted small MS4 or activity which may result in noncompliance with permit conditions.
- 4.14. State/Tribal Environmental Laws.
- 4.14.1. 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/Tribal law or regulation under authority preserved by section 510 of the Act.
- 4.14.2. No condition of this permit releases the permittee from any responsibility or requirements under other environmental statutes or regulations.
- 4.15. 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.
- 4.16. Procedures for Modification or Revocation. Permit modification or revocation will be conducted according to 40 CFR 122.62, 122.63, 122.64 and 124.5.

## 5. DEFINITIONS

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.

- 5.1. *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.
- 5.2. *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.
- 5.3. *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.
- 5.4. *Discharge*, when used without a qualifier, refers to “discharge of a pollutant” as defined at 40 CFR 122.2.
- 5.5. *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.
- 5.6. *EPA* means the EPA Regional Administrator or an authorized representative.

- 5.7. *Measurable Goal* means a quantitative measure of progress in implementing a component of a storm water management program.
- 5.8. *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).
- 5.9. *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.
- 5.10. *NOT* means Notice of Termination to be covered under EPA's Construction General Permit.
- 5.11. *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.
- 5.12. *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.
- 5.13. *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.
- 5.14. *Stormwater* is defined at 40 CFR 122.26(b)(13) and means storm water runoff, snow melt runoff, and surface runoff and drainage.
- 5.15. *Storm Water Management Plan (SWMP)* refers to a comprehensive program to manage the quality of storm water discharged from the municipal separate storm sewer system.

## Statement of Basis

PERMITTEE: United States Department of the Air Force, 460<sup>th</sup> Space Wing

FACILITY: Buckley Air Force Base (AFB) Municipal Separate Storm Sewer System (MS4) located at 39° 42' 30" N and 104° 45' 30" W

PERMIT NO.: CO-R042003

RESPONSIBLE OFFICIAL: Colonel Clinton E. Crosier, Commander

PHONE: 720-847-4601

CONTACT PERSON: Laurie B. Fisher  
Water Quality Program Manager

### Facility Background Information:

Buckley Air Force Base (Buckley AFB) is an Air Force Space Command base. During 2000, base-operating responsibilities changed from the Colorado Air National Guard (COANG) to the U.S. Air Force (USAF) and ultimately the 460th Space Wing (460 SW) became the host unit at Buckley AFB.

The 460 SW's mission is to provide combatant commanders with expeditionary warrior Airmen, and deliver global infrared surveillance, tracking, and missile warning for theater and homeland defense. Also, the 460 SW provides infrastructure and organizational support for approximately 77 tenant organizations who have facilities and operations located on Buckley AFB including the 140th Wing (140 WG) of the COANG, the Colorado Army National Guard (COARNG), the Navy Operational Support Center, Marines Corps, and Coast Guard, and reserve components of these forces.

Prior to the issuance of this permit, stormwater discharges from the Buckley AFB MS4 were regulated under EPA's General Permit for Storm Water Discharges from Federal Facility Small Municipal Separate Storm Sewer Systems in Colorado (COR42000F). This permit was issued on June 23, 2003 and expired on June 22, 2008. This general permit was not reissued. The eight facilities covered under the general permit have been or will be issued individual permits for discharges from their MS4s. This approach is being taken so that terms specific to the operations, industrial activities, and receiving water conditions of each facility can be included in each individual permit. It is believed that this approach will result in a permit with more streamlined conditions specifically tailored to the goal of reducing pollutant loading in stormwater runoff.

As part of the process of issuing an individual permit for stormwater discharges from the Buckley AFB MS4, representatives from EPA Region 8 conducted a facility audit of the MS4 program at Buckley AFB. The audit team reviewed contracts, regulations, annual reports from the previous permit, and facility operating procedures. Oversight inspections of industrial activities and interviews of program staff were also performed. A summary of the significant findings from this audit are as follows:

- Buckley AFB has a strong program to address stormwater discharges from “municipal” and industrial facilities. This is likely due to a strong education program with annual training on several topics and oversight in the form of base-wide inspections and regional Air Force oversight;
- New facilities at Buckley AFB are very well designed with separation of areas exposed to industrial activities and large secondary containment features;
- Development at Buckley AFB includes detention structures but does not currently reflect low impact development practices. Implementation of a design standard which mimics pre-development hydrology will require changes in how contracts for new construction are created and managed.
- Contracting of small construction sites is a concern as violations of the construction general permit were noted during the audit. The ability to influence contractors through either contractor performance appraisals and daily quality assurance evaluations is not very effective as it is currently being implemented.
- Buckley AFB maintains a mostly daylighted storm sewer system with maintained detention structures, so visible degradation from high flows in receiving waters is not very evident. Pollutants leaving the base are likely minimal due to the strong “municipal” and industrial sites program and a commitment to tracking and properly disposing of all potentially hazardous chemicals.
- Future development in the surrounding watershed will affect East Tollgate Creek and how the stormwater conveyance system at Buckley AFB needs to be managed. Communication with the City of Aurora regarding newly proposed projects is important.

Recommendations from the facility audit were used to develop specific permit conditions for Buckley AFB. This audit is available as part of the administrative record for this permit. A summary of the recommendations from the Buckley AFB MS4 audit is as follows:

- Buckley AFB should continue to include training on an annual basis for “municipal” and industrial operators;

- The contracting process for new construction projects will need to be modified to include a line item for the cost of permanent stormwater control measures. Environmental staff will need to review proposed projects to ensure that permanent stormwater control measures can meet hydrologic endpoints and can be maintained. Once installed, it will be necessary to retain designs and determine mechanisms so that permanent stormwater control measures are maintained to meet pollutant removal and detention/retention/infiltration goals over time;
- The contracting process for small construction projects needs to be re-evaluated so that there is more incentive to comply with the terms of the construction stormwater permit; and

A monitoring program should be initiated to ascertain receiving water quality and to evaluate the effectiveness of the MS4 program.

Each of these recommendations, as well as more specific findings from the facility MS4 audit are included as permit conditions in this permit. These supplement the previous conditions laid out in EPA's General Permit for Storm Water Discharges from Federal Facility Small Municipal Separate Storm Sewer Systems in Colorado (COR42000F).

#### Receiving Waters:

All surface water runoff within Buckley AFB is intermittent and occurs only in response to precipitation events. This runoff is controlled and managed on base by the Buckley AFB stormwater drainage system, a man-made system covered under Buckley AFB's MS4 permit. Runoff from facilities on base discharges into this MS4 system and discharges at outfalls into natural drainage channel receiving waters. The receiving waters, also intermittent drainages, are East Toll Gate Creek (a natural drainage channel) and Granby Ditch (a natural channel, largely improved by man, and a component of the City of Aurora's MS4 drainage system). However, construction in the City of Aurora appears to be moving East Toll Gate Creek toward more perennial flow. Based on topography, surface water drains from the eastern side of the base via either an unnamed tributary to Murphy Creek or an unnamed tributary to Sand Creek. However, this part of the Base is well vegetated, most runoff occurs as overland flows, and therefore actual runoff discharges at outfalls are rare.

Surface drainage from Buckley AFB and the surrounding area is generally from southeast to northwest. Sand Creek, the primary surface drainage feature in the area, is located to the north-northeast of the base; Murphy Creek is tributary to Sand Creek. East Toll Gate Creek crosses the southern part of the base and is tributary to Toll Gate Creek about 1.4 miles to the northwest, at its confluence with West Toll Gate Creek. Toll Gate Creek is tributary to Sand Creek where it joins about 3.3 miles further downstream, southwest of the I-225 and I-70 interchange. Sand Creek is tributary to the South Platte River approximately 12 miles northwest of Buckley AFB. This portion of the South Platte is designated as the U.S. Geological Survey's (USGS's) Middle

South Platte-Cherry Creek watershed with the hydrologic unit code 10190003. The named drainages are all classified as Waters of the United States.

East Toll Gate Creek is the only receiving water or drainage basin that has any drainage area occurring upstream of the Base, so activities which may impact water quality entering the base are limited to this drainage. The total area of the East Toll Gate Creek drainage basin is 11.1 square miles (7,100 acres). The part of the East Toll Gate Creek drainage basin located on Buckley AFB is about 20 percent of the entire basin. The upstream drainage area, which enters (runs onto) the base at two points along the southern boundary, is about 40 percent of the entire basin, or twice the size of the on-base drainage area. Therefore, a significant volume of runoff flows onto the base in response to major precipitation events. The upstream drainage area, located within the limits of the City of Aurora and in unincorporated Arapahoe County, is partially developed with several commercial and residential developments currently under construction. East Toll Gate Creek, located both immediately upstream and downstream of the Base, is designated by the State of Colorado as impaired, as follows:

WBID: COSPUS16c,

Segment Description: Tributaries to S. Platte River, Chatfield Reservoir to Big Dry Creek except specific listings

Portion: East Toll Gate Creek, West Toll Gate Creek, Toll Gate Creek,

Pollutant of concern: Selenium.

In addition, Sand Creek, which is a possible receiving water downstream of the base, is designated as impaired by the State of Colorado, as follows:

WBID: COSPUS16a,

Segment Description: Sand Creek,

Portion: all,

Pollutants of concern: Selenium and *Escherichia Coli* (*E.coli*). There are no TMDLs in place for waters on Base or immediately downstream.

The major soil-mapping units present on Buckley AFB include the Fondis-Weld, Alluvial Land-Nunn, and Renohill-Buick-Little associations. The Fondis-Weld association, composed of the Fondis and Weld soil series, covers the most surface area at Buckley AFB. The Fondis soils have moderately slow permeability (< 0.63 inches per hour). The Alluvial Land-Nunn association consists of soils that have moderate permeability (0.63 inches per hour). The most common soil series within the Renohill-Buick-Little association are the Renohill-Little complex and the Renohill-Buick loam. Renohill soils are characterized as moderately slow to slow permeability (less than 0.63 inches per hour).

### Endangered Species

Coverage under this permit is available only if the stormwater discharges, allowable non-storm water discharges, and discharge-related activities are not likely to:

- Jeopardize the continued existence of any species that are listed as endangered or threatened ("listed") under the ESA or result in the adverse modification or destruction of habitat that is designated as critical under the ESA ("critical habitat"); or
- Cause a prohibited "take" of endangered or threatened species (as defined under Section 3 of the Endangered Species Act and 50 CFR 17.3), unless such takes are authorized under sections 7 or 10 of the Endangered Species Act.

"Discharge-related activities" include activities which cause, contribute to, or result in stormwater point source pollutant discharges and measures to control stormwater discharges; including the citing, construction, and operation of Best Management Practices (BMPs) to control, reduce, or prevent stormwater pollution.

Upon its initial certification for MS4 permit coverage in 2004, Buckley AFB, working with the U.S. Fish and Wild Life Service (FWS) and the State of Colorado, certified in its Notice of Intent (NOI) application, that stormwater discharges and discharge-related activities from the Buckley AFB MS4 would not jeopardize the continued existence of any species that are listed as endangered or threatened ("listed") under the ESA or result in the adverse modification or destruction of habitat that is designated as critical under the ESA ("critical habitat"). Buckley AFB continues to work with FWS and the State to update its endangered species lists and is required to evaluate the potential affects of every new construction project through a formal impact analysis. These analyses require that all new projects are designed and maintained such that the existence of listed species cannot be jeopardized and critical habitat cannot be adversely modified or destroyed.

No species that are federally-listed as endangered or threatened ("listed") under the Endangered Species Act (ESA) have been found or are expected to be present on Buckley AFB. According to the U.S. Fish & Wildlife Service there is no critical habitat designated on or near Buckley AFB. Therefore, plans to address impacts from stormwater discharges are not applicable. The burrowing owl is a state species of concern.

### Historic Properties

Coverage under this permit is available only if the stormwater discharges, allowable non-stormwater discharges, and discharge-related activities are:

- Not likely to affect a property that is listed or is eligible for listing on the National Register of Historic Places as maintained by the Secretary of the Interior; or
- In compliance with a written agreement with the State Historic Preservation Officer (SHPO) that outlines all measures the MS4 operator will undertake to mitigate or prevent adverse effect to the historic property.

Upon its initial certification for MS4 permit coverage in 2003, Buckley AFB, working with State Historic Preservation Officers (SHPOs), certified in its Notice of Intent (NOI) application, that stormwater discharges and discharge-related activities from the Buckley AFB MS4 would not affect a property that is listed or is eligible for listing on the National Register of Historic Places as maintained by the Secretary of the Interior. Buckley AFB continues to work with SHPOs to update its listing of historic properties and any other archeological areas of significance and is required to evaluate the potential affects of every new construction project through a formal impact analysis. These analyses require that all new projects are designed and maintained such that properties listed or eligible for listing on the National Register of Historic Places are not affected.

