SOP NO. 33

STANDARD OPERATING PROCEDURE
for
STORMWATER MANAGEMENT, EROSION CONTOL AND RE-VEGETATION

Denver Federal Center
Site-wide RCRA Facility Investigation

Prepared for:
General Services Administration
Rocky Mountain Region
Denver, Colorado

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Revision 2.0

SOP NUMBER 33 STORMWATER MANAGEMENT, EROSION CONTROL, AND RE-VEGETATION

TABLE OF CONTENTS

ATTACHMENTS

SOP NUMBER 33 STORMWATER MANAGEMENT, EROSION CONTROL, AND RE-VEGETATION

REVISION LOG		
Revision Number	Description	Date
1.0	Original SOP No. 33	February 2020
2.0	SOP No. 33 Update and Revision	March 2025

SOP NUMBER 33 STORMWATER MANAGEMENT, EROSION CONTROL, AND RE-VEGETATION

1.0 PURPOSE AND SCOPE

This Standard Operating Procedure (SOP) provides technical guidance and methods that will be used to manage stormwater, control erosion and re-vegetate disturbed areas at the Denver Federal Center (DFC) in accordance with requirements of the General Services Administration (GSA) DFC Municipal Separate Storm Sewer System (MS4) permit (permit no. COR-042004), issued by the U.S. Environmental Protection Agency (EPA). This SOP serves as a supplement to site specific work plans and project designs and is intended to be used in conjunction with the other SOPs in this volume.

2.0 PERSONNEL QUALIFICATIONS

Personnel performing stormwater management and re-vegetation activities will have knowledge and experience in the equipment and procedures used or will work under the direct field supervision of knowledgeable and experienced personnel. Personnel will also be qualified to perform this work in accordance with the project-specific health and safety plans (HSP).

Stormwater management erosion control and re-vegetation will be directed by the GSA Project Manager who is responsible for ensuring that all requirements of this SOP are implemented. The project manager will be knowledgeable and experienced in stormwater management, erosion control and re-vegetation activities or will consult with the Environmental Programs Group (EPG) as necessary. Should the project not have GSA PM, then the Agency PM shall have the responsibility to comply. All projects require some level of coordination with a GSA point of contact; the GSA POC must ensure that the Agency PM is aware of these requirements.

Note that if the project soil disturbance is one acre or greater or if groundwater dewatering is required, the project must comply with the Environmental Protection Agency's Construction General Permit (CGP) including filing an NOI 14 days in advance (see details in Section 4.0), the person(s) inspecting your site shall be a "qualified person". A qualified person is defined in Part 6.3 of the CGP https://www.epa.gov/system/files/documents/2022-01/2022-cgp-final-permit.pdf

3.0 STORMWATER MANAGEMENT AT THE DFC

The following requirements shall be implemented when performing work at the DFC, along with the Universal Scope Requirements (USRs) the GSA PBS Interim Core Building Standards.

ALL SOIL DISTURBANCES OF ANY SIZE AREA

Anyone who disturbs soil as part of a project shall prepare and submit an application for an Excavation ("Dig") Permit that must include a Stormwater Management and Erosion Control

Plan or have an approved Work Plan for soil or groundwater investigations conducted under the DFC Consent Order that includes an Erosion Control and Re-vegetation Plan. The Stormwater Management and Erosion Control (SMEC) Plan must be submitted by the GSA PM and the soil disturbance contractor and provided to EPG for approval along with the dig permit application prior to project mobilization. EPG will provide information on known water table depths along with groundwater information to determine if dewatering is expected and if sampling will be required. Please note that if dewatering is expected, you must follow the EPA CGP and submit an NOI. No soil work can begin until an approved dig permit is received from EPG.

The SMEC Plan shall provide adequate detail, relative to the scale of the project, to describe how stormwater management and erosion control will be performed on the project, and must include the following project specific stormwater procedures required for all soil disturbance:

- Description of Stormwater Control Measures (SCMs) or Best Management Practices (BMPs) you will be implementing to manage stormwater and runoff on your work site and anticipated date of install and of removal
- Protection methods for all nearby stormwater or curb inlets downstream from your work site (rocks socks, straw wattles, inlet covers, etc.), including a map of all inlet locations and anticipated date of install and of removal
- Description on prevention measures for track out of soil and mud from your work site (i.e., track out control mats, constructed vehicle tracking control, vacuum sweeping, etc.)
- Description of management and disposal methods of concrete washout(s) as applicable
    - Use only commercially available concrete washout containers or DFC provided concrete washout facility in the eastern portion of the facility. Plastic children's wading pools or pits dug into the ground are not allowed for concrete washout on the DFC
- Description of inspection and maintenance procedures of all SCMs/BMPs
- Description of soil pile maintenance methods
    - If soil pile(s) are going to be staged for a period before reuse or disposal, they will need to be covered with poly sheeting or tarps and surrounded with straw wattles or rock bags.
    - If soil pile(s) are placed on a non-paved surface, the straw wattles will need to be staked down. If placed on a pavement or concrete surface, surrounded the pile with rock bags, not straw wattles.