Numerous surveys, studies, and inventories have been conducted on Buckley AFB to identify historic or cultural features, sites or items. Six buildings, which date to the Cold War era, have been determined by Buckley AFB, with the concurrence of the Colorado State Historic Preservation Office, to be individually eligible for the National Register of Historic Places (NRHP). These buildings are two hangars and the exteriors of four of the radomes. No archaeological sites eligible for inclusion in the NRHP have been identified on Buckley AFB and no Indian sacred sites, traditional cultural properties, Native American human remains, or cultural items have been identified, or inadvertently discovered or reported on Buckley AFB.

The Integrated Cultural Resources Management Plan (ICRMP) for Buckley AFB provides guidance and establishes standard operating procedures for the management of culturally significant resources on the base. The ICRMP contains compliance procedures including Native American concerns, consultation procedures, and Section 106 review guidelines. The ICRMP is consulted prior to any proposed project to ensure that there are no new cultural resources constraints associated with a proposed action.

#### Technology Based Effluent Limits

NPDES permit coverage for these discharges is required in accordance with the 1987 Amendments to the Clean Water Act (CWA) and final EPA regulations for Phase II stormwater discharges (64 FR 68722, December 8, 1999). The 1987 Water Quality Act (WQA) amended the Clean Water Act (CWA) by adding section 402(p) which requires that NPDES permits be issued for various categories of storm water discharges. Section 402(p)(2) requires permits for the following five categories of storm water discharges:

1. Discharges permitted prior to February 4, 1987;
2. Discharges associated with industrial activity;
3. Discharges from large municipal separate storm sewer systems (MS4s) (systems serving a population of 250,000 or more);
4. Discharges from medium MS4s (systems serving a population of 100,000 or more, but less than 250,000); and
5. Discharges judged by the permitting authority to be significant sources of pollutants or which contribute to a violation of a water quality standard.

The five categories listed above are generally referred to as Phase I of the stormwater program. In Colorado, Phase I MS4 permits have been issued by the Colorado Department of Public Health and Environment (CDPHE) to the cities of Denver, Lakewood, Aurora, Colorado Springs, and the highway system operated by the Colorado Department of Transportation within those cities. In Colorado, NPDES permitting authority for Federal Facilities has not been delegated to CDPHE. Therefore, EPA maintains NPDES primacy for those facilities.

Phase II stormwater regulations were promulgated by EPA on December 8, 1999 (64 FR 68722). These regulations set forth the additional categories of discharges to be permitted and the requirements of the program. The additional stormwater discharges to be permitted include:

1. Small MS4s;
2. Small construction sites (i.e., sites which disturb one to five acres); and
3. Industrial facilities owned or operated by small municipalities which were temporarily exempted from the Phase I requirements in accordance with the provisions of the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991.

The 1987 CWA amendments clarified the fact that industrial storm water discharges are subject to the best available technology (BAT) / best conventional technology (BCT) requirements of the CWA, and applicable water quality standards. For MS4s, the CWA specifies a new technology-related level of control for pollutants in the discharges - control to the maximum extent practicable (MEP). However, the CWA is silent on the issue of compliance with water quality standards for MS4 discharges. In September 1999, the Ninth Circuit Court addressed this issue and ruled that water quality standards compliance by MS4s is discretionary on the part of the permitting authority (*Defenders of Wildlife v. Browner*, No. 98-71080).

The technology based effluent limits for this permit are largely based on the implementation of a Stormwater Management Program (SWMP) which addresses six minimum measures. The SWMP and additional measures included in this permit are the means through which Buckley AFB complies with the CWA's requirement to control pollutants in the discharges to the maximum extent practicable (MEP) and comply with the water quality related provisions of the CWA. EPA considers MEP to be an iterative process in which an initial SWMP is proposed and then periodically upgraded as new BMPs are developed or new information becomes available

concerning the effectiveness of existing BMPs (64 FR 68754). The Phase II regulations at 40 CFR §122.34 require the following six minimum pollution control measures to be included in SWMP:

1. Public Education and Outreach on Storm Water Impacts;
2. Public Involvement/Participation;
3. Illicit Discharge Detection and Elimination;
4. Construction Site Storm Water Runoff Control;
5. Post-Construction Storm Water Management in New Development and Redevelopment; and
6. Pollution Prevention/Good Housekeeping for Municipal Operations.

The regulations specify required elements for each minimum measure and also include guidance which provides additional information recommended for an adequate program. The permit includes nearly verbatim the required program elements for each minimum measure. The permit also includes a number of additional requirements for each minimum measure which were derived from the recommendations of the regulations and from findings recognized during the facility audit which could affect the implementation of an effective stormwater program.

A summary of technology based effluent limits and a rationale for these limits follows:

### **General Requirements**

- Buckley AFB must continue to develop, implement, and enforce a SWMP. The SWMP must include management practices, control techniques, system design, engineering methods, and other provisions the permittee or EPA determines appropriate for the control of pollutants in discharges from the MS4;
- Buckley AFB must fully implement the SWMP; including meeting its measurable goals. Implementation should take place in approximate equal intervals throughout the permit and progress will be tracked in the annual report;
- The SWMP must include each of the minimum control measures; and
- Buckley AFB must conduct an annual review of the SWMP in conjunction with preparation of the annual report.

Fundamental to these general requirements is a need to develop a Stormwater Management Program. The purpose of this SWMP is to meet the goals of this permit and to prevent deleterious effects to downstream resources from stormwater runoff. These goals should not be mutually exclusive. If they start to become mutually exclusive, the permit should be re-evaluated upon reissuance to incorporate more effective conditions.

Nowhere in the permit is there a specific requirement to create a formal stormwater management plan. This was not written into the permit as there is a concern that a formal stormwater management plan could be contracted out and written into a formal document which may not always be kept current. Buckley AFB is encouraged to develop a stormwater management plan or aggregation of products (e.g., a database which documents existing activities with reporting functions) to provide a place where both EPA and stormwater management personnel at Buckley AFB can show what activities are taking place to prevent deleterious effects to downstream water resources from stormwater runoff. The most important goal is that the stormwater management program is effective and necessary activities are taking place. A static document which meets all of the permit conditions when developed, but does not allow for changes to the program to be readily addressed, does not meet that goal.

It is expected that the SWMP should be an evolving program which changes over time to include new Best Management Practices (BMPs), contracting mechanisms, and training protocols. Outside of the annual report requirements in this permit, how Buckley AFB chooses to document the activities of this program is best left to their own judgment.

### **Public Education and Outreach on Stormwater Impacts**

There are three target audiences for public education and outreach at Buckley AFB:

1. Base residents in housing and dormitories;
2. Shoppers utilizing support facilities including the base exchange, commissary, car wash, and gas station; and
3. Military and civilian populations working on base.

Compared to a traditional MS4 (i.e., a "city"), Buckley AFB maintains strict controls over what can be purchased, used, and disposed of within the boundaries of the base. These controls are very effective, provided that people have the training and knowledge to employ the existing practices successfully. Therefore, the focus of public education and outreach activities is to continue existing practices which have been recognized so far. These include providing all new occupants in employee housing with a new resident packet and quarterly training for contractors/employees/tenants on topics such as construction stormwater, industrial stormwater, oil/water separator maintenance, spill containment, and hazardous waste management. In addition, continued outreach in the more traditional fashion should occur utilizing outlets such as the base paper, the base web site, the military component of the City of Aurora paper titled "The Guardian," and outreach materials adopted from the Keep it Clean Partnership.

During the facility audit, it was noted that every facility with materials or activities that could impact stormwater quality has a facility environmental manager. This person serves as the single point of contact through which all environmental training and practices can be coordinated. This practice is encouraged as it both provides a level of accountability at every facility and empowers facility environmental managers to employ innovative or economical practices for pollution

prevention given their knowledge and day-to-day responsibility.

Permit conditions require that Buckley AFB must:

- Continue an education and outreach program for Buckley AFB which targets project managers, contractors, tenants, residents, 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;
- At a minimum, produce and disseminate informational material to inform the public (i.e., project managers, contractors, tenants, residents, 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;
- For new residents in on-base housing, update new resident packets or provide information through alternative sources to educate new residents with information on household hazardous waste collection and disposal and information on the potential impacts of stormwater runoff;
- Provide and document training to appropriate 460<sup>th</sup> Space Wing personnel, for example, environmental, engineering and planning staff, and contracting officers to communicate the specific requirements for post-construction control as specified in this permit. Such training will be made available to tenant unit personnel, within the context of current contracts or inter-service support agreements; and
- Document education and outreach activities, including documents created for distribution and a training schedule which notes the dates that trainings occurred and the target audiences reached.

The permit requires additional training on the topic of Low Impact Development (LID). This additional requirement is included in the permit because there is a new requirement in the permit to design, build, and maintain newly developed impervious surfaces in a manner which mimics pre-development hydrology. For this requirement to be met, it will be necessary for all the people involved in overseeing contracts, developing contracts, and maintaining permanent stormwater control features to have a basic understanding of why and how to implement LID practices.

### **Public Involvement and Participation**

Public involvement and participation at Buckley AFB is very strong when considering the applicability to these target audiences. There are several mechanisms by which employees are

involved in decision making processes which can impact environmental resources. It is not necessary to create new internal processes for environmental review. However, documenting the existing processes to ensure that they meet the goals of this permit and educating employees and contracting officials to recognize the goals of the MS4 program will be critical to ensuring that pollutants in stormwater runoff are minimized.

The city of Aurora is generally receptive in communication with the base, but there have been times where the city has not been responsive in cleaning out upstream trash or notifying the base when there is a new upstream discharge which could affect the stormwater conveyance system. Therefore, one additional requirement has been added to create and document a mechanism by which Aurora and Buckley AFB communicate to discuss new decisions which may impact East Tollgate Creek. A similar notification requirement will be proposed during the public notice period for the Aurora MS4 permit when it is reissued.

Permit conditions require that Buckley AFB must:

- Comply with applicable public notice requirements when implementing a public involvement and participation program;
- Make all relevant annual reports available on the permittee web site or provide links to all relevant annual reports posted on the EPA Region 8 web site in a locally available publication;
- Maintain a log of public participation and outreach activities performed;
- Document efforts to meet at least annually with the City of Aurora to discuss development, maintenance, and new discharges to East Toll Gate Creek; and
- Document volunteer activities to actively engage residents and personnel at Buckley Air Force Base in understanding water resources and how their activities can affect water quality.

### **Illicit Discharge Detection and Elimination**

An illicit discharge is any discharge to a MS4 that is not composed entirely of stormwater. The permit authorizes several non-stormwater discharges and provides requirements to detect, eliminate, and prevent illicit discharges.

In general, Buckley AFB maintains strict control over oil and hazardous wastes through actions independent of its MS4 permit. These include a facility-wide hazardous waste collection and disposal permit, Spill Prevention Control and Countermeasure (SPCC) plans, and tracking of potentially hazardous waste from cradle-to-grave using computerized maintenance management systems. Consistent training helps ensure the success of these programs and other programs like

it. Therefore, it is not necessary to create an illicit discharge detection and elimination program independent of the MS4 permit. The MS4 permit contains permit conditions which enhance existing activities without a significant burden. These include requirements to address illicit discharges within a certain timeframe and maintain an illicit discharge database. It is expected that through more active tracking of illicit discharges, it will be possible to determine if there are specific trends which need to be addressed. The requirement to conduct annual dry weather screening annually has been retained despite the fact that illicit discharges have not been detected in the past during these screenings. This is because annual dry weather screening will provide environmental staff with a continued connection to the receiving water. If illicit discharges are not detected, it will still be possible to determine if there is significant erosion from outfall discharges or noticeable debris or trash which needs to be addressed.

Permit conditions require that Buckley AFB must:

- Implement a program 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, and include training for staff on how to respond to reports of illicit discharges;
- 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;
- Provide a mechanism for reporting of illicit discharges and provide this number on any outreach materials as appropriate;
- Investigate any illicit discharge within fifteen (15) days of its detection, and 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);
- Maintain an information system which tracks dry weather screening efforts, illicit discharge reports, and the location and any remediation efforts to address identified illicit discharges;
- Conduct dry weather screening annually at each of the major outfalls for the presence of non-stormwater discharges and to determine if there are significant erosion issues which need to be addressed. If an illicit discharge is detected, an assessment of that discharge shall be made. For example, sampling could include field tests of selected chemical parameters as indicators of discharge sources where dry weather flows are detected. Screening level tests may utilize less expensive "field test kits" using test methods not approved by EPA under 40 CFR Part 136, provided the manufacturer's published

detection ranges are adequate for the illicit discharge detection purposes;

- Address the categories of non-stormwater discharges or flows listed in **Part 1.3.2** and require local controls or conditions on these discharges as necessary to ensure that they are not significant contributors of pollutants to the small MS4. If the permittee identifies any of these non-stormwater discharges as a significant contributor of pollutants, the permittee must include the category as an illicit discharge and implement a plan of action to minimize or eliminate the illicit discharge as soon as practicable; and
- Update the complete storm sewer system map in the Buckley AFB GIS prior to the end of year three of the permit.

### **Construction Site Stormwater Runoff Control**

At a military installation, construction plans, specifications, inspections, and day-to-day activities are largely driven by contracts. Government construction contracts require that all applicable regulations be followed, and noncompliance with contracts results in a stoppage of work. There are several mechanisms by which Buckley AFB can oversee construction projects in terms of environmental performance and adherence with the construction stormwater general permit (i.e., the CGP). First, construction project plans are reviewed by environmental staff for compliance with the terms of the permit and to review whether BMPs to filter and detain stormwater are likely to be effective. Second, environmental staff independently evaluate construction sites for compliance with the terms of the permit. Third, contracting office technical representatives visit construction sites daily to review whether all terms of the contract, including stormwater permit compliance, are being adhered to. And finally, all construction site contractors are provided with an evaluation at the end of the project which affects whether contractors can be given repeat contracts.

Permit conditions have been designed to specifically address each of these mechanisms. A requirement to provide training to contracting representatives who perform daily Quality Assurance Evaluations (QAEs) was included, since these people are consistently involved in every construction project and have an enhanced presence. During the facility audit in 2009, one site was recognized as having deficient stormwater controls. Given that QAEs were being performed on a daily basis without recognition of these deficiencies, training on what to look for seems necessary.

One condition which is new to MS4 permits requires environmental staff to be provided with CCAS (Construction Contract Appraisal Support System) rating sheets where there has been documented non-compliance. This has been included to ensure that contractors are not given additional contracts for new construction without considering their record for complying with construction stormwater requirements. In addition, this will help validate whether contract representatives performing QAEs are adequately assessing whether there is compliance with stormwater regulations. Compliance with stormwater regulations is a condition of contract

performance similar to structural building requirements (e.g., stud spacing, electrical wiring) and should not be viewed as being of lesser importance.

A requirement to maintain and utilize a Notice of Termination (NOT) form specific to Buckley AFB is provided to serve a dual purpose. Having Buckley AFB ensure that 70% vegetative cover has been met on all areas of the site will help assure that vegetation is adequately established. The NOT form will also provide a specific time and place where environmental staff can ensure that they have access to design specifications and operation and maintenance requirements for permanent stormwater control measures installed at site prior to the contractor walking away from the project.

Permit conditions require that Buckley AFB must:

- Develop, implement, and enforce a program to reduce pollutants in stormwater runoff from construction activities;
- Use an ordinance or other mechanism available under the legal authorities of the permittee to require erosion and sediment controls with sanctions for compliance to ensure compliance with the terms of the NPDES General Permit for Stormwater Discharges for Construction Activity in Colorado, COR10000F (i.e., the Construction General Permit or "CGP");
- Provide information on construction site BMPs with criteria for maintenance and installation. This may reference or incorporate documents which define how to install and maintain BMPs such as the Urban Drainage and Flood Control District Criteria Manual;
- Implement procedures for site plan review which incorporate consideration of potential water quality impacts, and review the Scope of Work for Buckley AFB projects to ensure that effective construction stormwater BMPs are proposed;
- Maintain a list of policies and procedures which can be used to enforce construction site compliance within Buckley AFB independent of EPA staff directly enforcing the CGP;
- Implement an inspection plan and keep a copy of that plan which provides inspection triggers, a priority for order of inspections, and a required timeframe upon which construction sites must be inspected by Buckley AFB. All construction sites within Buckley AFB must be inspected at a minimum semi-annually, and all sites must be inspected prior to construction stormwater permit termination to verify that 70% vegetative cover has been met on all areas of the site;
- Maintain a site inspection form for use by Buckley AFB stormwater managers at sites;

- Provide training to contracting officials which perform daily QAEs (Quality Assurance Evaluations) annually regarding the maintenance and installation of BMPs for construction stormwater control and the terms of the construction stormwater permit; and
- Upon the closeout for construction projects where there has been documented non-compliance with the construction stormwater permit, provide information to the appropriate contracting authority for their action to document incidences of non-compliance;

### **Post-construction Stormwater Management for New Development and Redevelopment**

Controls for stormwater runoff from new developments and redevelopments are included for most projects at Buckley AFB. However, these controls are limited to detention facilities which would not be considered to be low impact development designs. From a visual inspection during the audit, there is minimal visible downcutting and erosion in the banks of receiving waters. This is likely due to the use of detention facilities for the purpose of minimizing sediment loads, active maintenance of detention facilities, a low degree of impervious cover in the immediate watershed, and a predominantly daylighted stormwater conveyance system. As the base and the surrounding urban area are developed, the flow and water quality in East Tollgate Creek could be more significantly impacted.

One significant permit condition which addresses new development requires Buckley AFB to ensure develop Form 1391 Military Construction Project Data Sheets or other equivalent documents for all new construction projects disturbing 1+ acre to include a requirement to design for and provide funding for the installation of permanent post-construction stormwater control measures designed to retain, detain, infiltrate, or treat runoff from newly developed impervious surfaces in a manner which mimics pre-development hydrology. This is a very significant requirement, however, a design standard (e.g., retaining the 2-yr., 24-hour event on-site) is not specified in the permit. This permit does offer flexibility to use Regional methods for mimicking pre-development hydrology such as Peak Flow Control for Full Spectrum Detention as specified by the Urban Drainage and Flood Control District. Regardless of the method and assumptions used to design, build, and maintain sites to mimic pre-development hydrology, it will be necessary to document the assumptions used in reviewing and requiring contracts with a hydrologic performance standard.

During the 2009 facility audit, great lengths were taken to determine each of the activities which affect how new development addresses stormwater runoff and how new practices and control measures are planned for and maintained. Applicable permit conditions address several areas such as master planning, environmental evaluations, long-term maintenance, and contracting procedures. The conditions provided in this permit provide a framework which breaks down the barriers to installing and maintaining stormwater controls and development practices which mimic pre-development hydrology utilizing the contracting, planning, review, and maintenance procedures already in existence at Buckley AFB. Of particular importance, this permit places a

more significant burden on contracting officers to develop, maintain, and enforce contract conditions which relate to runoff quality and quantity.

Permit conditions require that Buckley AFB must:

- Develop Form 1391 Military Construction Project Data Sheets or other equivalent documents for all new construction projects disturbing 1+ acre to include a requirement to design for and provide funding for the installation of permanent post-construction stormwater control measures designed to retain, detain, infiltrate, or treat runoff from newly developed impervious surfaces in a manner which mimics pre-development hydrology. A line item needs to be included in every new proposal (e.g., Department of Defense Form 1391) to ensure that performance-based or design-based post-construction stormwater requirements for new developments and re-developments are provided. This should include a line item for costs associated with the installation and design of permanent stormwater control measures which presumptively meet the performance-based or design-based runoff criteria;
- Prior to the end of year 3 of the permit, incorporate LID designs provided for use in Simplified Acquisition Base Engineering Requirements (SABER) or other equivalent projects for the design and maintenance of new parking lots exceeding one acre in size such that they will significantly reduce, retain, and treat stormwater onsite;
- As part of the design review process for new construction projects disturbing equal to or greater than one acre, review all projects to ensure that they include permanent post-construction stormwater control measures designed to retain, detain, infiltrate, or treat runoff from newly developed impervious surfaces in a manner which mimics pre-development hydrology;
- When updated, include hydrologic performance specifications and information related to the design and maintenance of permanent stormwater control measures in natural resource plans;
- Include post-construction BMP “as-builts” for all newly installed permanent stormwater control measures in a georeferenced data management system;
- Ensure that all newly installed post-construction stormwater control measures are working as designed prior to closing out contracts;
- 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

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

For permanent stormwater control measures to be effective, they must be adequately planned for, installed, and maintained. This permit contains what could be considered cradle-to-grave management of permanent stormwater controls. It can be possible to maintain traditional stormwater controls such as detention ponds over the long-term without significant recordkeeping or analysis. This is because they are readily visible, and the hydrologic capacity of a pond can often be modified or maintained after the fact without significant information. This is not the case for stormwater control measures which incorporate low impact development practices such as soil modifications, planned undisturbed areas, and bioinfiltration. It is for this reason that this permit addresses each phase including long-term planning, contract development, evaluation of newly developed contracts, contacting procedures, and tracking and maintenance of permanent stormwater controls. This process should allow Buckley AFB to address hydrologic endpoints effectively. For any new construction project, it should also be possible to determine whether the terms of the permit were met by answering questions such as:

1. Did the 1391 Military Construction Project Data sheet or other equivalent mechanism contain a budget for permanent control measures and an appropriate performance-based or design-based standard for runoff controls?
2. Did the NEPA process, if applicable, include a review of these runoff controls?
3. Prior to terminating the contract for construction, did Buckley AFB receive design and maintenance specifications from the contractor?
4. Did these design and maintenance specifications get included in a georeferenced data management system?
5. Is there a mechanism by which maintenance is being performed through an existing program such as the Recurring Work Program?
6. Has maintenance occurred through the existing program consistent with the maintenance specifications provided by the contractor or have modifications been necessary to allow for better performance?

### **Pollution Prevention and Good Housekeeping for Municipal Operations**

For the purposes of this permit, Buckley AFB has several types of "municipal operations" operated through several tenants. Municipal operations are operated through tenants including the US Marine Corps and the Army National Guard, and municipal operations are also operated by the Air Force. While there are slight differences between facilities operated by the U.S. Marines, the National Guard, and the 140<sup>th</sup>, consolidation of training and contracted maintenance/recycling/waste transport activities does occur under the umbrella of the 140<sup>th</sup> as a

whole.

Municipal activities include grounds/park maintenance, fleet maintenance, maintenance of the flight line, vehicle washing operations, building maintenance, stormwater system maintenance, street cleaning, materials storage, hazardous materials storage, used oil recycling, and winter road maintenance.

In general, "municipal operations" at Buckley Air Force Base are very well maintained and operated. This is due to several base-wide initiatives which garner certain behaviors (e.g, site-wide SPCC plan, hazardous waste permit). This is also due to a well-established training program. Annual internal evaluations and triennial external evaluations (ESOCAMPs) are also effective in evaluating pollution control measures at all municipal operations. For this purpose, this permit does not contain prescriptive permit conditions which would duplicate or minimize the effectiveness of these existing processes.

Permit conditions require that Buckley AFB must:

- Provide and document annual training for operators at all fleet maintenance facilities and civil engineering shops covering the topics of stormwater runoff impacts and controls and the maintenance of onsite pollution control measures. These trainings can be provided to a single point of contract for each facility for further distribution;
- Consider deicing training if available to minimize the use of and runoff from chemical deicers and traction aggregates;
- Evaluate options for consolidated areas to wash large equipment where practicable;
- Develop and implement a schedule for cleanout of storm sewer inlets in a manner which prevents significant deposition of sediment or other debris to receiving waters;
- Develop and 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;
- Include in recurring work contracts (e.g., the recurring work program (RWP)), specifications for maintenance of instream BMPs (e.g., sediment basins, drop structures, trash racks); and
- Include maintenance activities for all permanent stormwater control measures in the Integrated Wastewater Information Management System (IWIMS) or another suitable application when turned over (as-builts, specifications, etc.) to the 460<sup>th</sup> Civil Engineer Squadron.

The SWMP and additional measures included in this permit are the means through which Buckley AFB complies with the Clean Water Act requirement to control pollutants in the discharges to the maximum extent practicable (MEP) and comply with the water quality related provisions of the CWA. It is expected that compliance with the conditions in this permit, including the technology based effluent limits, will result in discharges that are controlled as necessary to meet applicable water quality standards. Part 1.3.5 of the permit includes eligibility restrictions for discharges to water quality impaired waterbodies. As written in Part 1.3.5 of the permit, EPA will notify MS4 operators whose discharges are likely to cause or contribute to a water quality impairment, or whose discharges contribute directly or indirectly to a 303(d) listed waterbody. If EPA determines that discharges from the MS4 are causing or contributing to a water quality impairment, that MS4's SWMP must include a section describing how the program will control the discharge of the pollutants of concern and ensure discharges from the MS4 will not cause or contribute to instream exceedances of the water quality standards. This documentation must specifically identify measures and BMPs that will collectively control the discharge of the pollutants of concern.

### Monitoring

The Phase II stormwater regulations at 40 CFR §122.34(g) require that small MS4s evaluate program compliance, the appropriateness of the BMPs in their SWMPs and progress towards meeting their measurable goals. Monitoring and assessment activities are included as part of each of the minimum measures of the permit. In addition, Buckley AFB is required to implement a monitoring program which can be used to assess the effectiveness of the MS4 program as whole. The terms of the monitoring program are left open-ended so that Buckley AFB can work with existing internal programs or external programs developed by Aurora or the Urban Drainage and Flood Control District to leverage resources.