The following stormwater procedures are required for all soil disturbances:

- Prevent project-related soil and silt from entering the storm sewer system, the Agricultural Ditch, McIntyre Gulch or any storm sewer system inlet.
- All necessary erosion control measures must be in place and functioning prior to any excavation and remain functioning for the duration of the project.
- Discharge (pump) any accumulated stormwater to open field areas only; location to be approved by EPG prior to discharge.
- Revegetation and/or stabilization of excavated soils shall be performed so that sediment will not enter catch basins or the storm sewer system.
- Initiate stabilization measures as soon as practicable in portions of the site where construction activities have ceased. In no case shall stabilization be initiated more than 14 days after the construction activity in that portion of the site has ceased.
- Accomplish permanent or final stabilization of the disturbed areas of the site by installing stabilization or landscaping requirements as required by the contract.
- Do not discharge any water to the storm sewer at any time.
- All control measures must be removed and the site cleaned after project completion and inspected by an EPG team member.

SOIL DISTURBANCE EQUAL TO OR GREATER THAN 5,000 SQ FT

If the project footprint is 5,000 sq. ft. or greater, the project must also follow GSA PBS Interim Core Building Standards and the Energy Independence & Security Act (EISA) Section 438 compliance. EISA requirements specific to stormwater and this SOP apply if there is a change from vegetative cover (xeriscape, grass, flower gardens, shrubbery) to hardscape (black top, concrete, new building foot print). If that change occurs, runoff modeling and runoff mitigation are required (infiltration structures, use of permeable surfaces, impoundments, etc.) If the project is returning the disturbed area to some type of vegetative cover, this is not required. The project must provide documentation of runoff calculations or runoff modeling of the area as required (https://www.epa.gov/laws-regulations/summary-energy-independence-and-security-act).

SOIL DISTURBANCE EQUAL TO OR GREATER THAN 1 ACRE AND FOR DEWATERING REQUIREMENTS

If the soil disturbance is planned to be one acre or greater, if the total area disturbed during execution of the project will become one acre or greater at any time, or if dewatering is required, the project must follow the EPA Notice of Intent (NOI) process and comply with the Construction General Permit (CGP) from EPA. Soil disturbance is defined in the CGP

as all construction activities (earth-disturbing activities such as the clearing, grading, and excavation of land), other construction-related activities (e.g., grubbing; stockpiling of fill), and construction support activities that involve earth disturbance or pollutant-generating activities of their own (asphalt batch plants, pollutant generating materials storage, disposal areas, and designated equipment staging yards).

NOI and NOT procedures: (https://www.epa.gov/npdes/submitting-notice-intent-noi-notice-termination-not-or-low-erosivity-waiver-lew-under)

EPA CGP: (https://www.epa.gov/system/files/documents/2022-01/2022-cgp-final-permit.pdf)Note that you must develop a Stormwater Pollution Prevention Plan (SWPPP) consistent with Part 7 of the CGP before submitting your NOI, and you must have submitted an NOI at least 14 days prior to any soil disturbance. If an NOI is required solely for dewatering purposes, the SWPPP can be the Stormwater Management and Erosion Control Plan as detailed above.

To terminate an NOI and submit a Notice of Termination (NOT), all conditions must be met as detailed under Section 8.2 of the EPA CGP including but not limited to establishing uniform, perennial vegetation (i.e., evenly distributed, without large bare areas) to provide 70 percent or more of the vegetative cover native to local undisturbed areas; and/or implement permanent non-vegetative stabilization and providing all required documentation including photographs as per Section 8 of the EPA CGP linked above. See link above for NOT submittal procedures.

4.0 RE-VEGETATION OF DISTURBED AREAS AT THE DFC

Initiate the installation of stabilization measures immediately in any areas of exposed soil where construction activities have permanently ceased or will be temporarily inactive for 14 or more calendar days; immediate stabilization means right after all disturbances of the area are complete and all equipment has been removed from the stabilization area. Complete the installation of stabilization measures as soon as practicable, but no later than 14 calendar days after stabilization has been initiated.

If vegetative stabilization measures are being implemented, stabilization is considered “installed” when all activities necessary to seed or plant the area are completed. If non-vegetative stabilization measures are being implemented, stabilization is considered “installed” when all such measures are implemented or applied (National Pollutant Discharge Elimination System General Permit for Discharges from Construction Activities, 2022 Construction General Permit (CGP)). Revegetation is not considered complete until at least 70 percent or more of the vegetative cover native is established regardless of the size of disturbed area.

SEEDING

Seeding of disturbed soil areas at the DFC shall comply with the Denver Federal Center Soil Preparation Specification 32 91 10 in Attachment 1 and the DFC Seeding Specification 32 92 19 in Attachment 2, or with a pre-approved, project specific re-vegetation and/or landscaping plans.