Permit conditions require that Buckley AFB must:

- Not later than the end of year three of the permit term, develop a program to evaluate the water quality in East Tollgate Creek, and if deemed necessary by the permittee, Granby Ditch, as it both enters Buckley AFB and leaves Buckley AFB. This program shall at a minimum include evaluations of streambank stabilization, and water quality. The water quality monitoring program may include indicators such as chemical monitoring, assessment of macroinvertebrates or other aquatic life, or watershed assessment of river stability and sediment supply, provided that the monitoring program provides meaningful data to evaluate the effectiveness of the stormwater management program. The permittee is responsible for evaluating data for analysis of trends; and
- Send a description of the water quality monitoring program to EPA with the Annual Report for year 3 of this permit term. Programs will be assessed by EPA Region 8 to determine whether the program meets the goals of this permit and whether the data is

being collected and reported in compliance with EPA test procedures approved under 40 CFR Part 136.

Administrative Record

The administrative record for this permit may be obtained upon request by contacting Amy Clark at 303-312-7014 or [clark.amy@epa.gov](mailto:clark.amy@epa.gov) or by writing or E-mailing to the address listed below:

Donna Roberts  
EPA Region 8  
Mailcode: 8P-W-WW  
1595 Wynkoop Street  
Denver, CO 80202-1129  
303-312-6371  
[roberts.donna@epa.gov](mailto:roberts.donna@epa.gov)

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Amy Clark  
Wastewater Unit  
EPA Region 8  
Drafted: December 3, 2009  
Edited: September 17, 2010

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"), except as provided in Part 1.3 of this permit,

**United States General Services Administration**

hereinafter "permittee", is authorized to discharge from all municipal separate storm sewer outfalls existing as of the effective date of this permit

to receiving waters which include McIntyre Gulch and other associated waters of the United States within the exterior boundaries of the Denver Federal Center in the SE ¼ of Section 9, T 4S, R 69W, located in the City of Lakewood, Jefferson County, Colorado,

in accordance with the conditions and requirements set forth herein.

This permit shall become effective **to be determined upon issuance**

This permit and the authorization to discharge shall expire at midnight, **to be determined upon issuance**

Signed this        day of

\_\_\_\_\_  
Authorized Permitting Official

Stephen S. Tuber, Assistant Regional Administrator  
Office of Partnerships and Regulatory Assistance

INDUSTRIAL (Rev.07/04)

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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 boundary of the Denver Federal Center.

### 1.2. Discharges Authorized Under This Permit

1.2.1. During the effective dates of this permit, the permittee is authorized to discharge stormwater from the following areas, under the conditions of this permit:

1.2.1.1. All portions of the MS4 within the exterior boundaries of the Denver Federal Center.

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. Non-Stormwater Discharges. 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 Discharges. 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 occurring during emergency situations.
- 1.3.3. Stormwater Discharges Associated with Industrial Activity. This permit does not authorize stormwater discharges associated with industrial activity as defined in 40CFR §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).
- 1.3.5. Discharges that are causing or contributing to an exceedance of applicable numeric or narrative water quality standards. EPA will notify the permittee if its MS4 discharges are likely to cause or contribute to a water quality impairment, or whose discharges contribute directly or indirectly to a 303(d) listed waterbody. If EPA determines that discharges from the MS4 are causing or contributing to a water quality impairment, the permittee's stormwater management plan (SWMP) must include a section describing how the program will control the discharge of the pollutants of concern and ensure discharges from the MS4 will not cause or contribute to instream exceedances of the water quality standards. This documentation must specifically identify measures and Best Management Practices (BMPs) that will collectively control the discharge of the pollutants of concern. The permittee may be required to provide additional information to EPA to determine whether its discharge is causing or contributing to a water quality impairment.
- 1.3.6. Discharges of pollutants into waters which a Total Maximum Daily Load (TMDL) has been either established or approved by EPA unless the discharge is consistent with that TMDL. The permittee must incorporate any conditions and requirements applicable to discharges from the MS4 into the Stormwater Management Program in order to remain eligible for permit coverage. EPA will notify the permittee if a TMDL has been developed that specifies a wasteload allocation (WLA) for discharges from the MS4. The notification will require the MS4 operator to assess and document whether the WLA is being met through implementation of existing stormwater control measures or if additional control measures are necessary. The notification may also include requirements to describe and document an implementation schedule for controls, calculations, and monitoring or other proof that show that the WLA is being met. This may involve an iterative process of controls and evaluation. All documentation related to these requirements must be included as part of the records for the SWMP.
- 1.3.7. Discharges that do not comply with Colorado's anti-degradation policy for water quality standards. Colorado's anti-degradation policy can be obtained from the Colorado Department of Public Health and Environment or from its web site: <http://www.cdphe.state.co.us/op/reg/waterqualityregs.asp> (The anti-degradation rules are contained within Regulation 31 - Basic Standards and Methodologies for Surface Water).
- 1.3.8. Discharges and discharge-related activities that affect endangered species. Coverage under this permit is available only if the permittee's stormwater discharges, allowable non-storm water discharges, and discharge-related activities are not likely to:
- Jeopardize the continued existence of any species that are listed as endangered or threatened ("listed") under the Endangered Species Act (ESA) or result in the adverse modification or

destruction of habitat that is designated as critical under the ESA ("critical habitat"); or

- Cause a prohibited "take" of endangered or threatened species (as defined under Section 3 of the ESA and 50 CFR 17.3), unless such takes are authorized under sections 7 or 10 of the ESA.

"Discharge-related activities" include: activities which cause, contribute to, or result in stormwater point source pollutant discharges; and measures to control stormwater discharges, including the siting, construction, and operation of Best Management Practices (BMPs) to control, reduce, or prevent stormwater pollution.

1.3.9. Discharges that Affect Historical Properties. Coverage under this permit is available only if the permittee's stormwater discharges, allowable non-stormwater discharges, and discharge-related activities are:

- Not likely to affect a property that is listed or is eligible for listing on the National Register of Historic Places as maintained by the Secretary of the Interior; or
- In compliance with a written agreement with the State Historic Preservation Officer (SHPO) that outlines all measures the permittee will undertake to mitigate or prevent adverse effect to the historic property.

## 2. Stormwater Management Plan (SWMP)

### 2.1. General Requirements

- 2.1.1. The permittee must continue to develop, implement, and enforce a SWMP. The SWMP must include management practices, control techniques, system design, engineering methods, and other provisions the permittee or EPA determines appropriate for the control of pollutants in discharges from the MS4.
- 2.1.2. The permittee must fully implement the SWMP; including meeting its measurable goals. Implementation should take place in approximate equal intervals throughout the permit and progress will be tracked in the annual report (see **Part 3.3**).
- 2.1.3. The SWMP must include each of the minimum control measures of **Parts 2.2-2.7**.
- 2.1.4. The permittee must conduct an annual review of the SWMP in conjunction with preparation of the annual report required under **Part 3.3**.
- 2.1.5. EPA may request documentation of the minimum control measures as required by the SWMP. EPA may review and subsequently notify the permittee that changes to the SWMP are necessary to:
- Address discharges from the MS4 that are causing or contributing to water quality impacts;
  - Include more stringent requirements necessary to comply with new Federal or State statutory or regulatory requirements;
  - Include other conditions deemed necessary by the EPA to comply with water quality standards, ESA related requirements, and/or other goals and requirements of the Clean Water Act (CWA); and/or
  - Address the SWMP requirements of the permit, if EPA determines that the permittee's current SWMP does not meet permit requirements.
- 2.1.5.1. EPA may request changes in writing and can require including a schedule to develop and implement the changes. The request will offer the permittee the opportunity to propose

alternative program changes to meet the objectives of the requested modification.

- 2.1.6. Transfer of Ownership, Operational Authority, or Responsibility for SWMP Implementation. The permittee must implement the SWMP 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, unless deemed longer by the permitting authority, 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.
- 2.1.7. If EPA notifies the permittee that changes are necessary to ensure that stormwater discharges are not causing or contributing to a violation of water quality standards, the notification will offer the permittee an opportunity to propose alternative program changes to meet the objectives of the requested modification. Following this opportunity, the permittee must implement any required changes according to the schedule set by EPA.
- 2.2. Public Education and Outreach on Stormwater Impacts.** The permittee must:
  - 2.2.1. Continue an education and outreach program for the DFC which targets project contracting office representatives (CORs), project managers, building/property managers, and environmental staff;
  - 2.2.2. Establish a central point of contact for each tenant at the Denver Federal Center for the purposes of communication and training. This should include both the research labs at the DFC and the Army Reserve center;
  - 2.2.3. At a minimum, produce and disseminate informational material to contracting officer representatives, project managers, contractors, building and property managers, tenants, 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;
  - 2.2.4. Provide annual training to all building managers and tenant points of contact related to the applicable requirements of the EMS, the dig permit, and how to report and recognize spills and illicit discharges. This training may be incorporated into a larger program to educate tenants and building managers related to environmental compliance or environmental awareness; and
  - 2.2.5. Document education and outreach activities in the EMS or other appropriate tracking mechanism (e.g., database or SWPPP), including documents created for distribution and a training schedule which notes the dates that trainings occurred and the target audiences reached; and
  - 2.2.6. Within four years of the effective date of this permit, provide and document training to all planning staff and contracting officers to learn about Low Impact Development (LID) practices, green infrastructure practices, and to communicate the expectations for meeting pre-development hydrology within the context of the Energy and Independence Security Act of 2007.
  - 2.2.7. The annual report (**See Part 3.3**) must document the following information related to public education and outreach:
    - 2.2.7.1. A description of the methods, frequency, type, and target audience of stormwater outreach performed during the permit term;
    - 2.2.7.2. A copy or representation of public outreach materials provided to the target audience(s);

- 2.2.7.3. An estimation of the number of people expected to be reached by the program over each year of the permit term; and
- 2.2.7.4. The name or title of the person(s) responsible for coordination and implementation of the stormwater public education and outreach program.

### 2.3. Public Involvement and Participation.

The permittee must:

- 2.3.1. Comply with applicable public notice requirements when implementing a public involvement and participation program;
- 2.3.2. Make all relevant annual reports available on the permittee web site or provide links to all relevant annual reports posted on the EPA Region 8 web site in a locally available publication;
- 2.3.3. Maintain a log of public participation and outreach activities performed using an appropriate mechanism such as the facility EMS or a Stormwater Management Plan (SWMP); and
- 2.3.4. When significant additions or modifications are made to the federal center EMS which could impact compliance with the terms of this permit, provide EPA staff the opportunity to review those modifications or additions as necessary.
- 2.3.5. The annual report (See Part 3.3) must document the following information related to public involvement/participation:
  - 2.3.5.1. Documentation of any events or other activities to clean up MS4 receiving waters;
  - 2.3.5.2. Documentation of any volunteer activities conducted to help actively engage residents and personnel at the Denver Federal Center in understanding water resources and how their activities can affect water quality; and
  - 2.3.5.3. The name or title of the person(s) responsible for coordination and implementation of the storm water public education and outreach program.

### 2.4. Illicit Discharge Detection and Elimination.

An illicit discharge is any discharge to a MS4 that is not composed entirely of stormwater. Exceptions are described in Part 1.3.2. The permittee must:

- 2.4.1. Implement a program 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, and 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 any outreach materials as appropriate;

- 2.4.4. Provide emergency spill contact information to all building managers, project managers, and the appropriate tenant single point of contact;
- 2.4.5. Investigate any illicit discharge within fifteen (15) days of its detection, and 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);
- 2.4.6. Maintain an information system which tracks dry weather screening efforts, illicit discharge reports, 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 outfalls for the presence of non-stormwater discharges and to determine if there are significant erosion issues which need to be addressed. If an illicit discharge is detected, an assessment of that discharge shall be made. For example, sampling could include field tests of selected chemical parameters as indicators of discharge sources where dry weather flows are detected. Screening level tests may utilize less expensive "field test kits" using test methods not approved by EPA under 40 CFR Part 136, provided the manufacturer's published detection ranges are adequate for the illicit discharge detection purposes;
- 2.4.8. Address the categories of non-stormwater discharges or flows listed in **Part 1.3.2** and require local controls or conditions on these discharges as necessary to ensure that they are not significant contributors of pollutants to the small MS4. If the permittee identifies any of these non-stormwater discharges as a significant contributor of pollutants, the permittee must include the category as an illicit discharge and implement a plan of action to minimize or eliminate the illicit discharge as soon as practicable;
- 2.4.9. Update the complete storm sewer system map in the Denver Federal Center GIS prior to the end of year three of the permit; and
- 2.4.10. The annual report (See **Part 3.3**) 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 MS4; 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 and any local controls placed on these discharges; and

- 2.4.10.8. A description of the schedule and/or progress in creating a complete storm sewer map in the Denver Federal Center AFB GIS.

**2.5. Construction Site Stormwater Runoff Control.**

The permittee must:

- 2.5.1. Maintain a list of policies and procedures which can be used to enforce construction site compliance within the DFC. This may include working with the City of Lakewood and utilizing the EPA for enforcement of construction stormwater violations;
- 2.5.2. Use an ordinance or other mechanism available under the legal authorities of the permittee to require erosion and sediment controls with sanctions for compliance to ensure compliance with the terms of the NPDES General Permit for Stormwater Discharges for Construction Activity in Colorado, COR10000F (i.e., the Construction General Permit or "CGP");
- 2.5.3. Create a general plan for inspection and enforcement of construction site stormwater BMPs which specifies any appropriate sanctions, penalties, enforcement procedures and inspection schedules;
- 2.5.4. Review the scope of work for all construction projects by environmental staff (e.g., the EPG) to assess whether proposed BMPs are realistic and to ensure compliance with the stormwater construction permit requirements for developing a stormwater pollution prevention plan;
- 2.5.5. Provide information on construction site BMPs with criteria for maintenance and installation. This may reference or incorporate documents which define how to install and maintain BMPs such as the Urban Drainage and Flood Control District Criteria Manual;
- 2.5.6. Maintain and utilize a closure process whereby environmental staff (e.g., the EPG) or contracting office representatives evaluate whether 70% vegetative cover has been met at all areas of the site prior to closing out construction stormwater permits. This process could be incorporated into the dig permit process;
- 2.5.7. Provide training to contracting office representatives which perform daily inspections on a biannual basis regarding the maintenance and installation of Best Management Practices for construction stormwater control and the terms of the construction stormwater permit;
- 2.5.8. Consider requiring socks or other equipment available in the back of response trucks to prevent the flow of sediment laden or contaminated water from reaching storm drains, since the DFC plays a role as a first responder in dealing with stormwater emergencies.
- 2.5.9. The annual report (See **Part 3.3**) must document the following information related to construction site stormwater runoff control:
- 2.5.9.1. A description of construction activities which disturbed greater than or equal to one acre of land at the DFC during the term of this permit;
- 2.5.9.2. A description or citation of the established ordinance or other regulatory mechanism used to require erosion and sediment controls;
- 2.5.9.3. A description of the sanctions and enforcement mechanisms the DFC uses to ensure that construction activities disturbing equal to or greater than one acre of land are in compliance with the terms of the CGP;

- 2.5.9.4 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;
- 2.5.9.5. A description of the procedures for receipt and consideration of information submitted by the public;
- 2.5.9.6. 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;
- 2.5.9.7. Documentation of annual training provided to contracting office representatives, regarding the maintenance and installation of BMPs for construction stormwater control and the terms of the construction stormwater permit; and
- 2.5.9.8. The name or title of the person(s) responsible for coordination and implementation of the construction site runoff control program.

## **2.6. Post-construction Stormwater Management for New Development and Redevelopment.**

The permittee must:

- 2.6.1. Include in contracts and requests for funding (e.g., a “prospective package”) a requirement to design for and provide funding for the installation of permanent stormwater control measures designed to retain, detain, infiltrate or treat runoff from newly developed impervious surfaces in a manner which mimics pre-development hydrology for all new projects which disturb greater than or equal to one acre of land. This should include a line item for costs associated with the installation and design of permanent stormwater control measures along;
- 2.6.2. Prior to the end of year 3 of the permit, incorporate LID designs provided for use in Simplified Acquisition Base Engineering Requirements (SABER) or other equivalent projects for the design and maintenance of new parking lots exceeding one acre in size such that they will significantly reduce, retain, and treat stormwater onsite;
- 2.6.3. As part of the design review process for new construction projects disturbing equal to or greater than one acre, review all contracts to ensure that they include permanent post-construction stormwater control measures designed to retain, detain, infiltrate, or treat runoff from newly developed impervious surfaces in a manner which mimics pre-development hydrology;
- 2.6.4. Include or reference in the dig permit, applicable requirements and available guidance to design post-construction stormwater features or low impact development practices designed to mimic pre-development hydrology;
- 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. Develop and maintain a system to track the location, design, and maintenance specifications of permanent stormwater features. This could be incorporated into a GIS system or other internal process such as the Facilities Maintenance Plan or the Federal Center EMS and 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; 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 3.3**) must document the following information related to post-construction site stormwater runoff control:
  - 2.6.10.1. A description of the program to ensure that hydrologic endpoints are evaluated for new development and re-development projects as required in **Part 2.6.1** and the mechanism used to review the adequacy of permanent stormwater control measures;
  - 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 DFC contracts initiated after the effective date of the permit contain language which requires the installation of permanent stormwater control measures and an excerpt of applicable contract 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 for Municipal Operations.**

The permittee must:

- 2.7.1. Develop and implement an operation and maintenance program with the ultimate goal of preventing and reducing pollutant runoff from municipal operations which includes an employee training component;
- 2.7.2. Provide and document annual training for all grounds maintenance and facilities maintenance contractors on an annual basis covering the topics of stormwater runoff impacts and controls and the maintenance of onsite pollution control measures. These trainings can be provided to a single point of contract for each facility for further distribution;
- 2.7.3. Conduct an annual snow meeting at the beginning of each year to discuss strategies to prevent the misuse and over-application of chemical deicers;
- 2.7.4. Conduct an annual street sweeping and storm sewer system maintenance meeting or training to discuss procedures for disposing of material and priorities/schedules for cleaning out stormwater BMPs and street sweeping;
- 2.7.5. Inventory the DFC for locations of all stormwater features such as detention basins, drop structures, and trash racks. Where these facilities are noted, provide a schedule for their inspection and procedures for when these need to be cleaned out and/or modified. Include these activities in maintenance contracts, specifications for maintenance of instream BMPs (sediment basins, drop structures, trash racks);

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- 2.7.6. Develop and implement a schedule for cleanout of storm sewer inlets in a manner which prevents significant deposition of sediment or other debris to receiving waters;
- 2.7.7. Provide the grounds contractors or other parties responsible for pesticide and herbicide application with training related to the requirements for NPDES permitting (given the requirements in EPA's new pesticide application general permit) and in the area of chemical disposal and stormwater runoff at least once during the effective term of this permit;
- 2.7.8. Track pesticide and herbicide records for each site for each chemical. Contractors should keep a daily log in a format which can be provided for assessment by the Environmental Protection Group or other entities if necessary;
- 2.7.9. Evaluate the activities at the Army Reserve Base to determine whether industrial permitting is necessary; and
- 2.7.10. Consider adding specifications for use in construction project re-vegetation or for use in training materials related to procedures related to the application of pesticides and herbicides. Such specifications would specify procedures for disposing of excess chemical residuals, procedures for storage and maintenance of herbicides and pesticides, maintenance of MSDS's for all herbicides/pesticides used, use of backflow protection systems to prevent contamination of domestic water sources, procedures for routing water and chemical residuals away from storm drains, and any applicable requirements as prescribed in the dig permit.
- 2.7.11. The annual report (See **Part 3.3**) must document the following information related to pollution prevention and good housekeeping for municipal operations:
  - 2.7.11.1. 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;
  - 2.7.11.2. 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; and
  - 2.7.11.3. A description of how maintenance activities are tracked for permanent stormwater control measures.

### **3. Monitoring and Master Planning**

#### **3.1. The permittee must:**

- 3.1.1. Not later than three years from the effective date of this permit, develop a program to evaluate the water quality in McIntyre Gulch, as it both enters and leaves the DFC. This program shall at a minimum include evaluations of streambank stabilization, and water quality. The water quality monitoring program may include indicators such as chemical monitoring, assessment of macroinvertebrates or other aquatic life, or watershed assessment of river stability and sediment supply, provided that the monitoring program provides meaningful data to evaluate the effectiveness of the stormwater management program. The permittee is responsible for evaluating data for analysis of trends;
- 3.1.2. Send a description of the water quality monitoring program to EPA with the Annual Report for year 3 of this permit term. Programs will be assessed by EPA Region 8 to determine whether the program meets the goals of this permit and whether the data is being collected and reported in compliance with EPA test procedures approved under 40 CFR Part 136; and

- 3.1.3. Develop a vision and/or design guidelines for McIntyre Gulch which define how it can be re-configured, conserved, and managed as a high quality receiving water and as an amenity for the Federal Center within 3 years of the effective date of this permit. This could include a vision for how to reconstruct channels to include meanders, drop structures, and to utilize and enhance the function of the existing wetlands. This could also include a vision of how to connect McIntyre Gulch to existing pedestrian corridors or to provide alternative access points so it could be utilized as a recreational amenity for the Federal Center if so desired.

### 3.2 Recordkeeping

- 3.2.1. 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 required by this permit, copies of Discharge Monitoring Reports (DMRs), 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.
- 3.2.2. The permittee must submit the records referred to in **Part 3.2.1** 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.

### 3.3. Annual Reports

The permittee must submit an annual report to EPA for each year of the permit term. The first report is due April 1, 2011, and must cover the activities during the period beginning on the effective date of the permit through December 31, 2010. Each subsequent annual report is due on April 1 of each year following 2009 for the remainder of the permit term. Reports must be signed in accordance with the signatory requirements in **Part 4.7**. 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:

Stormwater Coordinator (8P-W-WW)  
Small MS4 Annual Report  
US EPA Region 8  
1595 Wynkoop Street  
Denver, CO 80202-1129

## 4. Standard Permit Conditions

- 4.1. **Duty to Comply.** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of CWA and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.
- 4.1.1. *Criminal Violations.*
- 4.1.1.1. *Negligent Violations.* The CWA provides that any person who *negligently* violates permit conditions implementing 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, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a fine of not less than \$2,500 nor more than \$25,000 per day of violation,

or by 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 of not more than 2 years, or both.

- 4.1.1.2. *Knowing Violations.* The CWA provides that any person who *knowingly* violates permit conditions implementing 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 sections 402(a)(3) or 402(b)(8) of the Act, is subject to a fine of not less than \$5,000 nor more than \$50,000 per day of violation, or by 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 by imprisonment of not more than 6 years, or both.
- 4.1.1.3. *Knowing Endangerment.* The CWA provides that any person who *knowingly* violates permit conditions implementing 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, 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 not more than \$250,000 or by 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 criminal penalties of not more than \$500,000 per day of violation, or by imprisonment of 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.
- 4.1.1.4. *False Statement.* The CWA provides that any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under the Act or who knowingly falsifies, tampers with, or renders inaccurate, any monitoring device or method required to be maintained under the Act, shall upon conviction, be punished by a fine of not more than \$10,000 or by imprisonment for not more than two years, or by both. If a conviction is for a violation committed after a first conviction of such person under this paragraph, punishment shall be by a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four years, or by both. (See section 309(c)(4) of the Clean Water Act).
- 4.1.2. *Civil Penalties.* The CWA provides that any person who violates a permit condition implementing 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 sections 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.
- 4.1.3 *Administrative Penalties.* The CWA provides that any person who violates a permit condition implementing 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 sections 402(a)(3) or 402(b)(8) of the Act is subject to an administrative penalty as follows:
- 4.1.3.1. *Class I penalty.* Not to exceed \$16,000 per violation nor shall the maximum amount exceed \$37,500.
- 4.1.3.2. *Class II penalty.* Not to exceed \$16,000 per day for each day during which violation continues nor shall the maximum amount exceed \$177,500.

- 4.2. 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.
- 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 in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.
- 4.5. Duty to Provide Information.** The permittee shall furnish to the EPA, within a reasonable time, any information which the EPA 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 EPA, upon request, copies of records required to be kept by this permit.
- 4.6. Other Information.** If the permittee becomes aware that the permittee has failed to submit any relevant facts in the Notice of Intent or submitted incorrect information in the Notice of Intent, or in any other report to the EPA, the permittee must promptly submit such facts or information.
- 4.7. Signatory Requirements.** All Notices of Intent, Notices of Termination, reports, certifications, or information submitted to the EPA, or that this permit requires be maintained by the permittee, shall be signed and certified as follows:
- 4.7.1. *Notices of Intent.* All Notices of Intent/Termination shall be signed by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes: (1) the chief executive officer of the agency, or (2) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).
- 4.7.2. *Reports and other information.* All reports required by the permit and other information requested by the EPA or authorized representative of the EPA shall be signed by a person described in **Part 5.7.1** or by a duly authorized representative of that person. A person is a duly authorized representative only if:
- 4.7.2.1. The authorization is made in writing by a person described in **Part 5.7.1** and submitted to the EPA; and
- 4.7.2.2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated activity, such as the position of manager, operator, superintendent, or position of equivalent responsibility for environmental matter for the regulated entity.
- 4.7.3. *Changes to authorization.* If an authorization under **Part 4.7.2** is no longer accurate because a different individual or position has responsibility for the overall operation of the MS4, a new authorization satisfying the requirements of **Part 5.7.2** must be submitted to the EPA prior to or together with any reports, information, or notices of intent to be signed by an authorized representative.
- 4.7.4. *Certification.* Any person signing a document under **Parts 4.7.1** or **4.7.2** 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 gathered and evaluated 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 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.”