SOD INSTALLATION

Sod installation shall comply the following requirements:

- The Contractor shall repair, restore or replace sod in all lawn areas disturbed in and around the project site, including areas disturbed during access or egress to the project work site.

- When preparing the site for the sod installation, the Contractor shall allow one inch (1") for sod application.

- Do not install in frozen or wet soil. Install sod only after danger of frost is past or sufficiently before frost season to allow for establishment before first frost.

- Coordinate installation with irrigation and sodding work to ensure that damage will not occur. Install irrigation systems? after final grades are established and prior to sodding.

- New sod shall match the existing sod in the surrounding area.
    - If the existing grass mixture is not available, then a drought-resistant variety of Kentucky Bluegrass, or approved equal, may be used. The following Kentucky Bluegrass cultivars are acceptable: America, Apollo, Brilliant, Impact, Mallard, Midnight, Midnight II, Moonlight, Rugby II, Showcase, Total Eclipse and Unique.
    - The Contractor shall submit the proposed Bluegrass cultivar in writing to the GSA PM for review and approval, prior to the purchase and installation of the sod.

- The Contractor shall install sod using skilled persons proficient in the trades required in a neat, orderly and responsible manner with recognized standards of workmanship.

- Deliver properly loaded sod pallets on vehicles and protect from exposure to sun, wind and heat. Do not drop sod from loading carts, trucks or pallets.

- The Contractor shall perform sodding work after installation of the irrigation system, soil

preparation and all other planting

- The Contractor shall remove and replace all sod found to be bare or with dead grass, larger than four (4) square inches in area, or where there is not a healthy, green, well-rooted stand of grass. Replace immediately as sod is removed as many times as necessary to provide an acceptable sod through the duration of the warranty period. Replacement sod and installation shall comply with the specifications for the original sod.

- The sod shall be strong rooted and free of diseases, insects, stones and other plants.

- Sod shall be capable of growth and development when planted and shall not be dormant. All yellow areas without normal green color will be rejected.

- Cut sod using an approved method in accordance with local governing American Sod Producers Association. Cut sod strips no more than 18 inches wide by 6 feet long (1 square yard) with a thickness of ¾" to 1 ¼". Height of blades shall be 1-1/2 to 2 inches.

- The Contractor shall lay sod within 24 hours of cutting. Do not plant if sod is dormant or frozen.

- Install sod on a firm, moist subgrade, with tight joints and no voids between strips.

- Lay sod parallel to contours to form a solid mass with tightly fitted joints. Butt ends and sides of strips. Do not overlap. Stagger strips to offset joints in adjacent courses.

- Repair mounds and depressions occurring after installation and prior to final acceptance.

- Roll or tamp thoroughly to bond sod to subgrade. Place sifted soil into minor cracks between sod strips. Remove excess to avoid smothering of adjacent grass.

- Spread fertilizer over all sodded areas at a rate of 5 pounds per 1,000 square feet.

- Water thoroughly until moisture permeates to four to six inch (4"-6") depth. Water lightly to avoid erosion.

- Keep equipment, vehicles and foot traffic off all sodded areas. All damaged materials shall be replaced, and all damaged areas restored to original condition.

- The Contractor shall begin sod maintenance immediately after installation and continue until final acceptance. Contractor shall warrant all sod for a period of sixty (60) non-dormant days from date of final acceptance (if date is prior to September 15th) against

defects including death, settling, and unsatisfactory growth. Sod installed after September 15th shall not be acceptable without the prior approval by the GSA PM and the warranty period is adjusted.

- Contractor shall also warrant all replacement sod for sixty (60) non-dormant days following replacement. Contractor shall warrant replacement sod installed after September 15th until May 15th of the following year.

- All areas damaged by planting or replacement operations shall be fully restored to their original condition as specified.

5.0 ENFORCEMENT

DFC SOP 33-Stormwater Management, Erosion Control and Re-Vegetation is included within the Universal Scope Requirements contract documents and is enforced by GSA DFC Contracting Officers (CO's), Contracting Officer Representatives (CORs), and EPG personnel.

The GSA will implement an escalation protocol to enforce SOP 33 at the DFC if requirements are not being met. The enforcement policy includes the following escalation protocols:

- First-time violators receive a written warning and an assigned timeline for the operator to achieve compliance.

- Second-time violators receive a written warning and corrective action timeline, and the COR is notified in writing of the noncompliance.

- Third-time violators are required to attend a meeting with the CO, COR and EPG to identify an acceptable resolution. The CO will determine the appropriate contract actions that need to occur to ensure compliance.

- If the violations persist or the operator does not comply with corrective actions or contract orders within the reasonable timeline provided by GSA, the case is referred to the GSA legal department for legal action.

- If the violation persists despite elevation to Legal, the GSA will utilize the EPA for enforcement of construction stormwater violations.

ATTACHMENT 1

Denver Federal Center
Soil Preparation Specification 32 91 10

ATTACHMENT 2

Denver Federal Center
Seeding Specification 32 92 19