- 4.8. Property Rights.** The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations
- 4.9. 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 and with the conditions of the permittee’s storm water management program. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by the permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
- 4.10. Inspection and Entry.** The permittee shall allow the State or Regional Administrator, or authorized representative (including an authorized contractor acting as a representative of the Administrator) upon presentation of credentials and other documents as may be required by law, to:
- 4.10.1. Enter upon the permittee’s premises where a regulated activity is located or conducted or where records must be kept under the conditions of this permit;
- 4.10.2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- 4.10.3. Inspect at reasonable times, any facilities or equipment (including monitoring and control equipment) practices, or operations regulated or required under this permit; and
- 4.10.4. Sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the CWA, any substances or parameters at any location.
- 4.11. 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.
- 4.12. Permit.** This permit is not transferable to any person except after notice to the EPA. The EPA may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Act.
- 4.13. Anticipated Noncompliance.** The permittee shall give advance notice to the EPA of any planned changes in the permitted small MS4 or activity which may result in noncompliance with permit conditions.
- 4.14. State/Tribal Environmental Laws.**
- 4.14.1. 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/Tribal law or regulation under authority preserved by section 510 of the Act.
- 4.14.2. No condition of this permit releases the permittee from any responsibility or requirements under other environmental statutes or regulations.

- 4.15. 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.
- 4.16. Procedures for Modification or Revocation.** Permit modification or revocation will be conducted according to 40 CFR 122.62, 122.63, 122.64 and 124.5.
- 5. Definitions.** 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.
- 5.1. *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.
- 5.2. *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.
- 5.3. *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.
- 5.4. *Discharge*, when used without a qualifier, refers to "discharge of a pollutant" as defined at 40 CFR 122.2.
- 5.5. *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.
- 5.6. *EPA* means the EPA Regional Administrator or an authorized representative.
- 5.7. *Measurable Goal* means a quantitative measure of progress in implementing a component of a storm water management program.
- 5.8. *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).
- 5.9. *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.
- 5.10. *NOT* means Notice of Termination to be covered under EPA's Construction General Permit.

- 5.11. *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.
- 5.12. *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.
- 5.13. *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.
- 5.14. *Stormwater* is defined at 40 CFR 122.26(b)(13) and means storm water runoff, snow melt runoff, and surface runoff and drainage.
- 5.15. *Storm Water Management Plan (SWMP)* refers to a comprehensive program to manage the quality of storm water discharged from the municipal separate storm sewer system.

## Statement of Basis

PERMITTEE: United States General Services Administration

FACILITY: Denver Federal Center (DFC) Municipal Separate Storm Sewer System (MS4)

PERMIT NO.: CO-R042004

RESPONSIBLE OFFICIAL: John Kleinschmidt

PHONE: 303-236-8000

CONTACT PERSON: John Kleinschmidt  
Environmental Program Manager

### Facility Background Information:

The DFC is located on part of the site of the former Denver Ordnance Plant within the City of Lakewood, Colorado in the SE ¼ of Section 9, T 4S, R 69W. This plant was built and operated by the U.S. Government in the early 1940s for the production of small arms ammunition. A number of ammunition manufacturing buildings still remain on the DFC property and have been converted for use as office, laboratory, and storage space.

After World War II, the Denver Ordnance Plant site became Federal surplus property transferred to the General Services Administration (GSA), and was converted into space for Federal agencies. Many of the original buildings were renovated during the late 1940s and early 1950s to accommodate the new uses.

The DFC is home to about 6,000 employees, most of which are employed by the federal government. The DFC encompasses an area of about 670 acres (2.7 km<sup>2</sup>) and has 90 buildings comprising over 4,000,000 square feet (400,000 m<sup>2</sup>) of office, warehouse, lab and special use space. There are 26 different Federal agencies on-site, making it one of the largest concentrations of federal agencies outside of Washington, DC. The major employers at the Denver Federal Center include the United States Department of the Interior (and its Bureau of Land Management, Bureau of Reclamation, and United States Geological Survey) and the GSA.

Prior to the issuance of this permit, stormwater discharges from the DFC MS4 were regulated under EPA's General Permit for Storm Water Discharges from Federal Facility Small Municipal Separate Storm Sewer Systems in Colorado (COR42000F). This permit was issued on June 23, 2003 and expired on June 22, 2008. This general permit was not reissued. The eight facilities covered under the general permit have been or will be issued individual permits for discharges from their MS4s. This approach is being taken so that terms specific to the operations, industrial

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activities, and receiving water conditions of each facility can be included in each individual permit. It is believed that this approach will result in a permit with more streamlined conditions specifically tailored to the goal of reducing pollutant loading in stormwater runoff.

As part of the process of issuing an individual permit for stormwater discharges from the DFC MS4, representatives from EPA Region 8 conducted a facility audit of the MS4 program at DFC. The audit team reviewed contracts, regulations, annual reports from the previous permit, and facility operating procedures. Oversight inspections of industrial activities and interviews of program staff were also performed. A summary of the significant findings from this audit are as follows:

- The DFC maintains an adequate stormwater program, under which training is provided to staff and tenants, and there are several well-documented procedures in place to address potential spills and contamination from reaching receiving waters.
- The centerpiece of environmental compliance and performance at the DFC is the Environmental Management System (EMS). This EMS is nationally recognized and works in conjunction with sustainable design guidelines which are being utilized to meet the mission of becoming the “most sustainable campus in the nation by 2020.”
- Management of soils is a significant issue at the Federal Center as there is asbestos contamination present. Excavated soils are covered prior to testing and potential disposal as specified in the dig permit. The dig permit process is a very well known and is routinely applied. Therefore, the EMS, in combination with the dig permit, provide excellent tools through which all aspects of the stormwater program can be managed.
- The DFC and part of the surrounding areas are in the process of being re-developed. Currently, several areas upstream of the Federal Center which are under re-development, do not have stormwater controls. When these areas are re-developed, there will be a great opportunity to minimize peak-flow discharges and re-define the character and quality of McIntyre Gulch.
- Based on interviews and review of documents during the audit, it was apparent that McIntyre Gulch is currently not thought of and is not managed as an amenity. During a meeting with Lakewood Engineering Staff, plans to change the geometry of the stream to make it a more effective stormwater conveyance were reviewed. These plans would compromise the quality of the stream for aquatic and riparian life, since they would reduce vegetative cover and create a trapezoidal channel for stormwater conveyance which does not provide the heterogeneity necessary for maintaining the diversity of aquatic and riparian life which is normal in a more natural setting.

Recommendations from the facility audit were used to develop specific permit conditions for DFC. This audit is available as part of the administrative record for this permit. A summary of the recommendations from the DFC MS4 audit is as follows:

- DFC staff should build upon the success provided through the EMS and include all applicable requirements as referenced in this permit into the EMS as action items.
- The EMS and dig permit should contain the appropriate requirements and procedures related to the implementation of the Energy and Independence and Security Act of 2007, which requires new federal projects to meet pre-development hydrology.
- A vision for McIntyre Gulch needs to be created whereby McIntyre Gulch is viewed as an amenity in the sustainable design guidelines for the DFC. This should include methods by which the riparian corridor along McIntyre Gulch and the associated wetlands can be enhanced.

Each of these recommendations, as well as more specific findings from the facility MS4 audit are included as permit conditions in this permit. These supplement the previous conditions laid out in EPA's General Permit for Storm Water Discharges from Federal Facility Small Municipal Separate Storm Sewer Systems in Colorado (COR42000F).

#### Receiving Waters:

The DFC lies within the larger South Platte River watershed. Specifically, discharges at the DFC enter McIntyre Gulch, a perennial waterbody which drains to the South Platte River downstream of the facility boundary. Given the history of the DFC as a large-scale ordnance producer in the past, there are several plumes of contamination, one of which is permitted to discharge by the EPA and includes limitations for 1,1,1-trichloroethane, 1,1-dichloroethene, and 1,1-dichloroethane released by a former leaking underground storage tank. However, as the DFC gets re-developed these sources of contamination are being minimized over time, and McIntyre Gulch, with its perennial flows and minimal upstream areas for potential impacts, has the potential to become a valuable amenity to the DFC. Currently, McIntyre Gulch is not exceeding water quality standards as applied by the State of Colorado.

Under Colorado Regulation 5CCR 1002-38, *Classification and Numeric Standards for South Platte River Basin, Laramie River Basin, Republican River Basin, Smoky Hill River Basin*, McIntyre Gulch is given the stream classification number COSPUS16c, and is described as:

“All tributaries to the South Platte River, including all lakes, reservoirs and wetlands, from the outlet of Chatfield Reservoir, to a point immediately below the confluence with Big Dry Creek, except for specific listings in the subbasins of the South Platte River, and in Segments 16a, 16b, 16d, 16e, 16f, 16g, 17a, 17b, and 17c.”

This segment (COSPUS16c) is use-protected and has water quality standards for Aquatic Life Warm Water Class 2, Recreation 1a, and Agriculture. "Use-protected" means "waters that the Commission has determined do not warrant the special protection provided by the outstanding waters designation or the antidegradation review process."

The water quality standards for the receiving water are described in both Colorado Regulation No. 38, *Classifications and Numeric Standards South Platte River Basin, Laramie River Basin, Republican River Basin, Smoky Hill River Basin* (5CCR 1002-38) and Colorado Regulation No. 31, *Basic Standards and Methodologies for Surface Water* (5 CCR 1002-31).

### Endangered Species

Coverage under this permit is available only if the stormwater discharges, allowable non-storm water discharges, and discharge-related activities are not likely to:

- Jeopardize the continued existence of any species that are listed as endangered or threatened ("listed") under the ESA or result in the adverse modification or destruction of habitat that is designated as critical under the ESA ("critical habitat"); or
- Cause a prohibited "take" of endangered or threatened species (as defined under Section 3 of the Endangered Species Act and 50 CFR 17.3), unless such takes are authorized under sections 7 or 10 of the Endangered Species Act.

"Discharge-related activities" include activities which cause, contribute to, or result in stormwater point source pollutant discharges and measures to control stormwater discharges; including the citing, construction, and operation of Best Management Practices (BMPs) to control, reduce, or prevent stormwater pollution.

Upon its initial certification for MS4 permit coverage in 2003, DFC, working with the U.S. Fish and Wild Life Service (FWS) and the State of Colorado, certified in its Notice of Intent (NOI) application, that stormwater discharges and discharge-related activities from the DFC MS4 would not jeopardize the continued existence of any species that are listed as endangered or threatened ("listed") under the ESA or result in the adverse modification or destruction of habitat that is designated as critical under the ESA ("critical habitat"). DFC continues to work with FWS and the State to update its endangered species lists and is required to evaluate the potential affects of every new construction project through a formal impact analysis. These analyses require that all new projects are designed and maintained such that the existence of listed species cannot be jeopardized and critical habitat cannot be adversely modified or destroyed.

No species that are federally-listed as endangered or threatened ("listed") under the Endangered Species Act (ESA) have been found or are expected to be present on DFC. According to the U.S. Fish & Wildlife Service there is no critical habitat designated on or near DFC. Therefore, plans

to address impacts from stormwater discharges at the DFC are not expected to affect endangered or threatened species.

### Historic Properties

Coverage under this permit is available only if the stormwater discharges, allowable non-stormwater discharges, and discharge-related activities are:

- Not likely to affect a property that is listed or is eligible for listing on the National Register of Historic Places as maintained by the Secretary of the Interior; or
- In compliance with a written agreement with the State Historic Preservation Officer (SHPO) that outlines all measures the MS4 operator will undertake to mitigate or prevent adverse effect to the historic property.

Upon its initial certification for MS4 permit coverage in 2003, DFC, working with State Historic Preservation Officers (SHPOs), certified in its Notice of Intent (NOI) application, that stormwater discharges and discharge-related activities from the DFC MS4 would not affect a property that is listed or is eligible for listing on the National Register of Historic Places as maintained by the Secretary of the Interior. Spurred by World War II, the U.S. Government purchased what is the DFC property in the early 1940s, and developed it into the Denver Ordnance Plant. Other buildings were built after the war was over. Currently, most of the buildings constructed on the DFC have been renovated, thus making them ineligible for National Historic designation. Only two buildings have maintained enough structural and physical integrity to meet the criteria for consideration for National Register designation: the original Office of Civil Defense Building adjacent to Building 50, and Building 710. Both of these buildings are underground. They are well clear of, and would not be affected by, DFC's stormwater discharges, allowable non-stormwater discharges, and discharge-related activities.

### Technology Based Effluent Limits

NPDES permit coverage for these discharges is required in accordance with the 1987 Amendments to the Clean Water Act (CWA) and final EPA regulations for Phase II stormwater discharges (64 FR 68722, December 8, 1999). The 1987 Water Quality Act (WQA) amended the Clean Water Act (CWA) by adding section 402(p) which requires that NPDES permits be issued for various categories of stormwater discharges. Section 402(p)(2) requires permits for the following five categories of stormwater discharges:

1. Discharges permitted prior to February 4, 1987;
2. Discharges associated with industrial activity;
3. Discharges from large municipal separate storm sewer systems (MS4s) (systems serving a population of 250,000 or more);

4. Discharges from medium MS4s (systems serving a population of 100,000 or more, but less than 250,000); and
5. Discharges judged by the permitting authority to be significant sources of pollutants or which contribute to a violation of a water quality standard.

The five categories listed above are generally referred to as Phase I of the stormwater program. In Colorado, Phase I MS4 permits have been issued by the Colorado Department of Public Health and Environment (CDPHE) to the cities of Denver, Lakewood, Aurora, Colorado Springs, and the highway system operated by the Colorado Department of Transportation within those cities. In Colorado, NPDES permitting authority for Federal Facilities has not been delegated to CDPHE. Therefore, EPA maintains NPDES primacy for those facilities.

Phase II stormwater regulations were promulgated by EPA on December 8, 1999 (64 FR 68722). These regulations set forth the additional categories of discharges to be permitted and the requirements of the program. The additional stormwater discharges to be permitted include:

1. Small MS4s (DFC is considered a small Phase II MS4);
2. Small construction sites (i.e., sites which disturb one to five acres); and
3. Industrial facilities owned or operated by small municipalities which were temporarily exempted from the Phase I requirements in accordance with the provisions of the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991.

The 1987 CWA amendments clarified the fact that industrial storm water discharges are subject to the best available technology (BAT) / best conventional technology (BCT) requirements of the CWA, and applicable water quality standards. For MS4s, the CWA specifies a new technology-related level of control for pollutants in the discharges - control to the maximum extent practicable (MEP). However, the CWA is silent on the issue of compliance with water quality standards for MS4 discharges. In September 1999, the Ninth Circuit Court addressed this issue and ruled that water quality standards compliance by MS4s is discretionary on the part of the permitting authority (*Defenders of Wildlife v. Browner*, No. 98-71080).

The technology based effluent limits for this permit are largely based on the implementation of a Stormwater Management Plan (SWMP) which addresses six minimum measures. The SWMP and additional measures included in this permit are the means through which DFC complies with the CWA's requirement to control pollutants in the discharges to the maximum extent practicable (MEP) and comply with the water quality related provisions of the CWA. EPA considers MEP to be an iterative process in which an initial SWMP is proposed and then periodically upgraded as new BMPs are developed or new information becomes available concerning the effectiveness of existing BMPs (64 FR 68754). The Phase II regulations at 40 CFR §122.34 require the following six minimum pollution control measures to be included in the SWMP:

1. Public Education and Outreach on Storm Water Impacts;

2. Public Involvement/Participation;
3. Illicit Discharge Detection and Elimination;
4. Construction Site Storm Water Runoff Control;
5. Post-Construction Storm Water Management in New Development and Redevelopment; and
6. Pollution Prevention/Good Housekeeping for Municipal Operations.

The regulations specify required elements for each minimum measure and also include guidance which provides additional information recommended for an adequate program. The permit includes nearly verbatim the required program elements for each minimum measure. The permit also includes a number of additional requirements for each minimum measure which were derived from the recommendations of the regulations and from findings recognized during the facility audit which could affect the implementation of an effective stormwater program.

A summary of technology based effluent limits and a rationale for these limits follows:

### **General Requirements**

- DFC must continue to develop, implement, and enforce a SWMP. The SWMP must include management practices, control techniques, system design, engineering methods, and other provisions the permittee or EPA determines appropriate for the control of pollutants in discharges from the MS4;
- DFC must fully implement the SWMP; including meeting its measurable goals. Implementation should take place in approximate equal intervals throughout the permit and progress will be tracked in the annual report;
- The SWMP must include each of the minimum control measures; and
- DFC must conduct an annual review of the SWMP in conjunction with preparation of the annual report.

Fundamental to these general requirements is a need to develop a Stormwater Management Plan. The purpose of this SWMP is to meet the goals of this permit and to prevent deleterious effects to downstream resources from stormwater runoff. These goals should not be mutually exclusive. If they start to become mutually exclusive, the permit should be re-evaluated upon reissuance to incorporate more effective conditions.

Nowhere in the permit is there a specific requirement to create a formal stormwater management plan. This was not written into the permit as there is a concern that a formal stormwater management plan could be contracted out and written into a formal document which may not always be kept current. DFC is encouraged to develop a stormwater management plan or aggregation of products (e.g., a database which documents existing activities with reporting

functions) to provide a place where both EPA and stormwater management personnel at the DFC can show what activities are taking place to prevent deleterious effects to downstream water resources from stormwater runoff. The most important goal is that the stormwater management plan is effective and necessary activities are taking place. A static document which meets all of the permit conditions when developed, but does not allow for changes to the program to be readily addressed, does not meet that goal.

It is expected that the SWMP should be an evolving program which changes over time to include new Best Management Practices (BMPs), contracting mechanisms, and training protocols. Outside of the annual report requirements in this permit, how DFC chooses to document the activities of this program is best left to their own judgment.

### **Public Education and Outreach on Stormwater Impacts**

There are three target audiences for public education and outreach at the DFC:

1. Contracting Officer Representatives (CORs);
2. Project Managers (PMs); and
3. Building and Property Managers.

The education and training aspects of the DFC stormwater management plan have helped achieve zero non-planned discharges to the storm sewer. This is one of the measures by which the EMS defines success for stormwater management. The continued achievement of no non-planned discharges is the DFC's method of evaluating the success of the program.

GSA personnel and contractors receive, via E-mail, the updated DFC Stormwater Brochure annually. Tenants are not educated regularly unless there is an incident. Incident-based training was provided to food service personnel in response to illicit discharges. The training included targeted education documented through the EMS.

All DFC tenants are Federal Agencies and so are governed by the same laws and regulations as GSA, including the Clean Water Act and the requirement to have their own Environmental Management System (EMS), which would direct their stormwater management. There are some standing tenant committees, and most tenants have a central point of contact.

Stormwater awareness brochures were created for years 2006-2007, 2008-2009, and a new brochure is being created for 2010. In addition, public education and outreach posters have been provided to building managers which note spill response requirements and procedures. There are research labs at the Federal Center. It is important that these educational materials be provided to the necessary personnel at research labs so that they may be made aware of procedures that are in place to prevent contamination from spills of oil and hazardous wastes. This applies to the Army Reserve site as well. Despite the fact that it is operated separately from the DFC, there is concern that not providing the Army Reserve with information on how to deal with contaminated soils and illicit discharges could result in contamination or pollutants being discharged to McIntyre

Gulch.

The Environmental Management System at the DFC is a key component to compliance with the stormwater permit. The EMS covers all applicable environmental regulations, including stormwater. Part of the EMS includes training. At the DFC, the Environmental Protection Group (EPG) is responsible for implementing the EMS. The last training provided to the EPG was in 2006 and covered all areas of compliance with environmental regulations, including stormwater.

Therefore, as part of any evaluation or audit from EPA, a key component should be reviewing the EMS. Also, when changes are made to the EMS, EPA should be made aware of these where it may affect compliance with permit terms and conditions.

Permit conditions require that the DFC must:

- Establish a central point of contact for each tenant at the DFC for the purposes of communication and training. This should include both the research labs at the DFC and the Army Reserve center;
- Provide annual training to all building managers and tenant points of contact related to the applicable requirements of the EMS, the dig permit, and how to recognize and report spills and illicit discharges. This training may be incorporated into a larger program to educate tenants and building managers related to environmental compliance or environmental awareness;
- Create and distribute a stormwater awareness brochure with information specific to the Federal Center and include contact information on the brochure for reporting illicit discharges, spills, and/or stormwater concerns;
- Continue an education and outreach program for the DFC which targets project Contracting Office Representatives (CORs), Project Managers, Building/Property Managers, and environmental staff;
- Document education and outreach activities in the EMS or other appropriate tracking mechanism (e.g., database or SWPPP), including documents created for distribution and a training schedule which notes the dates that trainings occurred and the target audiences reached; and
- Within four years of the effective date of this permit, provide and document training to all planning staff and contracting officers to learn about Low Impact Development (LID) practices, green infrastructure practices, and to communicate the expectations for meeting pre-development hydrology within the context of the Energy and Independence Security

Act of 2007.

The permit requires additional training on the topic of Low Impact Development (LID). This additional requirement is included in the permit because there is a new requirement in the permit to design, build, and maintain newly developed impervious surfaces in a manner which mimics pre-development hydrology. For this requirement to be met, it will be necessary for all the people involved in overseeing contracts, developing contracts, and maintaining permanent stormwater control features to have a basic understanding of why and how to implement LID practices.

### **Public Involvement and Participation**

There are several mechanisms by which employees are involved in decision making processes which can impact environmental resources. It is not necessary to create new internal processes for environmental review. However, documenting the existing processes to ensure that they meet the goals of this permit and educating employees and contracting officials to recognize the goals of the MS4 program will be critical to ensuring that pollutants in stormwater runoff are minimized.

There are several mechanism by which the DFC communicates and works with EPA and the City of Lakewood. During the facility audit, it was not recognized that public participation efforts needed to be prescribed outside of required public notice and participation which is mandated under the Clean Water Act and other environmental statutes. However, when significant planning documents are created and significant modifications to the facility EMS are made, EPA, the State of Colorado, and the City of Lakewood should be informed as appropriate.

Permit conditions require that DFC must:

- Maintain a log of public participation and outreach activities performed using an appropriate mechanism such as the facility EMS or a Stormwater Management Plan (SWMP); and
- When significant additions or modifications are made to the federal center EMS which could impact compliance with the terms of this permit, provide EPA staff the opportunity to review those modifications or additions as necessary.

### **Illicit Discharge Detection and Elimination**

An illicit discharge is any discharge to a MS4 that is not composed entirely of stormwater and is not authorized by this permit. The permit authorizes several non-stormwater discharges and provides requirements to detect, eliminate, and prevent illicit discharges.

Legal authority to prohibit illicit discharges and illegal dumping to the MS4 at the DFC includes State of Colorado Consent Orders, Federal Facilities Compliance Agreement with the EPA, and the Clean Water Act. There are no exemptions for these authorities.

Field screening is not a regular planned activity at the DFC. It is usually performed in response to a specific project (e.g., inspecting plumbing connections, dewatering associated with construction) or in response to a report of a discharge of water from an unknown source. When an illicit discharge is reported, the Environmental Programs Group (EPG) is notified, and the source is investigated immediately. Building, Property and Project Managers all carry updated Emergency Spill contact cards.

There is a Spill Prevention Control & Countermeasures (SPCC) plan for the DFC. Spill response kits are available for use by the Environmental Team. This is the protocol for spills or line breaks, and it includes the ability to contract for Emergency Response Services.

Hazardous waste training has been provided to the contractor through training manuals, workbooks, and qualified off-site instruction classes for proper identification, containment, safety, and cleanup procedures when suspected asbestos is found. Certificates of training, licenses, and permits are kept current and are provided by the contractor to GSA upon completion of this training. Documentation is kept on file.

Training consists of hazardous waste communications to identify hazardous waste and safety requirements in handling hazardous waste. In addition, the contract defines contractor responsibilities, procedures, disposal, and record keeping requirements when hazardous wastes are found.

To reduce the presence of unused or expired chemicals, a chemical roundup is also performed once per year and all building managers are notified.

Given the presence of contaminated groundwater plumes at the DFC, dewatering without coverage under a separate NPDES permit should be specifically addressed as an illicit discharge with the potential to contaminate McIntyre Gulch in any outreach materials, training, or reporting databases.

Permit conditions require that the DFC must:

- Provide a mechanism for reporting of illicit discharges and provide this number on appropriate outreach materials;
- Provide emergency spill contact cards to all building managers, property managers, and project managers;

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- Maintain an Illicit Discharge Detection and Elimination (IDDE) database for the purpose of recognizing trends in the location and type of illicit discharges which occur at the DFC. This may be included into a larger system such as the facility EMS;
- Develop a protocol for addressing construction dewatering and the options available for permitting discharges of excavated groundwater and communicate the terms of this protocol to the EPG and contract office representatives. A sample dewatering plan should be maintained at the DFC for reference by construction contractors, so that expectations on the frequency and protocols for testing of dewatering discharges can be more easily communicated; and
- Conduct dry weather screening annually at each of the major outfalls for the presence of non-stormwater discharges, to determine if there are significant erosion issues which need to be addressed.

### **Construction Site Stormwater Runoff Control**

There haven't been very many large projects at the Federal Center, so there isn't a template process for review of projects by stormwater managers. However, review is generally not pre-bid and is done after the design process by the stormwater manager. The architect/engineer is relied on post-award to execute the design for BMPs. The City of Lakewood stormwater criteria manual is used for construction BMP specifications

Most projects at the DFC are design-bid-build, which allows for sufficient review of permit terms and proposed BMPs by the EPG and contract officer representatives. The current utilities infrastructure project (UIP) is design-build, but that is not the norm at the Federal Center. The UIP was design-build for the purpose of spending available ARRA funds more quickly.

Two tools which are very effective in preventing pollution from reaching receiving waters are the dig permit and the Federal Center Environmental Management System. The EPG provided initial training on dig permit/EMS requirements and procedures when the dig permit process began several years ago. Guidance has also been provided on a case-by-case basis by the EPG as the need arises for clarification and evaluation of soils, etc. All relevant contracts contain language requiring compliance with NPDES permit requirements

Management of soils is a significant issue at the Federal Center as there is asbestos contamination present. Excavated soils are covered prior to testing and potential disposal as specified in the dig permit.

There is a process for stormwater program managers to effectively provide input regarding contract performance, but this is an informal process. Stop-work orders can and have been used, but this is not commonplace. There is not significant training or oversight from the DFC specifically related to compliance with stormwater permits. However, inspections of

construction projects are performed daily by the City of Lakewood.

There is not an extensive formal process for review and enforcement of stormwater permit requirements on construction sites. The DFC does not need to create a significant internal process given the limited number of large projects currently occurring on site, but there should be some sort of process created to deal with stormwater non-compliance, and in that process, EPA could be relied on as an enforcement authority.

Permit conditions require that the DFC must:

- Maintain a list of policies and procedures which can be used to enforce construction site compliance within the DFC. This may include working with the City of Lakewood and utilizing the EPA for enforcement of construction stormwater violations;
- Create a general plan for inspection and enforcement of construction site stormwater BMPs which specifies any appropriate sanctions, stop work orders, penalties, enforcement procedures and inspection schedules.
- The scope of work for all construction projects shall be reviewed by environmental staff (e.g., the EPG) to assess whether proposed BMPs are realistic and to ensure compliance with the stormwater construction permit requirements for developing a stormwater pollution prevention plan;
- Provide training to contracting office representatives which perform daily inspections on a biannual basis regarding the maintenance and installation of Best Management Practices for construction stormwater control and the terms of the construction stormwater permit;
- Maintain and utilize a closure process whereby environmental staff (e.g., the EPG) or Contracting Office Representatives evaluate whether 70% vegetative cover has been met at all areas of the site prior to closing out construction stormwater permits. This process could be incorporated into the dig permit process; and
- Consider requiring socks or other equipment available in the back of response trucks to prevent the flow of sediment laden or contaminated water from reaching storm drains, since the DFC plays a role as a first responder in dealing with stormwater emergencies.

### **Post-construction Stormwater Management for New Development and Redevelopment**

The DFC and part of the surrounding areas are in the process of being re-developed. When these areas are re-developed, there will be a great opportunity to minimize peak-flow discharges and re-define the character and quality of McIntyre Gulch.

McIntyre Gulch is currently not thought of and is not managed as an amenity. During a meeting

with Lakewood Engineering Staff, plans to change the geometry of the stream to make it a more effective stormwater conveyance were reviewed. These plans would compromise the quality of the stream for aquatic and riparian life, since they would reduce vegetative cover and create a trapezoidal channel for stormwater conveyance which does not provide the heterogeneity necessary for maintaining the diversity of aquatic and riparian life which is normal in a more natural setting.

There are existing stormwater BMPs such as detention ponds at the DFC. As-builts and maintenance specifications do not exist for these. These should be cataloged into a management system, so that inspections and repairs are made sufficient to retain the designed hydraulic capacity.

There is a process at the DFC for reviewing contracts as they relate to post-construction hydrology, though this is an informal process, and there are not facility-specific regulations regarding stormwater permitting for construction sites. However, other regulations are relied on for stormwater requirements such as those provided by the City of Lakewood. It will not be necessary to amend facility regulations to include a specific post-construction criterion, but contracts will need to be reviewed in the context of EISA requirements to meet pre-development hydrology.

The "dig permit" is relied on heavily at the DFC. For projects that are not very large (under 2.6 million at the time of the audit), the DFC Service Center is relied on for contracting, and the process by which stormwater requirements are included into projects is through the dig permit. The dig permit is very strictly adhered to as there is a RCRA Consent Order which specifies the implementation of a materials handling plan related to the excavation and use of fill due to the presence of asbestos contaminated soils. No excavations occur without first getting a dig permit and analyzing soils for potential asbestos contamination. Thus, the dig permit provides an ideal place to include post-construction requirements in addition to in the contract, where post-construction controls designed to mimic pre-development hydrology will need to be funded pre-award.

The EMS defines what goes into contracts and is incident based. Therefore post-construction BMP maintenance could also be addressed in terms of incidents in the federal center EMS. The EMS should include information related to maintaining pre-development hydrology. Where possible, the EMS should include goals for how receiving waters are supposed to be managed and maintained at the Federal Center.

A GIS system could also be created to manage the location of stormwater BMPs, but there is not a high degree of complexity of stormwater management structures to be managed at this point and time, so management of a GIS system for that purpose may not provide significant return on the effort.

At the closeout of construction projects, there is a "contract closure" process. There is an O/M

manual that is included for new construction, but stormwater is not usually a part of that manual. The post-construction BMPs are not tracked, but there is a Facilities Maintenance Plan which does include maintenance of new structures.

Permit conditions require that the DFC must:

- Include in contracts and requests for funding (e.g., a “prospective package) a requirement to design for and provide funding for the installation of permanent stormwater control measures designed to retain, detain, infiltrate or treat runoff from newly developed impervious surfaces in a manner which mimics pre-development hydrology for all new projects which disturb greater than or equal to one acre of land. This should include a line item for costs associated with the installation and design of permanent stormwater control measures;
- Include or reference in the dig permit, applicable requirements and available guidance to design post-construction stormwater features or low impact development practices designed to mimic pre-development hydrology;
- Incorporate a procedure such that closure of contracts includes the handoff of maintenance specifications and as-built drawings for post-construction BMPs; and
- Develop and maintain a system to track the location, design, and maintenance specifications of permanent stormwater features. This could be incorporated into a GIS system or other internal process such as the Facilities Maintenance Plan or the Federal Center EMS.

### **Pollution Prevention and Good Housekeeping for Municipal Operations**

For the purposes of this permit, “municipal operations” at the DFC include grounds and facilities maintenance. There are minimal activities which could be considered industrial activities at the DFC. There are no fleet maintenance activities at the DFC; therefore the bulk of “industrial” permitting requirements would include day-to-day activities such as grounds maintenance.

Maintenance activities at the DFC include street and parking lot sweeping, grounds maintenance, herbicide/pesticide application, snow removal, and underground utility repairs. All of these activities are performed by on-site contractors. The Army Reserve has fleet maintenance activities as well. Industrial activities are not a large concern at the DFC since they are minimal.

Where grounds maintenance activities do occur, such as at the Joppa Yard, these do not drain to the river, and there are secondary controls in place.

Permit conditions require that the DFC must:

- Provide and document annual training for all grounds maintenance and facilities maintenance contractors on an annual basis covering the topics of stormwater runoff impacts and controls and the maintenance of onsite pollution control measures. These trainings can be provided to a single point of contract for each facility for further distribution;
- Conduct an annual snow meeting at the beginning of each year to discuss strategies to prevent the misuse and over-application of chemical deicers;
- Conduct an annual street sweeping and storm sewer system maintenance meeting or training to discuss procedures for disposing of material and priorities/schedules for cleaning out stormwater BMPs and street sweeping;
- Consider deicing training if available to minimize the use of and runoff from chemical deicers and traction aggregates;
- Inventory the DFC for locations of all stormwater features such as detention basins, drop structures, and trash racks. Where these facilities are noted, provide a schedule for their inspection and procedures for when these need to be cleaned out and/or modified. Include these activities in maintenance contracts, specifications for maintenance of instream BMPs (sediment basins, drop structures, trash racks);
- Provide the grounds contractors or other parties responsible for pesticide and herbicide application with training related to the requirements for NPDES permitting (given the requirements in EPA's new pesticide application general permit) and in the area of chemical disposal and stormwater runoff at least once during the effective term of this permit;
- Track pesticide and herbicide records for each site for each chemical. Contractors should keep a daily log in a format which can be provided for assessment by the Environmental Protection Group or other entities if necessary;
- Evaluate the activities at the Army Reserve Base to determine whether industrial permitting is necessary; and
- Consider adding specifications for use in construction project re-vegetation or for use in training materials related to procedures related to the application of pesticides and herbicides. Such specifications would specify procedures for disposing of excess chemical residuals, procedures for storage and maintenance of herbicides and pesticides, maintenance of MSDS's for all herbicides/pesticides used, use of backflow protection systems to prevent contamination of domestic water sources, procedures for routing water

and chemical residuals away from storm drains, and any applicable requirements as prescribed in the dig permit.

The SWMP and additional measures included in this permit are the means through which the DFC complies with the Clean Water Act requirement to control pollutants in the discharges to the maximum extent practicable (MEP) and comply with the water quality related provisions of the CWA. It is expected that compliance with the conditions in this permit, including the technology based effluent limits, will result in discharges that are controlled as necessary to meet applicable water quality standards. Part 1.3.5 of the permit includes eligibility restrictions for discharges to water quality impaired waterbodies. As written in Part 1.3.5 of the permit, EPA will notify MS4 operators whose discharges are likely to cause or contribute to a water quality impairment, or whose discharges contribute directly or indirectly to a 303(d) listed waterbody. If EPA determines that discharges from the MS4 are causing or contributing to a water quality impairment, that MS4's SWMP must include a section describing how the program will control the discharge of the pollutants of concern and ensure discharges from the MS4 will not cause or contribute to instream exceedances of the water quality standards. This documentation must specifically identify measures and BMPs that will collectively control the discharge of the pollutants of concern.

### Monitoring

The Phase II stormwater regulations at 40 CFR §122.34(g) require that small MS4s evaluate program compliance, the appropriateness of the BMPs in their SWMPs and progress towards meeting their measurable goals. Monitoring and assessment activities are included as part of each of the minimum measures of the permit. In addition, the DFC is required to implement a monitoring program which can be used to assess the effectiveness of the MS4 program as whole.

The terms of the monitoring program are left open-ended so that the DFC can work with existing internal programs or external programs developed by City of Lakewood or the Urban Drainage and Flood Control District to leverage resources.

Permit conditions require that the DFC must:

- Not later than three years from the effective date of this permit, develop a program to evaluate the water quality in McIntyre Gulch, as it both enters and leaves the DFC. This program shall at a minimum include evaluations of streambank stabilization, and water quality; and
- The water quality monitoring program may include indicators such as chemical monitoring, assessment of macro invertebrates or other aquatic life, or watershed assessment of river stability and sediment supply, provided that the monitoring program provides meaningful data to evaluate the effectiveness of the stormwater management plan. The permittee is responsible for evaluating data for analysis of trends; and

- Provide a description of the water quality monitoring program description to EPA with the Annual Report for year 3 of this permit term. Programs will be assessed by EPA Region 8 to determine whether the program meets the goals of this permit and whether the data is being collected and reported in compliance with EPA test procedures approved under 40 CFR Part 136.

### Master Planning

The DFC has developed sustainable design guidelines to meet its vision of becoming the “most sustainable campus in the nation by 2020.” This includes several goals applicable to this permit such as zero emissions of stormwater and wastewater reuse, waste reduction, and chemical use reduction. Ideally, this document could also include plans for the vision of McIntyre Gulch. Where possible, every effort should be made to not only conserve the portions of McIntyre Gulch but improve the structure, habitat, and flow patterns to create a more sustainable wildlife and riparian community or organisms.

As part of the master planning efforts at the DFC, there needs to be a vision provided for McIntyre Gulch which outlines how it can be restored to a high functioning water body which serves as an amenity to the DFC. This could be similar to the process of creating the architectural design guidelines which are referenced in the sustainable design guide.

Permit conditions require that the DFC must:

- Develop a vision and/or design guidelines for McIntyre Gulch which define how it can be re-configured, conserved, and managed as a high quality receiving water and as an amenity for the DFC. This could include a vision for how to reconstruct channels to include meanders, drop structures, and to utilize and enhance the function of the existing wetlands. This could also include a vision of how to connect McIntyre Gulch to existing pedestrian corridors or to provide alternative access points so it could be utilized as a recreational amenity for the DFC if so desired.

### Administrative Record

The administrative record for this permit may be obtained upon request by contacting Amy Clark at 303-312-7014 or [clark.amy@epa.gov](mailto:clark.amy@epa.gov) or by writing or E-mailing to the address listed below:

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